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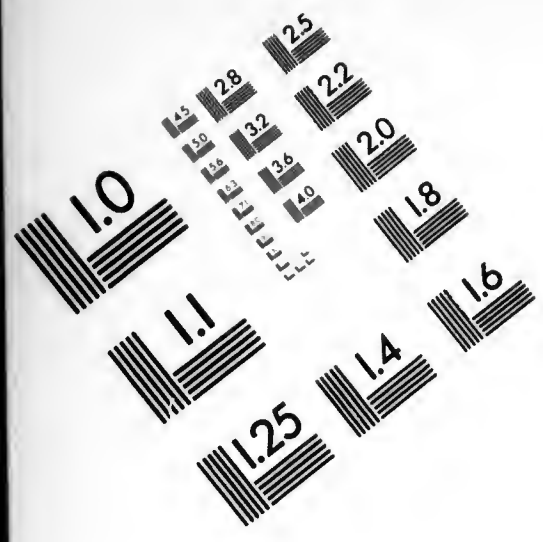
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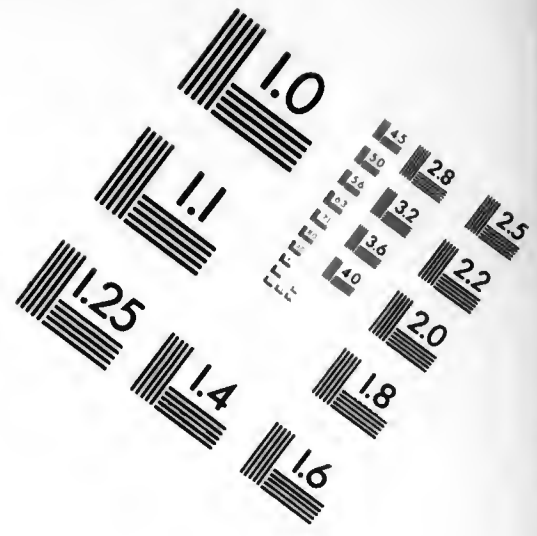
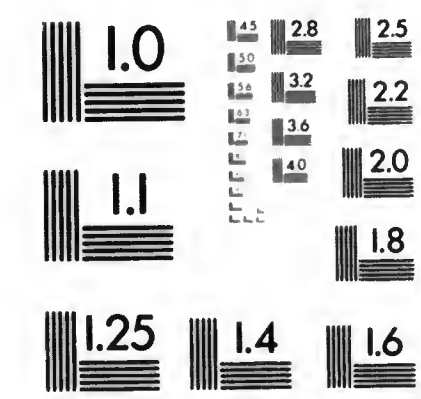
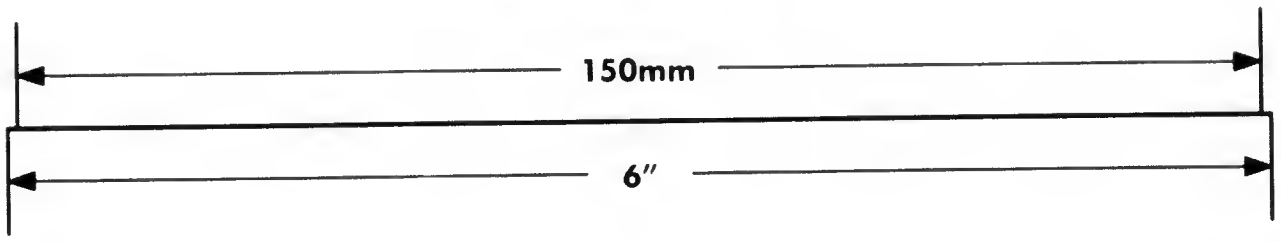
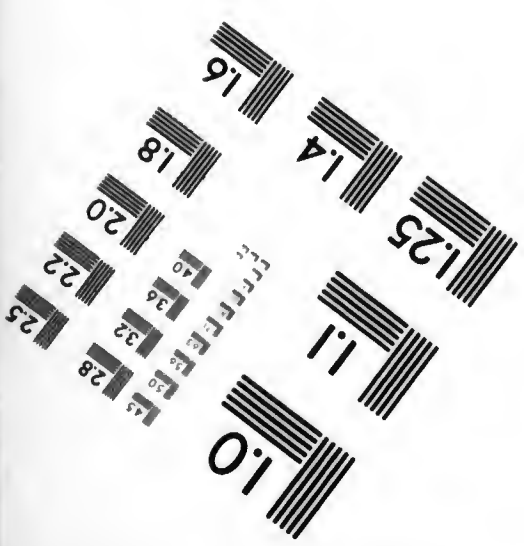


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January 5, 1929 **Established 1877**



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Farm Facts and Fancies

By ALVA AGEE

SOMETIMES I wonder whether it pays to be continually disturbed about the irrigation of public lands. We are right as far as the protest against being taxed for it goes—that is an outrage—but the trend is toward too much production anyway. The quarterly and annual financial reports of our great farm implement corporations reveal the demand made on them by farmers for modern labor-saving equipment. There is ability to handle more acres of cultivated crops within the farm, to prepare and plant land on time so that yields may be surer, and to harvest without waste and loss. The wonder is that there is work for all those who stay in the country.



Greater production per farm results naturally. There are time and opportunity to grow crops that require a lot of labor. Farm capacity is increased. If the increase runs up to five per cent, it is much like adding five per cent to the total acreage of the country. This is not criticism—I am not sure there is even any helpfulness in the statement of fact, except as it is well to recognize facts and base our thinking and planning on them.

Acres Grow Bigger

I do not care to risk the statement that the financial condition of the farmers would be better if the ability to get bigger yields through use of commercial fertilizers were cut in two, but if prosperity is to come only through a home market for all we can grow, as some men believe, the statement would be safe.

Acres become larger units in production as fertilizer needs are met. All the new land that could be developed in this country would have a power of production only a fraction of that secured through the liberal use of fertilizers. That is no reason for not watching to prevent new development, and the individual would be mighty foolish if he did not expand his farm's power by the intelligent use of fertilizers and modern farm equipment, but I do not see a home market able to take all we produce at prices favoring the seller as long as the individual farmer must have more fertilizer and better implements at his command to meet the competition of his neighbors.

Securing a Farm Home

The foregoing paragraphs furnish a rightly conservative background for the question whether there is reason that the tens of thousands of young men who are wanting to go into farming for themselves next spring should hold back. There is no good reason in the case of those who have some capital, some skill and an ambition to own a farm. I don't like to see agriculture a highly competitive business, but it has become so, and the alert young man will gain instead of lose as the years go along.

It does look like lean times for the farmer who does not put his labor into land that can be made, and is made, capable of competing with productive soils, but the chances are that some lean streaks may develop in industry either in the latter part of this year, or a little later on. Then it is the man on his own land who can feel most surely at home.



Land can be bought in some sections at a fairly low price today, and danger of loss of capital through depreciation is seeming small if one uses judgbent in buying. Then, too, one is in the kind of work he likes, and that counts. It is a better time to begin farming than it has been in the last ten years—I mean I think so.

The Small Farm

The beginner, with small capital, should want only a small farm. Big farms cannot drive small ones to the wall. Labor income is the big item in most farming, and the small farmer gets that, and increases it as he puts skill and self-interest into it. He is secure in an era of good times or poor times, provided always that he is not carrying too much debt. There is reason for emphasizing the word "small." Nobody knows how much risk another should take, but usually it is poor business to buy more land than will permit one to pay half the purchase price and to have enough cash to finance his work and living for the year.

When a member of a board of directors of a joint-stock land bank in the East, I personally should have liked to see many men helped with a loan exceeding half the value of their farms if it had not been bad business all around. As a matter of fact our bank neither made nor lost money under our management—and really was not organized primarily to make money, though we hoped to do so—but the regulation was sound, and did not have the slightest evasion. Any greater load of debt is not safe, and a new farmer should not want to incur it.

Being Oneself

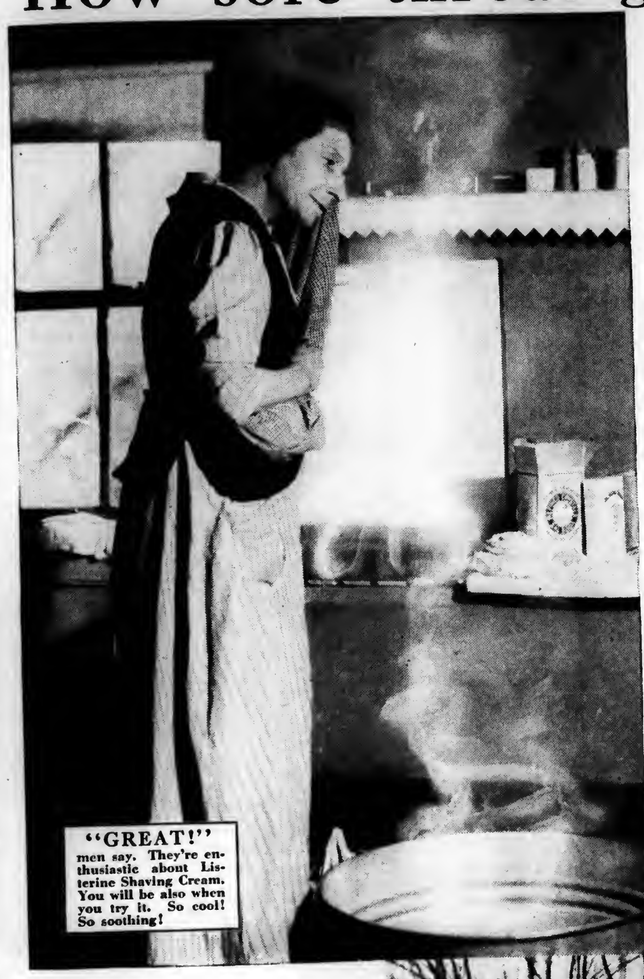
Down in a canyon a contractor harbors a mule needed in his work of leveling ground for more houses in San Diego. About ten minutes of six in the morning that mule is ready to be served breakfast, and he announces the fact to all and sundry. His honking comes floating through the residential district for a distance of half a mile, I am sure, and Sunday looks to him like any other day so far as breakfasting goes.

My neighbor has a dog that was made for the open spaces. He is too large for a dog and too small for a pony, but he would fit into the country better than the city. Every evening between seven and eight o'clock he exercises his voice and makes the welkin ring. Now and then some one goes out to enter a protest, but it is wasted effort because this dog has respect for his program and fixity of purpose. I take considerable pleasure in seeing, or rather hearing, these fellow creatures exercise their gifts unabashed by their city environment.

The matter is worthy of mention because so many human beings lack courage to go their own way. If one of my neighbors is engrossed in political economy, and another paints pictures, when each contributes something out of his thinking, why should not I call attention to the skill I am finding in a detective story much to my notion?

People spoil life by discarding a shoe because it has reshaped itself to fit one's foot, or a hat that has become accustomed to one's head. We need people who deny another's right to set fashions in thinking or in clothes, and the right to value highly the fashions they set for themselves, if they are sincere about it. It is one's right to be himself, as that mule knows full well.

How sore throat gets its start



"GREAT!" men say. They're enthusiastic about Listerine Shaving Cream. You will be also when you try it. So cool! So soothing!

Check it with LISTERINE *full strength*

WORKING over a steaming tub one minute, out in raw weather the next, a woman is almost certain to get sore throat or a cold—or both.

The same goes for a man leaving a warm house to work around icy barns.

Such sudden changes in temperature, physicians say, are the cause of countless throat conditions and colds. Many of them become complicated and dangerous if neglected.

After such exposure, or after your feet have been wet, gargle repeatedly with Listerine full strength at the first opportunity. It often keeps sore throat from becoming serious.

When Listerine enters the mouth it attacks the disease germs that cause ordinary colds and sore throat. Your relief is almost immediate. When it is not, consult your physician.

Listerine, full strength, is so powerful that even the stubborn B. Typhosus (typhoid) germ is killed in 15 seconds! This is shown by scientific tests in bacteriological laboratories of national repute.

Keep Listerine handy and use it daily during bad weather. You may be spared a costly and possibly dangerous illness. Lambert Pharmacal Company, St. Louis, Mo., U. S. A.

To prevent colds

rinse the hands with Listerine

Countless colds start when germs are carried to the mouth on food. By using Listerine on the hands before every meal, you attack such germs and lessen the risk of cold. Remember this mothers, when handling baby's food.





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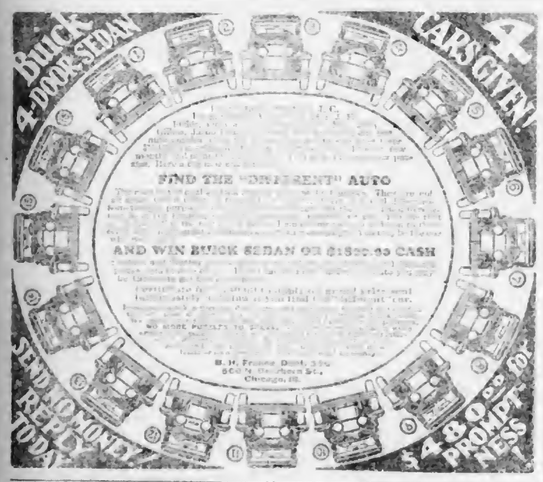
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ACCORDING to Roman mythology Janus was the god of all beginnings,—the beginning of life and the beginning of the agricultural year thence January is the first month in the calendar). Janus took precedence over all other gods and was placed over gateways and in other places of prominence. He was represented as having two faces,—one looking toward the East, and the other toward the West; hence he was able to look backward on the past, and forward to the future. Longfellow wrote to him:

[illegible]

Farewell! Look, and backward, and below
[illegible]

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CONGRESSIONAL RELIEF

CONGRESS is frequently accused of wasting time by talking too much, and of wasting money by printing almost everything under the sun in the Congressional Record. It remained for Senator Schall, author of a bill to promote manufacture of paper, etc., from corn stalks, to suggest a scheme to turn the traditional wordiness of Congressmen into cash for farmers. He has introduced a resolution directing the printing of the Congressional Record on paper made from waste products of farm field crops, such as corn stalks, rice, wheat or flax straw or sugar cane pulp. If this dream comes true lawmakers can point to their oratory as labor for farm relief. And the stately plant which grew the golden grain might have a more dignified resting place than mule bedding.

QUALITY POTATOES

THE State Bureau of Markets finds that Pennsylvania potatoes of high grade and high quality have been selling at 10 to 15c per bushel more than mediocre stocks from this and other states in Philadelphia and eastern markets, and marketing officials say that in spite of present relatively low prices it never paid better to grade close than it pays this year. With increasing competition naturally more attention must be paid to quality of the product. While grading potatoes is acknowledged to be necessary if desirable markets are to be found, growers will do well to go the next step and concentrate on quality, for it is the taste of the tuber which lingers in the mind of the consumer. If we are to get and hold a high place in the esteem of spud eaters we must not only place on the market a well-graded product, but one possessing that elusive and irresistible charm which only the best-eating varieties can exhibit.

A CREDIT THEORY

THERE are in circulation many theories about the stabilization of prices, none of them worth very much. One theory which has had a lot of free advertising in recent years is stabilization by control of credit. The idea is that prices fluctuate as credit is expanded or contracted. The chief trouble with this theory is that it is not in consonance with facts. Of late, for instance, the expansion of credit has been so great as to be considered dangerous by conservative financial authorities. If credit governs the course of prices they should have advanced during this period of expansion, but the opposite tendency is revealed by price indexes of commodities. Prices are the result and the composite expression of all the influences which affect trade and those concerned in it. Credit is one of these influences but it is not the only or even the dominant one. Those who expect to stabilize prices by control of credit will be disappointed. So will those who dream of stabilizing them by some regulation of production, marketing or distribution. For there is no way to stabilize all conditions which govern prices; or to avoid such fluctuations as normally follow changing conditions. It's about time to quit dreaming of stabilization and devote ourselves to the study of conditions as they arise.

INSECT OUTLOOKS

OBSERVING that winter conditions affect the size and activity of the insect crop Roy Melvin, an entomologist at the Iowa State College, has worked out a method of insect forecasting based on the bodily activity of the pest in the dormant season. He has rigged up a machine to measure the oxygen consumed by the insect or its eggs during warm and cold spells of winter and from the data gathered computes the probable damage the coming year. His estimates on the corn stalk borer this past season are said to have been borne out by results. A reliable insect forecast would obviously be of value to farmers, fruit and vegetable growers by forearming them in their annual battle with the pests, and such an outlook should be at least as accurate as some of the prophesies now propounded.

NEW YORK MILK SUPPLY

FIFTY farm leaders met in New York recently and appointed a committee to form a program for the stabilization of New York City's milk supply. It is to make a study of the whole problem and suggest steps to coordinate all agricultural resources in one effort to assure New York a supply from local producers and keep out western milk. All this talk about an adequate milk supply simmers down to a price high enough to stimulate local production and low enough to discourage western competition. The eastern dairyman with the advantage of freight cost should be able to lay down milk as cheap as his western competitor. If he cannot do so all the committees in the state cannot reserve the market for him. Attempts to stimulate eastern production by artificial prices will not do any good. A price for milk, or any other commodity, out of line with market conditions must eventually have unfavorable results for somebody.

A NATIONAL SCHEME

A NATION-WIDE marketing organization, or federation of commodity associations, is advocated by an earnest and persistent advisor on farm problems. The job of such a central marketing board would be to see that farm products bring a good price. Some hint of how this would be accomplished is found in the following statement: "The most effective means of regulating the flow of products, stabilizing prices and bringing producers into membership in the organization would be to grant the marketing organizations authority to direct interstate and foreign shipments of their respective commodities." It is highly improbable that the government would delegate such authority to a few men, or that it has the right to do so. And it is pretty certain that such a move would meet with protest from consumers and producers. Both find plenty of fault with the prices they give or get, but neither would trade the unrestricted market with all its shortcomings for the uncertain benefits of bureaucratic regulation. Nation-wide movements sound big, but as far as marketing farm products is concerned they have never cut so much figure as the local cooperatives, founded where needed and handled with business sense and without government interference.

MORE QUARANTINES

THREE more invaders from the Orient are to receive the distinction of official disapproval, according to the U. S. Department of Agriculture, which announces that quarantine measures will be employed against the Asiatic beetles "Aserica castanea", "Anomala orientalis" and "Serica similis". These insects are regarded as potentially injurious to crops and lawns and the first has been caught eating the leaves of some 50 different varieties of plants, including a half dozen fruits and vegetables. Northeastern New Jersey and southeastern New York are the principal sections to be affected by the quarantine this year. An extension of the Japanese beetle quarantine is also announced, indicating that the government has no intention of discarding this method of insect control. Whatever we may think of quarantines—and those who live with them express least love for them—we must admit that if the government ignored strange insect pests, or confined its opposition to them to the laboratory, it would get and deserve more criticism than it now receives for employing every known means of control, including quarantines. Much of the present criticism could be avoided by more attention to local conditions before a quarantine is applied.

THE SECRETARY APPROVES

SECRETARY JARDINE has analyzed and approved the McNary bill for farm relief [S 4602]. The bill provides for a federal farm board "to aid in the orderly marketing, and in the control and disposition of the surplus, of agricultural commodities in interstate and foreign trade." The Secretary thinks that the board, by establishing and financing stabilization corporations, could provide the means for handling surpluses, could enable the producers to get a greater share of the consumer's dollar by reducing the cost of marketing and preventing speculation and waste, and could encourage producers to organize for better balanced production, more economical distribution and greater bargaining power in the market. He sees in the proposed stabilization corporations great central merchandising agencies for cooperative organizations. He sees in them agencies for the stabilization of prices by the purchase and holding of surplus products. He sees in the $300,000,000 loan fund no subsidy for agriculture but a plan of financing corporations which would merchandise farm products economically and so manipulate them as to "save producers from preventable losses due to exceptional crop surpluses."

All these and more benefits does the Secretary of Agriculture see in the proposed legislation. He assumes, and probably Congress will assume, that the plan of merchandising farm products through central agencies, financed by public funds under the supervision of a federal board, is the most effective and economical system of marketing. But is it? That fundamental question deserves consideration at least in attempting to establish by legislation any system of marketing. The Secretary assumes that central agencies, financed by public funds and with authority to buy and hold surpluses, will have the ability to stabilize markets to the advantage of producers. But are we justified in expecting such an effect from such operations of these agencies? Is it not possible that such speculation on the part of these corporations will have an effect the opposite of stabilization? That question deserves consideration as do others; but probably we are merely wasting time and space in discussing them. For this plan, with the official sanction it has received and the support it is likely to get, will probably be approved without much further or more searching analysis.

Eastern Farm Comments

By MILES HORST

THE Pennsylvania Society of Farm Women will again hold their annual state convention in connection with the Farm Products Show at Harrisburg. A two days' program has been arranged for Tuesday and Wednesday, January 22 and 23 of that week. The programs of the Society are always interesting and inspirational to farm women. Proof of this is the fact that each year larger rooms are needed for the growing attendance. The assembly hall of the Penn Harris Hotel will be the headquarters of the Society during the week and also the place of meeting.

* * *

JAMES E. EASTMAN of Bradford county, one of Pennsylvania's Master Farmers and a good poultryman, reports a fine record in raising chicks. He started one flock of 845 chicks which were kept in brooder houses for four weeks and then transferred to clean range. He raised all of these but twenty-one. The second flock of 745 were kept in brooder houses right through to maturity. Of these he lost thirty-two. Analyzing his records two things stand out vividly. One is the precautions he took in keeping disease away from his growing chicks; the second, the care taken in the selection of feeds and the housing of the chicks.

* * *

THE vegetable exhibits in the State Farm Products Show, discontinued for the last four years, will again be included in this year's Show. The Vegetable Growers' Association of the state promises to have a display of vegetables better than any ever seen in this winter show. There will be a prize of $25 offered for the exhibitor of the best display of a variety of vegetables attractively arranged. The second and third prizes in this class amount to $15 and $10 respectively. Another class covers greenhouse grown products. There is a class for mushrooms and a class for the yellow and white varieties of celery. The exhibit will be worth seeing.

* * *

CONSTRUCTION work has been started on the new Pennsylvania Grange memorial dormitory for girls at the Pennsylvania State College. The structure, which is the gift of hundreds of Grange members, will be erected opposite the new hospital or infirmary just completed on the east campus and will be rose brick with white stone trim to harmonize with other new buildings.

The new dormitory will be constructed with a four-story central unit and two three-story wings containing in all 14 single bedrooms, 34 double bedrooms, five kitchenettes, two living rooms, shower rooms, storage rooms, trunk rooms and a Parcel Post room. It will house 100 or more girls in addition to providing social and dining quarters. Grange leaders raised $100,000 from members of their organization for the memorial. Their goal is a $250,000 fund, the actual cost of the building, which the College is helping finance.

* * *

OUTPRODUCING all other nerds in Pennsylvania, and ranking fourth in the United States for production during November was the achievement of the one hundred and ten Ayrshires owned by Penshurst Farm, Narberth, Pa., that averaged 763 pounds of 3.97 per cent milk, 30.29 pounds of butterfat, says the Ayrshire Breeders' Association. The Penshurst herd is the second largest herd of cows on official test in the United States.

Old Forge Farm, owned by W. L. Glatfelter, Spring Grove, Pa., with fifty-nine Ayrshires were second for production in the Keystone State, with an average yield of 610 pounds of 4.23 per cent milk, 25.81 pounds of butterfat, reports Advanced Registry Superintendent W. A. Kyle of the National Ayrshire Association, Brandon, Vermont.

* * *

"NOW is the time to begin to plan your next fall production of milk," pointed out H. H. Marsh, president of the Erie-Crawford counties subdistrict and director of the Dairymen's League, Inc., at the sub-district meeting held at Union City on December 27th. It was urged that the members seriously consider the necessity of a dependable fall supply of milk for the New York market if they are to protect their market from western milk shipments.

* * *

THE Virginia State Horticultural Society at the close of its thirty-third annual convention of the Society recently held in Winchester, Va., elected Thomas B. Byrd of that city as president for the coming year. Mr. Byrd is one of the famous trio of Byrd brothers—Tom, Dick and Harry. He is manager of the huge orchards of his brother, Governor Harry Byrd of Virginia. The governor is one of the largest, if not the largest, individual orchardists in the United States.

The Society is in favor of a more intensive advertising campaign for Virginia apples, but whether it will endorse a plan to advertise Virginia apples exclusively, or join in the national advertising of apples was left to the decision of the board of directors at an early meeting.—T. R. B.

* * *

ONE member of the First West Susquehanna Cow-Testing Association has erected a hospital shed in connection with his dairy barn, reports Tom C. Davis, tester, and another one is well started. Their purpose will be as maternity stalls where all cows will be kept at freshening time to avoid chance of spreading disease. These hospital sheds are recommended for controlling abortion.

* * *

A LOW chick mortality of 9.3 per cent was reported by Pennsylvania poultrymen who raised their chicks in complete confinement this year. These reports were obtained for a total of 12,309 chicks brooded under the "closed door" plan outlined by the poultry extension department of the Pennsylvania State College. A low chick mortality and freedom from intestinal parasites are two advantages of the plan.



The 925 turkeys in the above picture were raised by R. W. Lohr on his farm in Somerset county, Pennsylvania. Starting out last spring with 1,092 poults purchased in Kentucky, Indiana and Illinois, Mr. Lohr raised this flock in regular brooder houses, later as they developed turning them on open range. It is the largest single flock of turkeys raised in the state this year.

POTATOES can be fed to hogs. I always dispose of that part of my potato crop which nets me less than one-fourth the price I would have to pay for corn, that is bushel for bushel, at the barn. Numerous experiments conducted by our experiment stations have shown that 420 pounds of potatoes produce as much pork as 100 pounds of corn. Cooking the potatoes gives them a slightly higher feeding value.

* * *

COUNTY AGENT MILLER of Clarion county reports the results of two potato spraying demonstrations conducted in his county during the past summer. On the farm of C. L. Sherry the sprayed rows yielded at the rate of 267.4 bushels per acre as compared to a yield of 114.9 bushels an acre in the unsprayed rows. Just as outstanding were the results obtained on the farm of J. E. Staysa where the sprayed rows yielded at the rate of 274.1 bushels to the acre as compared to the unsprayed rows where the yield ran 113.6 bushels to the acre.

* * *

THAT the forests of beech, birch and maple in Pennsylvania cover more than 4,500,000 acres, or approximately one-third of the state's entire forest area, is brought out in a new bulletin "The Beech, Birch and Maple Forest Type in Pennsylvania," now ready for distribution by the Pennsylvania Department of Forests and Waters.

State Forester Joseph S. Illick and Leroy Frontz, research assistant, are the authors of this publication, which enters into a very full discussion of this valuable forest type in Pennsylvania. The bulletin is profusely illustrated. It is the result of an intensive field study project carried on in all parts of the region covered during a period of two years, and is the most comprehensive of its kind to be completed and summarized in bulletin form by the Department.

The study sets forth the description and extent of the beech, birch, maple forest type in the state, gives detailed data on growth and yield, discusses lumber and other forest products, and concludes with a complete discussion of methods of handling these forests for full production.

Studies show conclusively that beech, birch and maple forests grow more rapidly than is generally believed.

New Jersey Notes

AWARDS to the four Maryland can-house tomato growers who made the Ten-Ton Tomato Club this past year were made at the annual meeting of the Tri-State Packers' Association at the Benjamin Franklin Hotel, Philadelphia, on December 18th. J. W. Howard, Federalsburg, with an average yield of 12.5 tons on 2.1 acres; C. H. Gist, Westminster, with an average yield of 12.25 tons on 2.25 acres and W. Hall Dawson, Trappe, with an average of 10.57 tons on 9.7 acres were given gold watches. These prizes were made possible through contributions from industries interested in the production of canning crops.

The Ten-Ton Tomato Club was sponsored by the University of Maryland and, although this was the first year tried, there were 111 entrants. In order to qualify for the club a man must be growing tomatoes for canning and must produce at least an average of ten tons of tomatoes on a minimum of two acres; however, all acreage in tomatoes must be included in the contest.

Only four men qualified this year due to the adverse weather conditions during the growing season—principally eleven inches rainfall in twenty-four hours during August.

* * *

A SPECIAL women's committee representing the agricultural organizations of New Jersey has made extensive preparations in connection with the women's program for the fourteenth annual Agricultural Week to be held at Trenton, January 15 to 18.

The Women's Day will be continued as in past years, but this will be supplemented with tours, luncheons and meetings at which nationally known speakers will present talks of vital interest to the homemaker.

The program for rural women will begin Thursday evening, January 15, with a banquet for the wives of delegates to the State Agricultural Convention. At this meeting each woman will present her favorite recipe. On Wednesday, the women will attend the convention. This will be followed by a luncheon at which a compilation of the recipes submitted the night before will be distributed.

* * *

WITH the 1929 meeting of the New Jersey State Legislature at hand, the interest of farmers is centering on the farm legislative program. The organized interests of the state have got behind the state Farm Bureau Federation and the Grange which will represent the farm interests of the state as a unit. One of the chief activities in this program is the repeal of the personal exemption tax on automobiles. The farmers take the position that this exemption tax has worked a great hardship on municipalities and also that the state gasoline tax has produced revenues far in excess of expectations. By repeal of the personal exemption tax and the reduction of automobile registration fees to a nominal sum, there will come about a relief in automobile taxation and yet by continuance of the gas tax sufficient funds will be available for aggressive highway construction.—B.

* * *

SHIPPING of New Jersey products to northern New Jersey markets and New York City shows remarkable gains this last year. A study just completed from July through October this year by the State Experiment Station shows that these markets received over one-third of their fruits and vegetables by motor truck, with New Jersey furnishing the greater proportion of the truck shipments. The effect from this method of marketing has been severalfold. Tremendous congestion, in New York particularly, has been brought about, creating a new problem in distribution throughout the Metropolitan area. If the gain in motor truck shipment continues at the same rate new terminal facilities, pending final completion of the Port of New York Authority, will need to be established. Truck shipping, as the Department points out, is increasing the relations between grower and retailer, to the decided advantage of the grower. In addition, less handling and so cheaper marketing costs have resulted, and the time between harvesting and selling has been cut substantially.—B.

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Readers' Opinions

Location of Bees

By E. W. CLEEVES

WHAT a calamity it would be if some beekeepers should happen to get a bumper honey crop! A hundred pounds of honey would crush their hive supports and down would tumble bees, honey and all, crushing the comb, spilling the honey and killing the bees.

A bumper crop would cause others to wonder why they ever set their colonies where they are. Every pound must be carried up or down a steep bank, through a swamp or over a fence before it can be reached by even a wheelbarrow.

When the inspector finds bees on flimsy stands or in haphazard locations he cannot help thinking that their owners never really figured on getting a honey crop.

The honey crop varies. Some years are very poor, but the good year more than make up for the poor years. A yearly average of fifty pounds per colony means an occasional yield of three hundred pounds from some colonies. The foundation on which the hive sits should be strong enough to support double this weight.

Bees and Auto Traffic

A lot of hard lugging can be avoided if the location is so planned that a truck can be driven along the row of hives and the honey loaded directly from the hive to the truck. This arrangement is also convenient if one wishes to take advantage of the highly profitable business of renting bees to fruit growers during the blossom season. The smallest apiary should have at least a wheelbarrow road. Honey is heavy stuff to carry.

The hives should be so located that the flying bees do not cross roads and paths on a level with the traveling public. A little care on this point will save no end of trouble for the beekeeper and possibly prevent serious accidents to autoists. Some drivers become panicky when a bee gets in the car with them.

It is desirable to have bees close enough to the buildings to be easily watched. This will save many swarms that might otherwise escape and may prevent thieves from carrying off a few supers of honey. Bees close to the buildings require less time and get better attention.

Pure Italian bees will not sting the family or others about the dooryard and are not at all likely to sting in the bee yard, but a colony of hybrids are often very cross and at times seem ready to sting everything in sight.

The place where the hive sits should be well protected from the winds and get all the benefit of the winter sunshine. This protection means the difference between success and failure. Low temperatures are not so hard on bees as heavy winds that penetrate every crack and crevice of the hive.

How They Keep Warm

Bees do not be dormant all through the cold weather like wasps, ants and other insects. Experiments at Washington have shown that when the temperature within the hive drops to [illegible] Fahrenheit [illegible]

[illegible]

[illegible]

[



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Farm Practice

By W. D. ZINN

G. F. J., on page 402 of the Pennsylvania Farmer, informs me that Pennsylvania has a law to protect the farmers from buying low-grade fertilizer. He says that it is unlawful for any company to sell a mixed fertilizer that does not contain at least 14 per cent of plant food, that the law was enacted in 1926.



I am very glad to get this information. Some years ago I was attending an institute at Buffalo Mills in Pennsylvania and in my talk on fertilizer I asked what kind of fertilizer was bought by the farmers and a farmer handed me a tag containing the formula of the goods that had been bought by the carload in that community and it was as follows: 1-3—3—1-3. It almost took my breath when they told me that they had paid $40 a ton for the goods.

I turned to the blackboard and soon convinced the farmers—or at least I thought I did—that under no circumstances could the farmer afford to pay more than $5.40 per ton for that fertilizer. One dollar and 33 cents of this amount was for the nitrogen it contained, and I told the farmers I would not give a nickel for the nitrogen, for a company that would make so low grade a fertilizer might get their nitrogen from leather or horses' hoofs, and it would not be available for years and years. I wrote at once to the proper authorities asking them to take steps to protect their farmers. It is good news to know that at last the farmers are protected against such frauds.

Institute Speakers

On page 388 of this paper Mr. R. P. Kester has something to say about some prominent institute speakers of the past. His notes prompt me to reminisce a little.

From 1900 until 1912 the Board of Agriculture of West Virginia had charge of the farmers' institutes of the state. About the beginning of that time the said Board appointed Alva Agee and the writer to do five weeks of continuous work, beginning in Wetzel county and winding up in Wayne county in the southern end of the state. We had been out but a few days until Mr. Agee began to remonstrate with me for talking so much.

He said: "Zinn, you talk three times a day on the platform and all the time during the recesses and then you go home with some farmer and you talk to him until midnight. Remember that we are out for five weeks and you will never stand such work."

My reply was, "Mr. Agee, I will be doing business when you are laid on the shelf." Mr. Agee at that time was not very robust.

Everything went along lovely and we were having the largest crowds that had ever been seen at farmers' institutes in the state. These crowds came because they wanted to hear Mr. Agee, who was considered one of the best institute speakers in the United States. It was after he had held one of these audiences spellbound that I said to him: "Agee, I would rather be Alva Agee than Theodore Roosevelt." Roosevelt was then President. To this statement (and I was very sincere in making it) Mr. Agee demurred in his modest way. We finally reached Reedy in Roane county and were stopping at a very nice little hotel.

On coming down from his room in the morning Mr. Agee said: "Zinn, I am all in and will have to leave for home today."

"Not a bit of it," said I. "We are to have two meetings in Wirt county and I will go up there and shake the bushes and you lie here and rest until I come back."

Again Agee demurred, but the court failed to sustain the demur and off I went to Wirt and was the only speaker for two institutes of two days each. The Wirt county farmers were greatly disappointed, of course, but they were kind and forbearing toward me and I never heard of them sending in a protest to the Board for having been treated so meanly, but I have always felt under obligations to the good farmers of Wirt county for their long suffering and forbearance.

On arriving at Reedy I found Agee smiling and happy and we continued our itinerary without a break. I never heard Mr. Agee say, "Zinn, you will kill yourself," after that time. I still look on that trip as being the most enjoyable work I ever did in attending institutes. If I have ever accomplished anything as an institute speaker no little of it has been due to the information and inspiration I received from Mr. Agee on this and other speaking tours.

The Winter Care of Livestock

Winter is on and hundreds of farmers will be satisfied if they can only get their stock through until spring alive, thinking they will have all summer to grow and fatten them. No greater mis-



take was ever made. Our livestock are simply machines and the only way to make a machine pay is to keep it running. I once heard a prominent livestock man say that he liked to have his two-year-old cattle lose 150 pounds every winter, for they seemed to take on more weight the next season.

He was right in saying that they would take on more weight the next summer, but he was wrong in wanting the cattle to lose 150 pounds during the winter in order that they might have the fun of putting that weight back on their bodies. If it took two months to regain what they had lost they were losing one-sixth of the year. It has been proved over and over again that it costs twice as much to put a pound on an animal that it has lost as it costs to put on an additional pound. The reason for this is that the animal gets out of condition when it loses the pound and it must get into condition before it can make a gain.

The development of bone and muscle is made by feeding protein feeds such as legume hay, cottonseed meal or oil-meal, etc. The animal is going to grow and develop just in proportion as these feeds are furnished. The farmer who has only corn and timothy to feed is not prepared to winter young stock. They need more bone and muscle-making material than these feeds contain. He may succeed very well in feeding his work teams and matured cattle such feeds.

It is hard to estimate what internal and external parasites are costing the farmers of the country; and it is surprising how little effort is made by many farmers to free the livestock from these pests. Calves are apt to get lousy in the late fall and early winter. Last fall our calves came in from the pasture still running with their mothers and we did not dream that they were lousy, but an examination showed that they had many lice on

(Continued on Page 25.)

Striking it Rich!



Scattered throughout the West and Northwest are the ghosts of towns that lived a reckless, roaring life in their heyday. They were the mining towns—and when the diggings petered out, the towns died.

Many of these dead towns have arisen to a new life. Modern machinery and efficient methods have made it possible to work the old mines profitably—glean silver and gold that was not worth the labor in the earlier, cruder days.

MODERN methods of feeding and modern feeds are creating profits for poultrymen and dairymen that would have seemed incredible fifty or even twenty-five years ago.

Much of this increased effectiveness in production can be attributed to the attention now given to feeding. This subject has become a real science—the science of animal nutrition. Men are devoting their lives to it—scientists of high calibre.

New ideas in feeds are constantly coming to light. It is necessary to test every one of them . . . test . . . test . . . and test again. To adopt a new idea without adequate experiment might prove both foolish and harmful.

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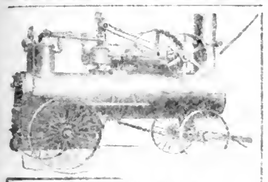
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FREE CATALOG

Stationary Spray Plant

By S. W. FLETCHER

ON the Pacific Coast the portable sprayer has been largely displaced by the stationary plant. It is winning friends in the East also. About a dozen stationary plants were installed in Pennsylvania, New Jersey and Virginia last spring. One of the best is in the orchard of the American Fruit Growers, Inc., at Flora Dale, Adams county, Pennsylvania.



At the recent Horticultural Week, held at State College, Mr. C. C. Carpenter, manager of this orchard described the plant. It consists of [illegible] gallon storage tank, a [illegible] pump driven by a [illegible] engine, and [illegible] pipe lines. [illegible] the mains, and [illegible] the laterals. Mr. Carpenter said [illegible] per bearing stand pipe in preference to galvanized. It is especially durable and costs less. The pipe should last at least twenty years, if flushed out with clear water after spraying and properly drained.

The installation of a stationary spray system requires very careful planning; it will pay to have the advice of an expert. The actual cost of his system, on 225 acres, was $7,087, of which $5,384 was for materials and $1,705 for labor. According to his figures, which include interest and depreciation as well as operation costs, he is saving $3,625 a year, as compared with the use of portable sprayers, and he believes that he is securing greater efficiency.

This is a large orchard, as have been most of the recent installations in the East; but in the Pacific Northwest the stationary spray system is used with equal success in orchards ranging in size from ten to fifteen hundred acres.

Inwood Packing Plant

THE [illegible] of the Standard Cumberland Dairy, Cumberland, Inwood, West Virginia, [illegible] has [illegible] Storage Temperature

[illegible] Used in Smaller Orchards

[illegible] Reference [illegible] Construction [illegible] Management of the Bank Storage of Fruit," of the Agricultural Experiment Station, State College, Pa., gives further details on storage construction. This is being sent to you under separate cover.

S. W. F.



-and now for 1929!

Now is the [illegible] to [illegible] your [illegible] down to [illegible] and [illegible] for the [illegible] year. [illegible] New Year [illegible]

Use Your Farm Service Hardware Store

Look for the "Tag"!

Garden and Truck Crops

By GILBERT S. WATTS

THE National Garden Bureau states that the sale of packet flower seeds has increased 11 per cent in the last three years but the sale of packet vegetable seeds has decreased 13 per cent. Apparently city gardeners are paying less attention to vegetables and more to flowers. All this improves the opportunities of growers of vegetables for market. The roadside market operator in particular is in position to demonstrate to the city man that he can secure good vegetables at their best without the trouble of growing them.

A CORRESPONDENT states that [illegible] of Senator Dunlap strawberry plants last [illegible] the summer she "became sick, had to let the berries go and they became awfully weedy. However, they made lots of runners and looked good in the weeds." It is not uncommon for strawberry growers to get sick over the weeds in their patches, but this is never [illegible] weeds as a result of home sickness [illegible] sincere sympathy. It is hard to advise without seeing the exact degree of weediness, the proportion of weeds that will live over winter and the number of good, strong berry plants.

Several things can be done. The simplest will be to let the [illegible] and mow it high with a scythe just above the berry leaves once or twice before picking time next spring. Or if very weedy and many weeds that will live over winter are present the patch might be left [illegible] for the early [illegible] and cultivated [illegible] the [illegible] worked [illegible] the [illegible] Before [illegible] the [illegible] Then [illegible] the [illegible] Then [illegible] the [illegible] Then

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Those Golden Eggs

By H. C. KNANDEL

WHEN the price of eggs is highest in the year, consumers demand fresh eggs while many producers are unable to supply any quantity, and storage eggs are largely consumed by the buying public. However, some fresh eggs trickle into the cities and the producer who is fortunate enough—or should we say the one who has used most foresight?—benefits from the high prices. It is not an impossibility to produce eggs during November, December and January, but it cannot be accomplished without foresight on the part of the poultryman. What are some for the factors which are responsible for the production of "The Golden Eggs?"



Hatch Early

As most high-producing hens have been molting, the bulk of the egg production must come from pullets under one year of age. Therefore, egg production must come largely from the birds which were hatched during the spring of 1928.

A trip through the country districts will convince the observer that many farmers have no definite time at which to hatch their chicks. If incubators are used they are set when other farm work is not so pressing. If Old Biddy is the source of incubation chicks cannot be hatched until she gets ready to set. This may be in March, April, May or June. Should chicks be purchased, the order is often delayed with the result that the chicks arrive too late in the season and cannot be properly grown and developed for winter egg production.

The wise person is now making plans for the purchase of chicks next spring. If he is going to hatch his own chicks, he has selected his breeding hens and males. Furthermore, if any quantity of chicks are to be hatched a definite schedule of all incubator operations is made. The heavy breeds must be hatched during March and the forepart of April, while the lighter breeds should be hatched prior to May 10th for general eastern conditions. By so doing, the pullets may be carefully grown so that they will reach laying age when egg prices are the highest.

Grade Pullets

Chicks in the same flock may not grow evenly. That is, some develop more quickly than others. When two or more ages of chicks are placed on the same range there is often an intermingling between the groups. The later-hatched birds have difficulty in holding their own with the larger ones. Very often poor development results.

When the pullets are housed great care should be taken to grade them according to size, maturity and time of hatching. The undeveloped pullets should be placed in a house or pen by themselves. They can then be fed in a different manner. Very often such fowls, penned by themselves, will develop into good producers. Were they to be allowed to run with the larger birds it is quite doubtful if they would pay for the feed consumed. Hence, the successful poultryman will grade his pullets when they are housed.

The Finishing Process

It is just as necessary to put the finishing touches on a pullet before the article is complete as it is to paint the body of an automobile. Very often pullets develop too fast. This may be due to the ration which is supplied them, or to other factors of management. It is not a good plan to have pullets lay when immature. If they do they lay small eggs and in addition their body is not of sufficient size to stand the strain of production over a long period of time.

How may production be retarded in the case of the early maturing fowls? One of the most satisfactory ways is to reduce the amount of animal protein in the ration, but this should not be done to the detriment of the fowl. One of the first requirements of a good pullet is a large, well-grown frame.

A second requirement is that this frame be well fleshed. This cannot be accomplished unless sexual maturity is rather slow. A general practice with some is to omit the mash mixture when pullets show signs of quick development. This may be questioned. While no doubt egg production will be retarded, at the same time the bird will not develop a suitable body. Therefore, it is considered a better practice to feed the mash but reduce in it the amount of meat scrap. The scratch grain should be fed liberally. For growing birds, a ratio of two pounds of scratch grain to one pound of mash is considered most effective. By this system of feeding, the pullets develop a large frame which is well fleshed.

The use of whole corn as a night feeding for poultry is a practice which is being followed by some commercial poultrymen. When corn is cracked a considerable amount of the nutritive value of the kernel is lost. In up-to-date mills this material usually finds its way in the milled feeds. On the farm, however, much of the corn germ is lost. Allowing fowls to pick off the kernels of corn from the ear may be practical in some instances. However, the litter soon becomes filled with corn cobs which are of no value. Some hens, too, are timid and refuse to eat off the same ear as their sisters. They would rather go to bed hungry. For these reasons, it is considered better poultry management to feed the shelled corn in troughs. This insures a plentiful supply for all. At the same time, it can be quickly eaten. This is to the hen's advantage especially during short days.

Mash Feed Essential for Eggs

When the pullets are housed—and by the way this should be done when they start to lay—a suitable mash ration may be fed. This may consist of one part by weight of wheat bran, wheat middlings, ground oats and corn meal with one-half part of meat scrap. As the season advances and egg production increases, the amount of meat scrap may be doubled. It is not well to add too much meat scrap to the ration at once, since production may be too rapidly increased, causing a loss of weight among the fowls.

If golden eggs be the mark at which you are aiming, then do not allow the pullets out of doors during the fall and winter months after they have been housed. This has a tendency to retard production. In the case of breeding hens, however, it is well to allow them range at any time of the year. This insures strong, healthy, vigorous chicks, but when eggs and plenty of them are of chief concern keep the pullets housed. In so doing it will be necessary to provide them with greens, oyster shell, grit and fresh water in addition to the scratch and mash mixtures referred to above.

Before artificial light is used on pullets allow them ample time to become familiar with their new home conditions. Late-hatched pullets may be turned into profitable egg machines, provided caution is exercised. Under no conditions is it advisable to give the pullets more than 13 working hours. Whether this be from 4:30 a. m. until evening or from sunrise until eight or nine o'clock in the evening makes little difference. It is essential, however, that the lights be turned on regularly.

Prolapsus and Pick-outs

What is your advice in regard to the loss of layers from prolapsus or blow-outs and pickouts. Some suggest more protein in the ration, up to 25 per cent, others advise reducing the amount of corn fed, as corn is fattening and heating. In your report of the annual convention of the New Jersey Poultry Association, Dr. O. N. Massengale speaking of the value of milk and meat proteins in chick rations, said he found that a ration containing ten parts of meat to five parts of milk gave best results. Would that be 10 pounds of meat scrap and five pounds of dried buttermilk or skimmilk to 100 pounds of mash for growing chickens? Also please give me best system for feeding Leghorn pullets under lights. I thank you and enclose stamp for reply, if I am not asking too much. E. R. Green.
Harford county, Md.

PROLAPSUS and pick outs are manifestations of troublesome cannibalism which is giving poultrymen much concern. Unfortunately, there is none too much information on this subject. I visited one poultryman recently who keeps 6000 Leghorns. This man was feeding a laying mash containing about 15 per cent protein, and at the end of the mash hopper he had a small compartment in which he put clear meat scrap. It was his theory that too much protein was at the root of the matter, so he provided a rather low amount in the mash, but enabled the hens to get more if they felt the need of it. He stated that under this system the hens did well, and ate a surprisingly small amount of extra meat.

I believe that many pickouts are caused by too little nest room during seasons of heavy production, as a hen which wants to lay, unable to find an empty nest lays on the floor where the other hens are able to pick at the exposed membranes of the vent.

Dr. Massengale stated that a ration containing ten pounds of meat scrap and five pounds of dried buttermilk or skimmilk per 100 pounds of mash seemed to give best results, all things considered, for growing chicks.

In feeding Leghorn pullets under lights they should have free access to mash, providing one foot of space for each eight birds at the hoppers. They should receive from 12 to 14 pounds of scratch feed daily, most of it at night, feeding a quantity that will leave enough unconsumed to provide them with a little grain when they come off the roosts when the lights go on in the morning. When production is heavy it is a good plan to feed a moist fleshing mash at noon consisting of one pound ground oats, one pound yellow cornmeal and one pound condensed buttermilk, plus one-fourth pint of cod-liver oil per 100 birds.

We are always ready to answer questions on poultry topics, so don't hesitate to write in at any time with your problems. R. L. S.

Fowls Have Paralysis

Would like to know what is the matter and what to do for chickens that get lame and limp around for some time and finally die. Their heads are red at first. None get well.
Mr. C. A. M.

PARALYSIS in mature fowls may be due to a number of causes. Under Pennsylvania conditions, the two main causes of this condition are (1) intestinal parasites, (2) coccidiosis.

By raising chickens from hatching time to maturity in fly-screened houses, fowls may be raised free from intestinal parasites. It is the usual plan to build a sun porch in the front of the house which may have a concrete, wooden or wire bottom. Some poultrymen prefer to raise their chickens on wire floors and thus allow the dirt and filth to fall through the wire so that the birds do not come in contact with it. It is imperative that the porch also be fly-screened.

For two years we have raised chickens in this manner very successfully, and none of them, on post-mortem examination, has exhibited any intestinal parasites.

Coccidiosis, however, is a serious chick disease which affects growing stock and mature fowls. Young chickens affected with this disease may appear to recover and then later when housed in the laying quarters they will develop a paralysis which finally results in death. Obviously, the treatment for this kind of paralysis is strict sanitation in the brooder house. Frequent cleaning, perhaps twice a week, and the liberal use of milk in the ration will do much to prevent serious outbreaks of coccidiosis. There is nothing which you can do for your hens at the present time to overcome this situation. H. C. K.

For Protein

We expect to use 100 lbs. ground corn, 100 lbs. ground oats, 100 lbs. bran, 100 lbs. middlings and 55 per cent protein meat scraps, dried buttermilk 30 per cent protein. How much of this meat scrap and dried buttermilk shall we use in the amount given above? Shall we use alfalfa meal in this and is it necessary to use cod-liver oil? H. F. Stahlman.

THE mash formula you are considering calls for 100 lbs. of meat scrap in addition to the mill feeds you mention. I think you could safely and economically substitute dried buttermilk for meat up to 20 lbs. of buttermilk, without interfering with the protein content or running up the cost. The addition of some good alfalfa leaf meal to a mash for winter feeding is a good practice, but I would want to feed from a pint to a quart of good cod-liver oil per 100 lbs. of mash as well. R. L. S.

Nest Box Notes

By R. L. SCHARRING-HAUSEN

I AM always interested at the "approach" employed by the various salesmen who visit the farm with the idea of selling me something. Whether I am in the market or not, I am usually willing to talk a few minutes, for the sake of the acquaintance and any little points which I may be able to pick up during the conversation. Occasionally, however, men come on the place who unintentionally make themselves so obnoxious as to render any hope of making a sale out of the question.

For instance, a farm machinery salesman called the other day, and as soon as he found I was in the poultry business, he started in to mention all the discouraging things which poultrymen have to face at times—low production, disease, lalling prices and what not, creating an atmosphere of gloom in which it would have been difficult to sell a tooth pick. Next in line was a fellow who instead of turning his car on the stoned space in front of the wagon house, backed around on the lawn and got his hind wheels stuck in a flower bed, narrowly missing having the dog set on him. Such persons are not only unsuccessful themselves but are a distinct loss to the men who employ them, at the same time making it difficult for salesmen who possess common sense and decent manners to do business.

* * *

I WAS interested in reading the report on a questionnaire published in one of the poultry journals on the feeding of cod-liver oil which had been sent to leading poultrymen all over the country. These men all used cod-liver oil at least part of the year.

* * *

THERE seems to be a wide-spread interest in turkey raising, judging from the number of inquiries which subscribers have sent to me after reading "The Holiday Bird." Most of them want to know where they can get hatching eggs or breeding stock, while others want further information on management.



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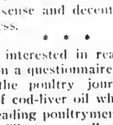
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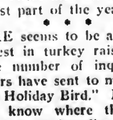
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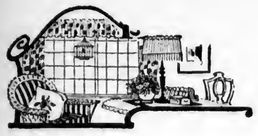
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Cotton Padding in Furniture

By Gertrude S. Stewart

REUPHOLSTERING furniture at home is not a difficult matter. A woman who has reasonable skill in using a hammer and tacks, and who can cut out garments according to a pattern, will usually find no great difficulty in doing over some of the upholstered pieces that need new covers. Sometimes a chair or a sofa consigned to the attic as too shabby for use can be redeemed by a little furniture polish and a new dress.

The old cover is usually removed to serve as a pattern for the new one and also permit an inspection of the stuffing already in the furniture. If there is the slightest evidence of the presence of moths, tobacco beetles or carpet beetles, all the old stuffing should be destroyed. The wooden framework should be thoroughly scrubbed with very hot water. If a treatment with gasoline can be given out-of-doors, it will still further reduce, the chances of unobserved insect eggs surviving to do later damage. Sometimes furniture can be fumigated to get rid of troublesome insects, but this is difficult to do under home conditions and most fumigants should be handled by persons experienced in their use.

A Further Precaution

After the framework is thoroughly free from the possibility of harboring insects or eggs, the supporting webbing should be tightened and springs examined and placed in the right positions. Clean new stuffing of the desired kind should be used.

The Bureau of Entomology of the U. S. Department of Agriculture suggests still another precaution against moth damage. As moth larvae do not feed on cotton, some furniture makers cover the inside stuffing with a complete unbroken layer of cotton batting, fitted close over the stuffing material and brought to the exact edges of the covering fabric. This layer prevents moth larvae from nesting in the porous vegetable fibers next to the wood or hair covers and eating them from inside. Surface damage can be largely prevented by any good housewife who goes over her furniture watchfully at frequent intervals. If the layer of cotton batting is pulled thin in fitting, or broken at any point, the chances of protection will be lessened.

The illustration shows a dull sofa and a chair which were originally covered by a farm woman [illegible] using the suggestions of the circular [illegible] demonstration. Extra [illegible] found [illegible] cretonne [illegible] woodwork [illegible] bolsters [illegible] of the [illegible] pleasing [illegible]





January Is an Excellent Time to Redeem and Work Over the Idle Furniture

When Taking Stock

By HEPSY NEFF

DUN & COMPANY reported 478 business failures for the entire country during the first week of December, 1928, and 502 failures for the second week. These weekly reports go on throughout the year. The foreclosing of farm mortgages and farm failures may not be common enough to attract public attention, a fact for which we may be thankful.

Merchants and business men of all kinds will be busy this month taking stock: invoicing. The mid-winter invoice or taking stock of the year's gains as well as present resources has been a mid-winter farm practice for many years. The new and growing class so well named "Master Farmers" are no doubt now at work along this line and before the end of January will have read the record of the past year and be able to forecast the coming year.

It is well within the truth to say that finding a Master Farmer is equivalent to finding a Mrs. Master-Farmer, and she will not only be interested in her husband's invoices but be hard at work on an invoice of her own. This January invoice is nothing new for Mrs. Farmer, whatever may be the custom of women who hold less important positions. She is the buyer for the indoor department of her firm and like her grandmothers before her she is ambitious to make good. Like all other buyers for big concerns she must make good or step down.

Better Chosen Foods

[illegible] [illegible] [illegible] with such staples as soap, baking-powder by the dozen cans, salt and spices, soda and coffee and whatever keeps safe. The question of gains in health from better chosen foods is settled and no woman can afford to ignore that fact. Best of all, better chosen foods means not only better health but less work in getting meals. In fact, as successful business has learned, better management always means less waste and more profit.

Get Out of the Ruts

Some of us have learned to have our good wool made into good bed blankets instead of wasting our time making cotton comforts and quilts, which add weight but not much warmth. The same may be said of our clothing. Winter clothes should protect and save the heat and vitality of the body, thus helping it to resist disease as well as promote growth and health.

Every International stock show proves what can be done by proper feeding of calves and pigs, yes, and boys and girls. The last International at Chicago had the largest number of prize-winning boys and girls ever gathered in one year. Here is a great fact which we must not forget. But this is telling nothing new to the thousands of men and women who saw this great gathering a few weeks ago. Fact is, we all really know far more than we use. Perhaps we shall continue to stumble along in the same old ruts unless we ensure now to include taking stock of our habits and making an inventory of our minds along with the other [illegible] [illegible] [illegible]

Cabbages and Colds

[illegible] [illegible] [illegible] [

A Renewed Home

I WOULD love to share with the sisters my pleasure in a rearranged kitchen and dining-room, but I realize the changes made were so slight, and the difference in convenience so great, you would not appreciate it to the full had you not known the dark, unhandy rooms as they were.

To begin with our house is of the stereotyped variety, a two-story front with one-story "T" back. As some humorist once aptly said, "A Queen Anne front and a Mary Ann back." A six-foot porch extended along each side of the "T", ending on the north with a 6x6 pantry. At the rear was an open space, back to a snare and a delusion that we termed cellar, in the hill.

The location is fierce, a steep ascent up from the road, and the house built on a narrow little "backbone," but we have a beautiful big ash tree in the yard and other trees near. In fact our problem is not "where" concerning fuel, but we almost fall over ourselves using it. We have lots of cleaning and clearing done. But to resume the topic.

The two rear rooms were 12x10 feet each, originally a saw mill shanty and the house sets directly east and west, facing west. We built a chimney—a long desired one—in the north wall of the dining room, previously having torn off the porch and pantry, and filled to the side wall each way with a window. It's an outside chimney, taking up no room.

We lowered the south window to a reasonable height, put in a glass outside door at that side and laid a good floor from a discarded silo, filled up the flue aperture and presto! the thing was done.

The Kitchen

In the kitchen we used 18-inch boards, 9½ feet long, against the dining room wall for a cupboard, giving four feet next the connecting door to the dining room, it having glass doors to the upper part, then an 18-inch open counter and another section beneath. Convenient? Very much so. This fall we have set in a piece of wall board in this open counter to shut out cold air when not using the kitchen.

The kitchen part of this built-in cupboard is 5½ feet long, and it also has an 18-inch high working space between the two sections. It's absolutely the handiest thing I ever saw about a kitchen.

We moved the flue from its position of nearly the middle of the room over to the north end with a window on each side of it. No one but some tired, harassed housewife, peering uncertainly into pots and kettles can know what that is to me, either. A glass south outside door and a window in that end, and a door fairly near the north end into the porch room completes this; but to travel those miles I used to in preparing a meal, and now have my stove, cupboard and kitchen table within hailing distance of each other, means a smile occasionally in place of a weary sigh. I'll tell something else, too.

We have a dining table, yes, but we also have a big table in the kitchen and much prefer eating there, and as we are using the dining room as a living room, as we all adore the fireplace, the kitchen is just the place to eat.

We tore out the supposed to be cellar and have a dandy now. Concrete block 12x16 feet, seven feet high and between it and the kitchen we built a room 12x16 feet, concrete floor, windowed sides, and outside door both north and south, and put a flue in it to use a heater if a severe winter; well ceiled and a sink in the corner by the the kitchen door; cistern just outside with a little 6x12 feet concrete floor, roofed porch, and it is on this north side that we go to chicken houses, smoke house, etc.

I have abundance of good shelves, firm working tables, etc. We ate in this porch room as long as it was warm enough. I have safes, a cupboard, refrigerator, etc., to use and enjoy my work. In the south yard is a good well, about ten feet from the porch, which porch by the way we hope to replace with a concrete one 8x36 feet next year. Notice I said hope.

A Dandy Cellar

We tore down an eyesore of crib and woodshed below the road and built a wood house 12x30 feet back of the well and to upper side, and it has a six foot porch with roof and west side closed and we put the separator there. We have a good outhouse over the cellar, and attic room over the rest where we store crates, etc., as we use bushel crates for potatoes and apples.

Next Year

And to all intent and purposes we do not have a front part of the house except for sleeping. We hope to fix up more comfortably the four large rooms, but if we never do they are livable. The front porch and door is used only by total strangers and, worse and moreover, it's not the dining-room door that is used—it's the kitchen one. Sinner and saint enter at it. It's hard on my reputation as a housekeeper, especially as my men kind are the type that sit in the kitchen while you cook and you become quite agile leaping over their feet. But I like to have them there. Last evening I felt maybe I was too lax when a tire tube was being overhauled in front of the fire, but personally I like to have them feel free to mend shoes, harness and shell the sheep corn, and the little Richard said, "Grandma, I put my arrows with their guinea feathers behind the door."

We hope—hope I say—to get painting and papering done next year. I did paper fresh, but it's of the Joseph's coat variety. We have to do as we can. And we do, both the man and I, try to have home a place to live in. At present the dining table has on it Barbara's typewriter, John's guitar, a jar of autumn leaves, a dictionary and the fish-bowl. So you see it's seldom used for its original purpose. I do feel happy to know that as the children have grown up and gone, and come home as often as possible, they want to stay right at home. Not a desire to go here, there and yonder, but seem content to be here with us. That's a joy. Nellie R. Nesselroade.

Jackson county, W. Va.

RECIPES—TRIED AND TRUE

Buns.—One cake yeast, one cupful milk scalded and cooled, one-fourth cupful lukewarm water, one tablespoonful sugar, four cupfuls sifted flour, one-fourth cupful sugar, three tablespoonfuls butter, one egg, one teaspoonful salt. Dissolve yeast and one tablespoonful sugar in luke-warm liquid. Add enough flour to make an ordinary sponge, about one and one-half cupfuls. Beat till perfectly smooth, cover and let rise in warm place 50 minutes. Add sugar and shortening creamed, also beaten egg and flour. Add salt last. Knead, place in a greased bowl and let rise one hour. Turn out and shape in buns. Let rise one hour and bake. READER.

Blood Pudding

Please publish a recipe for blood pudding. Mrs. R. F. N. J.

Stir the blood until cold and then strain. To each pint of blood add one teaspoonful allspice, one teaspoonful cloves. Salt and pepper as desired. Add one cupful of fat cut up in tiny pieces, three teaspoonfuls baking powder and enough equal parts of graham and wheat flour to make a nice smooth batter like cake batter. Pour into cloth bags until three-fourths full. Boil 45 minutes in cooker or boiler of boiling water. Remove sacks. Fry for breakfast. G. S. S.

Kill and Cure with Economy



(Courtesy U. S. D. A.)

Never cure meat until animal heat is out. Fresh sausage can be kept quite a while under a several-inch cover of lard. Cleanliness is a vital factor in the butchering and curing work. Throw nothing away:—All little tid-bits add bulk to the sausage. Bones if crushed or finely ground are fine for the chickens. Waste fat, trimmings and even the skin offer help in soap-making if rendered. Watch your brine daily. If it becomes ropy, change it. Slow smoking is best; it prevents leakage. We have two free bulletins to help you with canning and curing of both beef and pork. Send a self-addressed envelope, stamped, to Home Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa. Ask for leaflets on Meat Curing and Canning of Meat.

G. S. S.

What Builds Health?

WHAT is health? Health is the orderly activity of all part of the body which promotes growth and prolongs life.

What is disease?

Disease is such disorder in one or more parts of the body as destroys growth, hinders happy activity and limits life.

What conditions are necessary to health?

The first conditions necessary to health are clean air, clean water and clean food.

What makes air unclean?

Chiefly the dead bodies of animals, fish or any once-living creature. Waste and refuse of any kind, such as decaying fruits or vegetables.

What makes water unclean?

Washings from human or animal wastes of any kind. Water from wells in soil polluted with surface drainage is unclean.

What makes food unclean?

A noted scientist said: "Disease comes from dirty food and dirty fingers." Impure water cannot make dirty hands clean.

What makes water clean?

Wells located above any sources of pollution. Cemented cisterns are necessary in some sections. Driven wells piped to full depth are safe. Boiled water, cooled in clean vessels and clean air is safe.

What makes food clean?

Washing in clean water. Cooking at high temperatures. Raw foods after thorough washing and exposure to the direct rays of the sun are safe.

What kinds of food are necessary to growth?

First, foods that build and repair tissue, the proteids. Some proteid is found in most of our common foods. Proteid is most abundant in proportion to bulk in lean meats, white of eggs, fish, cheese and the legumes, peas and beans.

Foods that yield heat and energy; fats, sugars and starches. Foods that yield mineral salts; milk and the leafy vegetables. Hepsy Neff.

"Oh! Where Is That Key?"

By MRS. H. M. WOODWARD

THE woman who carries her house key house in her hand bag is put to much trouble because it is often difficult to locate. A safety pin fastened to the bag lining will form a good key holder and will avoid the usual delay and anxiety about the necessary key.

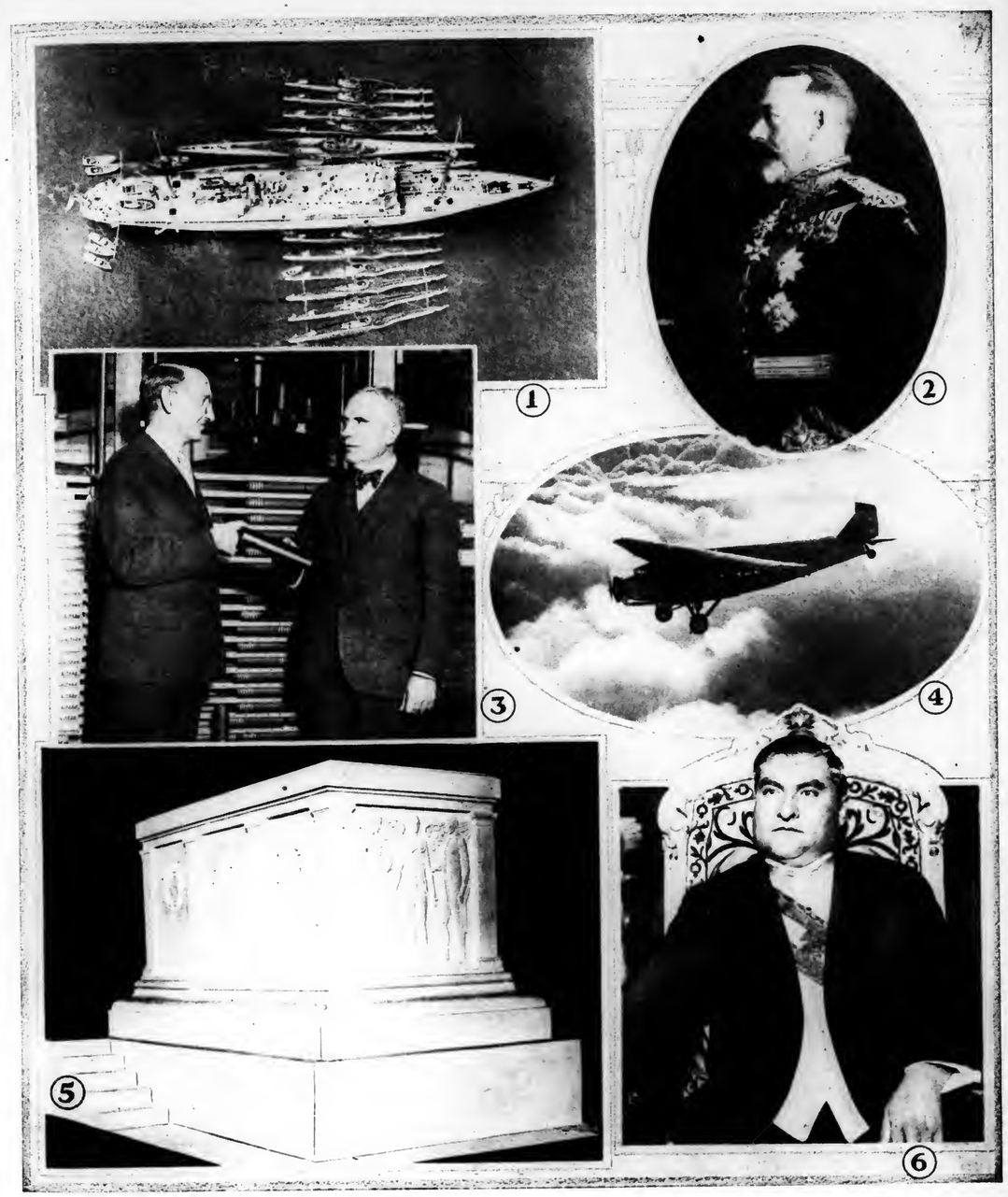
If the lock is a patent one, there are usually three keys, and different members of the family carry them. Yet quite frequently some one is locked out. Why not hide the third key outside where all the family can go to get it in times of distress? Make a hard and fast rule that the key be immediately put back in its hiding place or the plan is of no account.

An excellent way to care for extra keys for the various locks about the home is this; make a small flat key board about three by six inches, and screw into it as many screw hooks or eyes as are needed. Place all extra keys there carefully tagged. Articles having but one key, such as trunk or suit case should have their keys tied firmly to the handle.

Paper copies of keys are often useful. Trace carefully close to the edge of the key with a fine pencil point on a stiff tag. Note which key it is and hang the tag on the back of the key board.

When leaving home for a long time, protect the locks by securing any keys left inside. Bend stout wire the shape of a hairpin, having ends long enough that they can be slipped through the hole in the key and extend below it. The top of the hairpin is over the door handle back of the knob. The ends of the wire are then opened apart below the key and the key cannot be moved.

EVENTS CAUGHT BY THE CAMERA



(Copyright by Underwood & Underwood)

1. Photo shows an unusual air view of a mother ship (the U. S. S. Holland) with her brood of submarines at San Diego, Cal. There are ten subs of the "S" type and the long one is the V-2.

2. H. M. King George V appears on the road to recovery, according to latest bulletins from Buckingham Palace. A cold developed into a congestion of one lung and his condition alarmed the populace. Photo shows the British Monarch in full uniform—a recent study.

3. Left, Rae D. [illegible]kle, publisher, and George M. Rommel, author of the book "Farm Products in Industry", said to be the first book written on the subject. They are shown with the first book of the first edition, which was appropriately printed on paper made of corn-stalks—to illustrate farm products in industry. It is the first book printed on paper made of corn stalks. The utilization of hitherto wasted corn-stalks for the manufacture of paper is a new and growing industry.

4. Photo shows the new Ford all metal Trimotored plane "Columbus", the first of ten such planes ordered by the Transcontinental Air Transport, Inc., for use on transcontinental lines. This unusually good picture was taken at an altitude of 6,500 feet above the ground.

5. First photo of the winning design to complete the tomb of the Unknown Soldier at Arlington National Cemetery. In addition to the erection of the model here shown, the plan calls for a terraced approach of steps leading up to the tomb from the east front of the amphitheatre. The design is the work of T. H. Jones, noted New York sculptor.

6. This is the first official photo made of Mexico's new President, Emilio Portes Gil, after the inauguration ceremony. He is shown wearing the Presidential Band across his chest.

In Enemy Country

By James Willard Schultz

(Copyright, 1928, by James Willard Schultz)

Synopsis

Many Swans, a Sun medicine man, Lone Woman, his wife and Bear Plume, their son, who tells the story, have left the lodges of their own Blackfeet tribe and after perilous adventures, have joined the enemy tribe, the Crows. Lone Woman and Bear Plume cannot understand the move and Many Swans' only explanation is that he has done some secret wrong and must be punished. A tame wolf has joined the trio and is the constant companion of the boy. At the Crow tribe they find a welcome, much to their surprise, and Bear Plume and Black Elk, son of Chief Dusty Bull, pledge everlasting friendship. Comes a day when Many Swans gives a feast and smoke to Dusty Bull, Long Bow, Low Horn, an aspiring leader, and other chiefs and warriors. After the feast, the guests tell of their war trails and the coups they have made. Low Horn tells a tale of bravery and killing but is exposed as a liar by Many Swans and is severely punished by his own people. Lone Woman and Bear Plume are apprehensive of future revenge by the disgraced chief.

"BUT all enemy tribes fear us."

My new friend made no reply to that.

That night there was deep groaning, affrighted crying, in Low Horn's lodge, and on the following morning his women told that his body was hideously lost and he was making talk that was without sense. Toward night he became quiet, his body cooled, and it was known that he would recover from his terrible beating; but none thought that good news. Days passed, during which we got no sight of the man, he went out only at night.

Came then to my mother a close friend, one of Dusty Bull's women, and signed to her: "Last night, as I was about to pass Low Horn's lodge, I heard him angrily singing. I stopped and listened. His song of hate ended," she said, "so low that I just could hear him: 'Yes, that Painted Cheeks one, he who wounded me long ago; he who was the cause of this my torn and aching body, he shall not survive! Oh, you Big Ears (the Great Horned Owl), bird of night, my helper! Help me now; show me the way to end his trail!' And then he again sang his bad song. My thought was: 'He must be alone; he would not say that before his women.' Noiselessly I stepped to the doorway of the lodge, turned aside an edge of the curtain, and looked in. He was alone. I hurried away."

Signed my mother: "A man who takes a Big Ears for his helper must have a very bad heart."

"Yes. Tell your man to be ever watchful of him."

Said my father, when my mother had finished telling this to us, "Ha! That liar, that coward. I am not afraid of him."

"Have sense! Unless you want to be shot in your back, be ever watchful of that man," she strongly advised.

Dusty Bull's woman, of course, told him of Low Horn's prayer to his bird helper, and both camps soon knew of it. Both Dusty Bull and Long Bow came to my father and warned him to be watchful of his enemy.

"Well, let me make an end of this now. Let me go call the man out to fight me, with bow and arrows, knives or spears, and on horseback or afoot, as may be his choice," my father pleaded.

"That would be useless; he would not come out," said Dusty Bull.

"If he would fight and should you kill him, it would anyhow be the end for you. He has relatives, and, though they despise him for his great lie, they would feel obliged to end your trail, especially as you come from the tribe that is our worst enemy," Long Bow explained.

"My friends, as you advise me, I shall be watchful of that man, but I tell you now that it will not be Low Horn who ends my trail," my father signed, and so ended the talk.

Daily hunted by the men of both the Crow camps, the buffalo and other grass-eaters were becoming scarce within easy riding distance, so the Mountain Crows decided to move back into their hoch country.

The evening before they left, their chief, Long Bow, gave a parting feast for my father, and said to him, during the smoking of the last pipe: "My friend, I have taken great liking for you and am sorry that, tomorrow, we are to part."

"As your heart is toward me, so is mine toward you," my father answered.

"I would be glad to have you camp and hunt with me, with my mountain children, but as it is, after this that has happened, I think it best that you remain with your other good friend, Dusty Bull.

"My bad child, that Low Horn, I shall watch him; you shall quickly hear from me if he leaves my camp."

"GOOD. You are a real friend; I take your word. In the not-far-off future we must meet again and have many a smoke together," my father replied.

On the following morning my friend Black Elk and I watched the Mountain Crows break camp. The while Low Horn's women were taking down their lodge and loading their packhorses and travois, he sat apart from them, motionless as a rock, close wrapped even to his mean eyes in a new cow-leather toga.

Black Elk pointed to the toga and laughed: "You remember his old wrap, how it was painted?"

"Yes. Upon it was painted his great coup: the five of my people that he—killed not, and my father's arrow."

"Yes, that was it. And so proudly he wore it!"

The tribe began moving out. Family after family, each with its band of free horses, rode out in line upon the trail to the west, and last to go were Low Horn's women, he himself far behind them, the last man of the long caravan, still muffled to his eyes in his new wrap. Almost I was sorry for him.

Two days after the Mountain Crows left us, we all moved to the mouth of the Bighorn River. On the following day we went down the valley of Elk River, and on the next day set up our lodges at the mouth of Rosebud River. That is the name the Crows gave the little stream. I did not see that there was more rosebrush in its valley than there was in any other valley of the country. But here, in the valley of each river and in the breaks running up to the plains, were now ripe plums, service berries, and cherries, and the women and children began gathering and drying great quantities of them for winter use.

ON our second evening here, Little Otter and several other leading men of the camp came into our lodge, and my father signed to them that he was glad of their presence; he filled a pipe, and my mother began preparing a little feast for them. We noticed by their glances at one another that they had come for something more than a smoke.

When my father had refilled the pipe and lighted it, Little Otter signed to him: "My friend, just before you came to us, up on Bighorn River, two of our camp, out hunting, were killed by a war party from a tribe that is your enemy as well as our enemy, the Assiniboines. The women and children of those four fine men are constantly mourning, and we have to dry their tears, so is it that, because you, with your powerful buffalo medicine, have great favor with Sun, and because you are yourself a great warrior, we ask that you lead a party of us against those killers of our people."

My mother and I thought that he would at once refuse the request for, as I have told you, he always went alone upon raids against the enemy; so we were surprised when he replied: "As you ask, so will I do. With glad heart I will lead you and your party against those cut-throats, Killers of your people and my Blackfeet people."

Said my mother to him, after our visitors left: "After your always lone raids against the enemy, why is it that you now will lead a party of these Crows upon the war trail?"

"Just because they are Crows, and are very good to us; have made us, even without our asking, members of their tribe," he replied.

So was it that, on the following day, my mother and other women put up a great sweat-lodge for him and the men he was to lead against the enemy. In it they prayed Sun to save them from the dangers of the trail and give them success against the enemy. Came evening, and my father cautioned me to be ever watchful for our one Crow enemy, Low Horn; to take good care of my mother; close-herd our horses; keep our lodge well supplied with meat. He then took up his sacred pipe bundle and his weapons and shield, and joined his party of twenty men. Sadly my mother and I watched him lead them off down the valley.

Signed an old woman to us: "They go on foot. They will return with many horses, many scalps."

"Pray Sun for that," my mother signed back.

We returned to our lodge, and, low of heart, were staring at the little fire. Footsteps approached, the door curtain was thrust aside, and, smiling and bright-eyed, Black Elk came in, followed by his mother with robes and blankets.

"My father sent me," he signed, "to live with you, if you like, until your father returns."

"Good! I am glad that you have come," I answered.

My mother also was pleased, and she and Black Elk's mother soon fixed up a good couch for him, across the lodge from me. He sat upon it, and Wolf coming in, went cautiously to him, sniffed at his knee, and then wagged his tail, the while he licked his hand. Never before had the animal offered to be friendly with any one other than myself. I was surprised at his actions and pleased; it was proof that he had taken to Black Elk because he knew that he was my close friend. He already understood my language, and I signed to Black Elk that he must learn it, so that he could also tell Wolf what to do when we went out hunting or on upon discovery. I then said to the animal, 'Makkwivi, puksiput!'* and he came straight to me. Black Elk then repeated the words, and Wolf recrossed the lodge to him, ears working, tail wagging, and looking proudly back at me. So was it that, in learning how to order Wolf about, my friend soon wanted really to speak Blackfeet, and thereafter, when signing to him, I also spoke what I had to say. He was easy to teach; in a short time, he was able to speak our language as though he were himself a Blackfeet.

DAILY now, Black Elk and I rode out with my mother and Dusty Bull's women, to guard them while they filled their sacks with the various kinds of berries. They, as well as all the other women of the great camp, were greedy for the fruit; too greedy; everywhere between the lodges were horses drying upon smooth buffalo rawhides, more and more until it became difficult for one to find a way between them in the daytime; at night the hides were rolled up and piled just outside the lodges of the berriers. Came a day when Dusty Bull told his women to cease gathering the fruit. My mother also had dried more than we could use during the coming winter. So was it that, at last, Black Elk and I were free to go and come as we would during the long summer days, so long as we kept my mother and Black Elk's own people well supplied with meat. The latter were many; not only Dusty Bull and his women and nine children, two lodges of them, but also the lodge of Dusty Bull's father, mother, and several other old relatives. At last, we easily kept three lodge poles well filled with food; there were plenty of elk and deer in the valley of each river, and herds of buffalo and bands of antelope on the near plains. But each day more of the animals were killed by the several hundreds of hunters of the tribe, and the fright of survivors moved farther from our camp, and at last, when the nearest of the herds was about eight miles away, it took a whole day's ride to kill a load and bring the pieces with our pack-horses.

Before long [illegible] of our plans to go [illegible] and on that journey we went early [illegible] Next morning we [illegible] with Wolf trotting ahead of the pack-horses. When [illegible] shelf-ridge we were well up the valley of [illegible] following a trail about a month old, [illegible] made like that as it was [illegible] by the feet of our horses, and which caused Wolf to sneeze and sneeze until, becoming wise, he circled out past it and took the lead. It was our intention to go on up the valley until we should find buffalo; but soon after Sun appeared, Black Elk brought his horse to a stand and signed to me: "You see how worn is this trail; all of our hunters have followed it upon their way out to buffalo. Let us leave it, go east, where they have not traveled, and so, maybe, much sooner sight a herd."

"Wise your thought. Lead east," I answered, and herded our pack-horses from the trail to follow him. Wolf, watching us, turned back and followed me.

Leaving the valley, we rode out upon a plain cut with coulees, dotted with slender buttes. A plain that, as far as we could see, had no life upon it other than a few wolves and coyotes and little gatherings of sagehens. On and on we went, and it was not until Sun was straight above us that we found animals worth killing, a few antelope resting upon the northern slope of a ridge quite a long way ahead of us. I was about to sign to Black Elk that I would try to approach them and kill one with my gun—we were very hungry by that time—when they sprang from their beds and ran off. We went to the top of the ridge that they left, and from there had a good view of the country; no buffalo, not even a [illegible] old bull was in sight. I proposed that we turn and go south toward the head of Rosebud River, where we still some herds of the animals, but my friend signed to me that many of our hunters were already there, chasing them; that we should have a better chance to get meat by keeping on to the east, toward Tongue River, where his Crow people had not hunted for many moons; buffalo should be plentiful there; we should surely there find elk and deer.

SO was it that we kept on eastward, I somehow with low heart, with fear that that way was trouble for us. The day was now very hot; we became more and more thirsty; our horses' mouths foamed more and more thirsty; our horses' mouths foamed more and more thirsty; our horses' mouths foamed



Profits on the Horizon

THE dawn of another year is going to mean increased milk profits—right from the start—to thousands of dairymen who feed good cows intelligently. Real economical feeding is no mystery but an everyday fact to those dairymen—and it can be the same to you.

Get the right ration for *your* farm—the ration that balances with your hay and utilizes your home-grown grains most efficiently. If your dealer has a batch mixer, take your corn, oats or barley to him and get him to mix these feeds with the correct amounts of

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THE ADVERTISEMENTS in Pennsylvania Farmer contain information that is valuable and important. Read them and when answering them mention Pennsylvania Farmer. It will help us and help you.

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Farm and Dairy

By L. W. LIGHTY



RIDING through the country in the growing season we see many areas, larger or smaller, where the crops look sickly and stunted. Closer examination indicates the mechanical condition of the soil is at fault.

Many years ago I purchased Storer's great work on Agriculture and I studied it earnestly, not with the idea of "getting an education" but in the hope that I might coax my sterile soil to yield enough to pay some pressing debts. I learned that soil may become solidified and sealed up so neither air nor water can enter readily and in that condition it is almost a lifeless soil.

Before I had finished the first volume of my set I was convinced that my problem was so to open the soil that the rain could readily penetrate, and if enough fell it could find its way down to the rock seams and the air would follow as the water vacated the little spaces. The next rain would drive out the air and the process would be repeated, which appropriately enough has been referred to as soil breathing. I also soon learned how in a practical way the soil may be put into a condition so this "breath of life" may be utilized for man's welfare. Just half a dozen words tell it all!

Put Organic Matter into the Soil!

I know this has been repeated a thousand and one times, but at the same time when I look at those pale, sickly crops in the summer I realize also that the sayings have affected many folks as water does a duck's back. But ignoring such elemental and fundamental facts brings only loss and unpleasantness.

In my work I observed there were places in the fields that responded slowly to my treatment for the reason that the subsoil was sealed and the water could not move freely. There breathing was interfered with, but as soon as I laid lines of tile with a good open outlet my results were even better in this section than on the higher ground, because for a long while the best soil tended to the lower sections where stagnant water sealed the soil.

Great areas are not yielding what they easily could and should yield for the reason that the condition of the soil does not allow it to breathe in a healthy manner. The remedy is in the hands of every individual farmer.

Soil Life

The expert who has delved into the soil minutely finds a nonproductive soil, that is a soil lacking organic matter and water-logged, to be almost devoid of living organisms, while the soil that is in a condition to breathe in a healthy manner is teeming with minute organisms, many of them at work preparing the plant food our crops need. Some break down the vegetable matter and others the mineral matter and still others secure nitrogen from the air that passes through the soil spaces. Thus we see the action and interaction of favorable conditions and the work of the small organisms in the soil.

But the observant man who grows the crops continually realizes that the plants on the manured and limed soil are different from those where such application was not made. Again he observes the corn is different in growth where a sod was turned down as compared with that grown on soil where no sod existed for a few years.

The observations and practices of the farmers furnished Dr. Storer with a great repository of valuable facts to which he added his own gleanings from the work of the scientists the world over, resulting in a work on Agriculture that is and will be standard for a long time to come and may be profitably studied by any farmer who would be master of his business.

When Advising Folks

Frequently a call comes on the telephone asking for advice and of course there is a constant stream of letters. I am very hesitant about advising, because I know how easy it is to make a mistake. But I well recall how pleasant it was to meet a man of experience and counsel with him on matters that seemed difficult, and because of these recollections I am always ready to do my utmost to assist those who are puzzled as to what to do or how to do it.

The latest question that came over the wire after the middle of December was, "Would you advise plowing now?" I always did as much plowing in the fall as possible if the ground was in plowing order and always had favorable results, so I never advise against what always gave me good results.

Test Varies

Can you tell me it the test of cow's milk changes every month? I have three cows, one Guernsey and two Holsteins, and ship milk. The test is different every month, from 3.4 to 4.8 per cent. The cows are fed the same right along. MRS. B. U.

THE tests of milk are likely to vary somewhat from month to month. Some of the reasons for this are as follows: Change from pasture to dry feed, change in the period of lactation and change in weather conditions.

While tests will normally vary somewhat from month to month yet it must be conceded that the change in the test, as stated in your letter, is quite extreme and that so great a variation would scarcely be expected.

If you are of the opinion that the milk plant is not giving you a correct test I would suggest that you write to the Department of Agriculture at Harrisburg and state the facts. The Department of Agriculture will then send a man to check up on the testing at the plant and determine whether the patrons are receiving a correct test.

A. A. Borland.

Milk Laws

Can you tell me the requirement of the law in regard to selling milk? Do you have to have the cows tested? If so where could I locate a man for that work? I have eight head of cattle.

John C. Lupton.

ACCORDING to the ruling of the Department of Health, Harrisburg, Pa., the cows must either be tuberculin tested or else the milk must be pasteurized before offering it for sale.

I would suggest that you write to the Bureau of Animal Industry, Harrisburg, Pa., concerning the tuberculin testing of your cows. The Bureau has entire charge of the matter of tuberculin testing in the state of Pennsylvania and will be glad to give you details as to the different methods by which you may proceed to have your herd tested. A. A. Borland.



When you buy mixed feeds, the quality of the protein base is vitally important. Our new free book explains this and many other valuable points in feed buying. Six full pages of practical rations for farmers who mix feeds at home or have "batches" mixed by local feed mills.

No matter what class of stock you are feeding or in what form you buy feed, you can profit by these up-to-date business principles of Feeding Management. Mail coupon for your copy of this 52-page book.

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HOOSIER GALVAZINK PUMPS STAR WINDMILLS

Dairy Topics

By A. G. HUMPHREYS

A WEST VIRGINIA reader has a notion to put up a ten-foot silo and keep about six cows. He will sell cream for the present, but in the future, perhaps in about a year, he thinks a milk route will be established by his farm and then he will sell whole milk. The silo interests him at this time. He has a notion to buy it at once and put it up this winter while he has nothing else to do. How long will it take six cows to pay for a silo? How much silage should a cow have at a feed? How much corn will it take to fill a silo of the size he is about to buy?

In the first place a ten-foot silo is too big for six cows. He will not be able to feed the silage fast enough. When the silo is once opened, to get the best results out of the least feed, it should be fed out at the rate of about two inches per day. That may seem like a very small amount of silage to an inexperienced feeder, but when he takes off two inches of tight-packed silage he will find that his six cows have more than they can handle.

During this unusually warm winter weather I am having trouble to feed seven cows, five calves coming a year old, and two horses off an eight-foot silo. I cannot feed it fast enough to keep some of it from spoiling. An eight-foot silo will be plenty big enough for six cows and the attending crop of calves, some of which he will want to keep.

Will They Pay for It?

Six cows may not pay for a silo at all. It will depend on the cows. We never think of cows paying for a barn or a mowing machine or any part of farm equipment or shelter, but I suppose we ought to figure it along that way if we want to imitate other businesses.

If one wants to take the cows to the task of paying for the silo alone, and not for twenty other things that they are supposed to pay for, it will take six cows something like a couple of months taking all their income. I am supposing that the cows produce something like seventy-five dollars per month—all six of them. Many dairymen who read this will say that figure is too low, but I happen to know that a good many cows kept on farms remote from dairy sections are not in the class of dairy cows as we know them. At the best one can do it is more or less of a guess.

When it comes to filling a silo that of course depends on its height. For the inquirer's benefit let me say that it will take three big chickens and lots of potatoes and beans to fill the crew that fills the silo if they do it in one day.

The part that I do not understand is putting the silo up this winter while one has nothing else to do. I have lived on a farm a long time, or at least it seems like a long time, and I have never seen a day when there was nothing to do. By all means put the silo up while the season is slack, but take care of the cement that it does not freeze when the foundation is put in.

About Silage Feeding

A while ago I mentioned that I fed two horses some silage. It has been a question for a long time whether silage would hurt horses or was good for them. I feed it with a good deal of regularity to two, but they get very little when compared to what the cows get. I do not feed more than two or three pounds twice a day. When horses get sick on silage I am inclined to think they are fed too much of it.

Most every animal on the farm will eat silage. Chickens do well on it and the man who has hogs will find that they eat it with relish, so if our correspondent has too much silage for his six cows he might feed some of it to other animals he may have.



Just a cup of cream

But it is Equal to—6% interest on $912.00

A user of an old cream separator, which was apparently working all right, tried a new De Laval. Much to his surprise the new De Laval gave him a cupful of cream more at each separation. He figured he had been losing 15c. worth of butter-fat a day, amounting to $54.75 in a year—and equal to 6% interest on $912.00. Needless to say the De Laval stayed. This is not an unusual case, as the same thing, and often greater loss, is occurring on thousands of farms.

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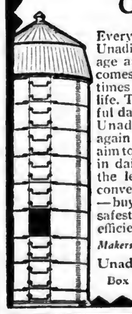
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IRA WHITMAN,
Tester of Ass'n No. 1



R. C. BLANEY,
County Agent



HAROLD BRUNGART,
Tester of Ass'n No. 2

A Year's Work in Centre County

THE Centre County C. T. A. No. 1 finished its fifth year August 1, 1928, with 19 whole year members and four part members. There were 404 cows in the association during all or part of the year. The results for the association for the five years are as follows:

Year	Cows Av. No.	Milk Lbs.	Fat Lbs.
1924	252.42	6,257	243.7
1925	220.50	7,280	265.3
1926	298.59	7,903	289.0
1927	202.67	8,050	293.7
1928	291.60	9,569	340.7

The results for the whole year members are as follows:

Total avg. number of cows in the association	291.60
Average per cow:	
Pounds of milk	9,569.
Pounds butterfat	340.7
Percentage of butterfat	3.6
Value of product	$245.36
Cost of roughage, including pasture	42.50
Cost of grain	67.19
Total cost of feed	109.69
Value of product above cost	135.67
Return for $1 expended for feed	2.24
Feed cost per 100 lbs. milk	1.15
Feed cost per pound fat	.32

Individual Herd Records

Sixteen herds with an average of five or more cows exceeded an average production of 300 pounds of butterfat. The five high herds follow:

Owner	Breed	Lbs. Milk	Lbs. Fat
Allen Harter	R.H.&G.G.	12,297	459.1
Theodore C. Kryder	R.H.	12,128	433.0
A. C. Hartle & Bros.	R.&G.H.	11,815	405.5
George P. Gummo	R.&G.H.	11,781	386.5
Peters Brothers	R.&G.H.	10,267	378.6

* * *

Association No. 2

THE Centre County C. T. A. No. 2 finished its first year Aug. 1, 1928, with nine whole year and one part year member. There were 151 cows in the association during all or part of the year. The results for the whole year members are as follows:

Total avg. number of cows in the association	101.78
Average per cow:	
Pounds of milk	7,997.
Pounds of butterfat	319.5
Percentage of butterfat	4.0
Value of product	$214.12
Cost of roughage, including pasture	38.67
Cost of grain	54.21
Total cost of feed	92.88
Value of product above feed cost	121.24
Returns for $1 expended for feed	2.31
Feed cost per 100 lbs. milk	1.16
Feed cost per pound fat	.29

Individual Herd Records

Six herds with an average of five or more cows exceeded an average production of 300 pounds of butterfat. The five high herds follow:

Owner	Breed	Lbs. Milk	Lbs. Fat
J. Fred Slack	R.&G.H.	11,315	409.5
S. F. Esterline	R.&G.J.	7,121	377.4
J. Victor Brungart	R.&G.J.	6,892	359.2
R. C. Bair	R.&G.J.	6,850	340.3
W. F. Rishel	R.H.	9,449	301.6

Lumpy Jaw

J. J. R.—I have a young cow which has a lump on her jaw as big as a goose egg. What can I do for it? I don't know whether she bumped it or not. She had one a year ago on the other jaw, but it disappeared. This one is growing rapidly.

Lumpy jaw is caused by a ray fungus —actinomyces. This organism is found on the awns of straw, also on fodder and some other forage crops. In case the growth is in the soft tissues, and is not attached to the bone, an operation properly performed will eliminate the trouble. If the growth is attached to the bone, an operation is not advisable. An application of pure tincture of iodine to such a growth may reduce its size. Doses of potassium iodide have been advocated and in certain cases have benefited the affected animal. If you use the iodide of potassium, give one-fourth ounce dissolved in one half pint of water and give as a drench. Repeat the dose every other day for four treatments, provided the animal appears physically strong. The treatment should be discontinued if the animal's eyes run to any considerable degree and show the appearance of foreign matter. Probably the best thing to bank on, however, is an operation by your veterinarian. This is difficult when the bone is involved and in that case it will have to be burned out with caustic rather than to use the cutting knife. H.



Farm Practice

(Continued from page 10.)

them. If we had allowed these lice to remain on the cattle it would have taken a lot of extra feed to feed the lice. We had no feed we could spare for the lice, so we dipped the calves twice and freed them of these parasites.

Woodbine Notes

Both personally and by letters farmers recently have insisted that I give "Woodbine Notes" more frequently. The only reason I have for not doing so is that it savors of blowing one's own horn too much.

As I have stated in former notes, Woodbine was a disappointment this season, due largely to the fact that it rained all the season and partly to the fact that the boss was not there. We had the poorest crop of corn we have grown in thirty years. Our silos hold 280 tons and we had 23 acres of corn and did not get enough silage to fill one silo. The 23 acres always filled both in other years. We should not have expected much corn, however, for we did not finish planting until the 7th of July. This corn grew big fodder but did not reach the earing stage. We have therefore a poor quality of silage.

The potatoes did no better than the corn for the same reasons. We had 16 acres planted and they produced less than 2,000 bushels and the sales amounted to about $700, which was less than the seed, fertilizer and planting cost.

The Clover Field

The only thing on the farm of which we are proud is the 18-acre clover field. The field was sown to wheat about the 27th of October, 1927, and a little timothy and 12 pounds of vetch per acre were sown at the same time. In the spring we sowed five pounds each of red and sweet clover and alfalfa per acre. We had some fears that the vetch would smother out the clovers, but though it grew very luxuriously it did not seem to injure the clovers, and we have now the finest field of clover we ever had on the farm.

On account of the rainy weather we did not get all the wheat cut for hay until it was ripe and we cut and threshed 120 bushels of wheat and vetch. The clover came on after the wheat was cut and made a fine crop, but again the rain interfered and we did not get it cured well and we now find it moulded badly.

This ground was in potatoes in 1926 and received a ton per acre of a 0-13-10 goods and therefore this clover will need no superphosphate in the spring. Neither will it get any manure. Our notion is that manure applied on heavy clover sods causes the bacteria to become lazy and they will not gather as much nitrogen from the air as they would if no manure were applied. No, that is not my notion; it is what the bacteriologists teach.

The writer thought he had unloaded permanently the care of the farms from his shoulders, but he has assumed the direct management of them again. With the home farms that he owns and the 100 acre rented farm together with 130 sheep and 127 cattle to look after he feels that he will not get lonesome because he has nothing to do, but I am afraid that I am to be kept busy.

The Grazing Farms

I never had a better season and the soils were never in better condition. The filth was all cut [illegible] and the soils [illegible] the [illegible] I did not [illegible] the [illegible] need [illegible]



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are often the forerunners of serious complications, trouble and expense. Don't allow your horses to be laid up when you need them most. Keep them working with

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Horsemen swear by it—sold for 35 years. 60 cents and $1.20 at drug stores or direct.

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Write today for free trial bottle—convince yourself at our expense.

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COMPLETE POWER MILKER $35

Ready to milk when you get it. Send for sensational offer! Milks 15 cows an hour. Easy to operate. Milks the human way—easy on the cows. 30 Days Trial—10 Year Guarantee—100% satisfaction guaranteed or money refunded. Write today.



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OTTAWA MFG. CO. 2021 White St., Ottawa, Kans.

I will condition a Horse or a Cow in twelve days



Put flesh on its bones. Give it life and vigor. Can add 50 percent to looks and value. Satisfaction guaranteed or no pay. Send postal for free offer.

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NEWTON'S Heaves, Coughs, Conditions or, Worms. Must for cost. Two cans satisfaction or Heaves or money back. $1.50 per can. Dealers or by mail.



For horses, cattle, hogs The Newton Remedy Co. Toledo, Ohio.



The Type of Desirable Market Lamb Is Illustrated by the Grand Champion Carload at the Recent International Livestock Exposition

4-H Club Results with Sheep

IN five years of club work Harry Sweany, of Carroll county, Ohio, has developed a flock of pure-bred Delaine Merino sheep now numbering 40 head, and each year has won enough in prize money at local fairs to meet all his expenses. This year he annexed both grand championship awards at his county fair, which puts up one of the big sheep shows of eastern Ohio.

Three ewes were bought for the foundation flock in the 4-H Club in 1924, well-bred lambs from a Huron county breeder. The second year in the club Harry raised two lambs from this. Next year he bought two ewes on the Baltimore and Ohio "ram special" train through eastern Ohio counties. With these and the lamb crop, seven that year, his little flock was augmented to 14.

Then in 1927 he raised more than 25 lambs, buying a few ewes in the meantime with money he had won at the county fair. This year his flock numbers 40 head, including three well-bred rams.

A Consistent Winner

Every year Harry has been sweepstakes winner in sheep club work in Carroll county. The first year he was given a free trip to the annual club congress at Columbus, but was declared ineligible after once winning a trip. This fall he entered some of his little flock for $130 offered at the county fair, and despite the stiff competition afforded by veteran showmen he came home with $110 and both purple ribbons denoting grand championships for both rams and ewes. For the last three years he has won grand champion award on ewes.

He is now organizing a sheep club of which he will be leader next spring. He hopes to do as well or better than his father as leader of their club the last five years. The six boys in this club have averaged $150 income a year from increase in their flock, wool and fair premiums.

This club boy is now a senior in high school. He has had abundant experience in club work himself, was an attendant on a special sheep train, won in wool judging last year at the Tri-State Wool Growers' meeting at Cadiz, and now has ambitions to complete his education at the College of Agriculture of the Ohio State University.

L. L. Rummell.

Give 'Em a Chance

THERE was no market for Keiffer pears last fall. We had too many, bushels—scads of pears. We stacked up the crates in a dry outbuilding, some being discarded orange and lemon crates to be had for the asking. Later we condensed the crates to a solid block and covered with burlap bags and canvas paulin to hold in the ground heat. Now at Christmas time we are feeding the hogs half a bushel of pears a day, just an appetizer after a few weeks on a rather prosy diet.

Try throwing a pile of straw somewhere on clay ground to keep the land from freezing. Off and on in frozen weather dig up a bucketful of fresh clay for the fall pigs. If you are one of the farmers who carry those fat hogs into frozen winter weather and have never been converted to feeding soft coal, try a bucket of fresh clay for the fat hogs occasionally.

When a hog wakes up in the morning he is thinking about his breakfast, then maybe he is rather too full to drink all the water he ought to have. At night he is hungry again and thirsty too if his owner is not a noon waterer—so he douses his night meal with an overdose of icewater! Do you suppose that would agree with Yours Truly? This way a hog never gets to wash out his empty stomach with clean water.

Give your fat hog the chance, for he would like to show you what he thinks of a quart of cold water at noon these dry frozen days. Give him the chance to flush out his system with what our washerwoman used to call "reuch water".

Thomas Jones.

A Vest Pocket Essay on Economy

ECONOMY is a much used word but with the accent always on the "con". While everybody is strong for the laudable disposition to save practically no one in this dizzy age permits it to interfere with his stepping along.

There is one business enterprise, that of raising hogs, in which economy appears to be a lost art, at least insofar as prevention of disease, especially hog cholera, is concerned. An owner will put up a neat sum to have his hogs immunized rather than observe rational methods of sanitation that would not cost a penny and would eventually get rid of the disease.

Nearly a Century

Ninety-five years have elapsed since hog cholera first began to take its annual toll and twenty annual reports have been written since anti-hog cholera serum was first given to the swine industry but the usual losses—plus the cost of immunization—are still being sustained. Moreover, in localities where the double treatment has been extensively and continuously used since it was developed a number of alleged new diseases of swine have been added to the woe of the hog raisers.

However, the factors responsible for starting new centers of infection have been determined. They are only three in number and it is feasible to correct all of them. The swine husbandmen of the nation can eradicate the disease by adopting and observing methods of sanitation that will prevent the introduction, harboring and spread of the infection. Have the hog owners suffered sufficiently to make a change?

I. K. Atherton, Inspector in Charge of Hog Cholera work, Maryland.

Dressed Sixty-Two Hogs Alone

MY 1926 hogs were very late. When cold weather had set in 62 hogs, ranging from 130 to 175 pounds, were still unsold. I got the idea that city people would buy dressed hogs if they knew they would not get too much fat, nor too big a hog. I talked to a few of them and proceeded to act.

At my request the city meat inspector drove out and approved of my herd and sanitation. I advertised that fact and that my cattle were free of tuberculosis, while I emphasized the point that I was killing only eating hogs, not lard hogs.

Plans to Save Time

The response was immediate. At each day's delivery I came home with enough orders to make another butchering imperative at once. This necessitated the killing of from five to six hogs at a time, generally every third day.

I used the garage and so planned things that fifteen minutes' work would remove all apparatus when I was through butchering. Just inside the door stood the small scalding barrel. Overhead a two-by-eight timber was fastened to the ceiling joists. One end was supported exactly over the barrel with the timber reaching straight away from the door and parallel with the scraping bench, planks of which were laid on sawhorses. This bench was a little to one side of the timber overhead.

From this two-by-eight hung a row of pully sets. Directly over the barrel was a good double pulley set for the heavy work of souising. The water was heated in a boiler sitting on a pressure gas stove of the flat type. This was conveniently near the barrel.

The preceding evening I shut up the selected hogs and kept feed and water from them. After bleeding each hog the hook was affixed and he went the rest of the way by rope and pulley. After sufficient soaking he was hoisted suspended over the barrel while I removed most of the hair, letting him down into the hot water from time to time to facilitate the operation. Then a short swing of the rope as he was coming down landed him on the bench. At this stage I put the water back into the boiler, where it could be getting ready for the next one.

A Hog an Hour

The scraping concluded, I slid the hog along the bench to within reach of the farthest pulley rope and suspended him while I washed and dressed him. By this time the water was boiling again and I went after another one. When the last hog was hanging dressed I removed the bench and the barrel and proceeded to split each one and loosen the leaf lard.

The average time consumed was one hour to each hog. My profits over hog prices came to over $300. My success was due to the following facts: They were "eating hogs," they were inspected, sanitary conditions were provided for and the system I followed with the equipment I used permitted me to handle the job without hiring help.

J. P. Newtire.

Salt for Sheep

THE practical sheep raiser is often called on to diagnose sheep ailments from what might be called a nondescript and rather hard-boiled experience. This is easily explained. The value of an individual sheep has never been so high that it suggested calling a veterinarian. For this reason the veterinarian himself often misses the interesting and challenging cases of sheep sickness that have impressed themselves on the old timer by sheer necessity and happen so.

Sheep may not be seen for days on end by many rather easy-going farmers. When a carcass is found or the unfortunate animal "kicking his last" is casually run upon the actual cause of death is most generally dismissed with an air of indifferent unknowableness. An example of this is salt poisoning. Many farmers who have actually lost sheep from this cause have never seen a case of salt poisoning and probably would never "catch on" if the well-defined symptoms lay before them in the sharply characteristic condition.

Fate of the Greedy

Possibly the farmer is one of those who depend on irregular salting instead of the safe method of keeping salt before the animals at will. Very casually the handful of salt is thrown "spat" in a pile and one animal in the lead or some other animal especially persistent manages to "scoop" and "holt" down two or three mouthfuls—then continues to lick the piles with the other sheep until the whole ration of salt has disappeared. This explains clearly—every observant sheep raiser knows—why one animal may turn up dead (poisoned) and all the others get by with it.

The veterinarian will tell you cases of salt poisoning that make recovery (severe cases seldom do recover) may take an anemic turn, leaving a sheep not dead but just about as well as dead from the standpoint of health and profit. To the thoughtful sheep raiser who knows salt poisoning at sight the fact immediately suggests itself that many scattered cases of unexplained decline (an individual here and there in flocks are brought on in the first place by cases of salt poisoning in which the animal never quite lost its legs. Such animals may have suffered damaging gastric and intestinal enteritis (inflammation) but yet managed to keep their legs! Damaged sheep, no doubt!

Virtue of Regularity

The writer is not out to debate the subject of condimental stock salts. There is no disputing that thousands of farmers testify losses have been reduced and flock health has been held at a higher plane with medicated salt than when sheep had been salted in old haphazard ways. Salting sheep once a week or salting sheep twice a month is not the proverbial "one thing after another" for the health of sheep—but just the same thing every time you do it when compared with the even dainty rations of salt a sheep takes daily if you give her the chance.

Hiram Dobbin.

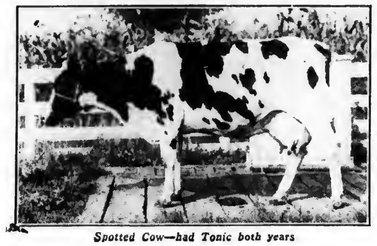
National Assn. Officers

THE National Association of Stallion Enrollment Boards held a dinner meeting during International week. Last year's officers were re-elected: W. L. Blizzard, Oklahoma, president; Carl U. Kennedy, Iowa, first vice-president; A. L. Harvey, Michigan, second vice-president; H. R. Church, Penna., third vice-president; R. B. Cooley, Lafayette, Ind., secretary-treasurer.

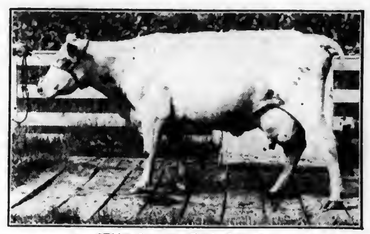
One of the speakers recently returned from Belgium, Fred Holbert, reported outstanding sires being patronized at fees equal to those of pre-war times. One horse was being stood at $400 per service without guarantee, and had 100 mares for the season. Wayne Dinsmore, of the Horse Association of America, reported on his observations of the number and age of stallions, concluding that there are not enough to serve the mares of the United States.

A Startling Milk Profit Story

THESE two cows, same age and condition, were started on a two-year milk test in the fall of 1926. Both were fed a ration of 6 parts ground corn, 6 parts ground oats, 2 parts wheat bran and 1 part oil meal. When they were off pasture the roughage consisted of corn silage, alfalfa and mixed hay. There was no difference except that the Spotted Cow had Dr. Hess Improved Stock Tonic with her feed during the first year—the White Cow did not.



Spotted Cow—had Tonic both years



White Cow—no Tonic first year

Results of test, with the monthly records, are given in the tables below:

FIRST YEAR
Only Spotted Cow had Tonic

	Spotted Cow Tonic		White Cow No Tonic	
	Pounds of milk	Profit	Pounds of milk	Profit
1st month	1423	$18.47	1535	19 29
2nd month	1234	15.31	1105	12.88
3rd month	1217	16.63	1157	12.19
4th month	1288	19.51	1058	11.30
5th month	1162	18.46	866	7.16
6th month	1024	12.99	721	7.91
7th month	1203	17.14	787	5.41
8th month	1144	15.94	702	4.16
9th month	1124	18.44	679	2.46
10th month	876	13.18	518	0.11
11th month	768	12.38	311	0.58
		Profit $178.45		Profit $83.45

During the first year of the test the Spotted Cow that received Dr. Hess Improved Stock Tonic produced 3024 pounds more milk and made $95 more profit than the White Cow, the one that did not receive any Tonic.

After the cows went dry the White Cow was then given Dr. Hess Improved Stock Tonic in preparation for the next year's lactation. The object was to have the cows start the second year on an equal basis.

SECOND YEAR
Both Cows get Tonic

	Spotted Cow		White Cow	
	Pounds of milk	Profit	Pounds of milk	Profit
1st month	1643	$26.80	2170	$35.51
2nd month	1596	26.47	2040	32.52
3rd month	1534	24.10	2022	33.12
4th month	1544	25.17	1968	34.06
5th month	1391	21.36	1682	26.35
6th month	1148	14.36	1510	22.31
7th month	944	13.74	1329	28.07
8th month	924	14.39	1141	15.62
9th month	704	9.73	878	11.12
10th month	552	6.30	533	5.65
		Profit $182.51		Profit $244.33

Outstanding facts about this test are:

First—White Cow gave 5834 lbs. more milk and made $160.88 more profit the second year with Tonic than first year without Tonic.

Second—The Spotted Cow made more profit the second year with Tonic than she did the first year with Tonic. This proves that the longer the Tonic is continued the more profitable it will be.

Dr. Hess Improved Stock Tonic is not a feed. It does not take the place of feed, and no feed can take the place of Dr. Hess Improved Stock Tonic. No additional salt or minerals are required, for they are present in Stock Tonic in all-sufficient quantities.

Dr. Hess Improved Stock Tonic

APPETIZER—REGULATOR—MINERAL BALANCE—*all combined in one product*

Adopt our plan of continuous feeding of this Tonic for at least 90 days and see what it will mean to you in increased production and profits. It costs but 50c per cow per month. See your local Dr. Hess dealer and get your 90 days' supply now. Figure 15 lbs. for each cow.

***RESEARCH FARM* — DR. HESS & CLARK, Incorporated — ASHLAND, OHIO**

SWINE

BERKSHIRE PIGS. 8 weeks old, registered. Good, thrifty breeding stock to make you money. **W. F. McFARRAN,** Furnace, Pa.

BEST GRADE CHESTER, Berkshire and Poland-China pigs, 6-8 weeks old, $7.00 each. Three months old, $12 each. Express paid. Bred sows and boars. **C. E. Bosserman, York Springs, Pa.**

Chester Whites (Champ. Blood) Bred sows & boars. Big type that wins. **L. O. CORMAN & SON,** Beech Creek, Pa.

CHESTER WHITES.—Pedigreed big type Champ. blood, all ages, 13 sows farrowed 151 pigs, priced low, must please. **C. E. Cassel, Hershey, Pa.**

CHESHIRES The pig for the family table. Unsurpassed in quality. **MORNINGSIDE FARM,** Sylvania, Pa.

CHESTER WHITES.—Big type, pure-bred. Bred sows, boars and gilts. Pigs, $10 prepaid. **GEO. F. GRIFFITH,** Newville, Pa.

CHESTER WHITES.—Big type. Stock of all ages for sale, from my undefeated show herd. Priced low. **S. J. Bowman, , Fisherville, Pa.**

Big Spotted Poland-Chinas. Have some choice fall pigs, 10 & 12 wks. old. Guar. to please. Write me. **Wm. H. Jackson, Darlington, Pa.**

BIG TYPE POLAND-CHINA GILTS, bred for March farrow, as good as grow. Prolific. Price right. Registered. **O. C. FOWELL, Ada, Ohio**

Reg. Spotted Poland-Chinas. Spring gilts and boars ready for service. Fall pigs at 10 wks. age, $10.50 each. **A. M. Kennel, R.2, Honey Brook, Pa.**

CATTLE

If You Want Angus heifers at a reasonable figure, write us. Pure-bred cattle always for sale. **BAYARD BROS.,** Waynesburg, Pa.

SHORTHORNS. A few good Shorthorn bulls, from eight to twelve months old. Also one January yearling. **C. L. & F. M. Patterson, R. 1, Rea, Pa.**

FAIRVIEW HEREFORDS.—Bulls, Heifers, Cows. Federal Accredited, bred right and priced to sell. **GEO. G. COCHRAN,** Dawson, Pa.

BUCK & DOE RUN VALLEY FARMS Hereford Cattle—Poland-China Hogs—Hampshire Sheep—Draft Horses. **THE SAINT AMOUR COMPANY,** Mortonville, Penna.

POULTRY

S. C. W. LEGHORN cockerels for breeding, banded by Penn'a Extension Dept. Write for prices and description. **J. C. McCOY, Jr., Emlenton, Pa.**

BARRED PLYMOUTH ROCKS.—Big, vigorous, well barred, Mar. hatched cockerels. Descendants from high producing state fair winners. Circular. **B. L. EVANS,** Spencer, Ind.

Exhibition Barred Rocks, Male and female. **ART MASON,** Ashland, Ohio

BUFF ROCKS Exclusively. Cockerels, hens and pullets. Large bone, golden plumage. Reasonable. **W. L. Gladish, R. 6, Petersburg, Ind.**

AYLESBURY and ROUEN DUCKS. Embden geese. Duroc boars, bred from prize-winners. **SHALLENBERGER FARMS, Amanda, Ohio**

Reid's Turkey Farm No Blackhead for 15 years. 700 Bronze Birds. **FREEHOLD, N. J., Star Route.**

TURKEYS, DUCKS, GEESE. Leading breeds. Buy your breeders now at special fall prices. Catalog. **Highland Farm, Rx. F, Bellefonte, Pa.**

Special Fall Prices on high-class breeding Turkeys, Geese, Ducks and Guineas, write your wants and for mating list. **Pioneer Stock Farm, Telford, Pa.**

Some of **AMERICA'S BEST MAMMOTH BRONZE TURKEYS**, original Gold Coin strain. Excellent yearlings and young stock bred from prize-winners. **MRS. S. OWEN,** Seville, Ohio

MAMMOTH PEKIN DUCKS For Sale N. V. HOSACK, Jackson Center, Pa.

SHEEP

Reg. Shropshire Ewes Good quality and bred to champion rams. **D. D. CLIFTON,** Agosta, Ohio

DAIRY CATTLE

ATTENTION—TAKE NOTICE

I desire to get in touch with several breeders who have cross-bred pure-bred Holstein bulls on grade or pure-bred Guernsey cows, or have cross-bred pure-bred Guernsey bulls on grade or pure-bred Holstein cows. If you have any dam-daughter pairs of such breeding I would appreciate your advising me, or if you know of any such breeder, please send me his name and address. **A. A. THOMPSON,** Uniontown, Penna.

HOLSTEINS.—4 months bull, good individual, nicely marked 1/2 white, $45. One month bull, 5/8 white, a nice one, $38. One fine heifer, 3 weeks old 5/8 white. All calves have good straight backs, and are sired by Echo bull whose 6 nearest dams average above 30 lbs. butter 7 days. Prices are cheap and registered. Accredited herd. **VALLEY VIEW FARM,** Phone 2456. Route 5, Carrollton, Ohio

Serviceable Ayrshire Bulls.—From dams having C.T.A. records from 500-600 lbs. butterfat, two time milking. Av. for entire herd over 400 lbs. fat just 2 yrs, 4.45% test. Write for information. **C. M. Barker & Son, Ulysses, Pa.**

REG. JERSEY BULLS ready for service. Also younger bulls. Accredited herd. **C. F. & M. W. BIOHAM,** Gettysburg, Pa.

FOR GUERNSEY DAIRY HEIFERS. Tuberculin tested. Shipped C. O. D. Write. **L. Terwilliger, Wanwatosa, Wis.**

TWO REGISTERED GUERNSEY HEIFERS, one bred Oct. 24th, the other bred Nov. 24th. Extra nice. These heifers were prize winners in our show herd of 1928. Priced to sell. **Ridgedale Guernsey Farm, W. O. Udell, Cambridge, Ohio**

Keep up with the advertisements to keep apace with progress. When answering them say you saw the ad in Pennsylvania Farmer.

Farmer's Business Letter

THE value of livestock marketed in 1928 showed little change over that of 1927. Pen Chickens alone total valuation of cattle, calves, hogs, sheep and horses is figured at slightly over $8,000,000, which compared with $7,900,000,000 in 1927. All classes of stock showed an increase. These valuation totals are representative of values throughout the country over, and indicate that farmers received more cash for livestock sold in 1928 than they did the previous year.

Fewer cattle were on feed in 1928 but they brought nearly $20 a head on average more than in 1927. The average return for hogs was around $1 a head less than the year before, but more were sold bringing the total valuation higher; sheep and lambs sold about fifty cents a head higher on the average, than they did in 1927.

On the whole it is regarded as a quite satisfactory year outside of the break in cattle and consequent losses on high priced feeders and the disappointing return on huge drove that hit them in the fall of the year.

Hogs Higher

It was a light week in hog marketing on account of the Christmas holiday, only about 136,000 head being received. Even early in the week were small, and the market worked higher, a top of $9.15 being paid on Wednesday, highest since the middle of November. But Thursday brought in 50,000 hogs and there was a break of about 30 cents. Average price of hogs for the week was estimated at $8.80, a gain of 20 cents over the previous week. There is a feeling that the low point has been passed in prices for the season. Shipments were improved this week, helping the market materially. While rather liberal runs of hogs are expected in January, it is believed that supplies will begin to dwindle in February, and that some price gain will follow.

Hog Prospects

In a comment on the hog market this week E. C. Brown, president of the Chicago Livestock Exchange, said:

"What is happening at the hog market now cannot be misinterpreted. Low hog prices with resultant cost of production have seriously impaired the morale of the grower. Hogs have been raised to market regardless of what the results are on the theory that a loss will be well spent at that. What happens at the hog market now is the direct result of the attitude of the grower. The whole situation has changed. Hogs are not being raised to market at a profit. They are being produced at a loss. Corn has been selling at around $1 a bushel, and it takes 12 bushels of corn to produce a 200-pound hog. Add to that the cost of labor, interest, taxes, depreciation, and you have a total cost of production. While corn has recently declined 25 to 30 cents per bushel, the result is that the cost of hogs has not been reduced a permanent advance seems due during the next few months.

"I have every confidence that the hog will make more than enough to pay their board and will avoid losses on the market on the average. There seems need to be panicky on this hog crop, in the face of conditions existing that 1929 prices will go as high as in 1928 and at the present rate of marketing the 1929 season will come much earlier."

Light Cattle Run

Receipts were very light in the cattle market, due to the holiday season. Only about 32,000 head were counted here, against 40,000 last week and around 60,000 in recent weeks. Yet the market showed little gain, and that only on the top end. Heavy cattle were called strong to 25 cents above a week ago, and light steers 25 to 50 cents higher, with top sale of the week $17. Bulk of sales for the week were at $11 to $14.25, against $11 to $14.75 a week ago and $11.25 to $16 a year ago. Average price of steers lost a little this week as compared to last week. Feeder trade was light, but a strong demand is expected after the first of the year, because of the general scarcity of cattle, and the feeling that their stock will be in demand all next year with not enough to go around. While relatively light supplies of finished cattle are expected next summer and fall there is doubt as to the price level being as high as the past summer, due to the high price of beef having curtailed the demand for it. Rather liberal supplies of cattle are expected in market this winter.

Dressing percentages of the car-lot show cattle which sold at the International auction, December 6, have been compiled and

Large [illegible] ... to 58 per cent.

Fewer [illegible] ... 1 per cent and most ... 2 per cent higher, Steers, heifers and cows sold about steady and five of them were Packers and Stockyards classes. Of all the fancy steers only four were below 66 per cent.

The grand champion head, Angus, fed by E. P. Hall of Mechanicsburg, Pa., and sold to Klingaist & Bastian of Allentown, Pa., at $40 per hundredweight, dressed 65.95 per cent. This lot of two steers was slaughtered after the 10th. Wheat, rye and shredding which is [illegible] ... mated to be from seven to ten cents per pound.

The grand champion load, 1,477 pounds, sold in Pittsburgh also at $2.02 per hundredweight and were among the highest on record for quality.

Lambs Gain

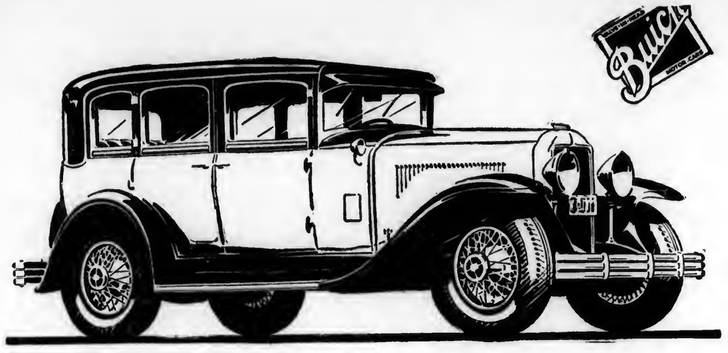
The lamb market made a good gain this week, even if such receipts were not as light, relatively, as in the case of cattle and hogs. The ten leading days' 50,000, comparing with 47,000 last week. Top native lambs this week brought $15.50, against $14.75 last week, and top fed western $15.60 as, first $15 last week. Trade in the Philadelphia market was advanced to 25 to 50 cents, against 10 to 25 cents a week ago.

Lamb Publicity

Lamb feeders of Colorado and Nebraska are going to report the lamb consumption campaign they put on last winter. Last year's campaign cost them $6,078 and they figured it made them between $12,000,000 and $14,000,000. The feeders assessed themselves at the rate of a cent a head for lambs on feed and the fund thus raised was turned over to the National Livestock and Meat Board under whose supervision it was spent. Most of the work was done with retail butchers in the large cities. They were called together for lamb cutting demonstrations and given suggestions for better methods of selling. As an experiment this was a general all-publicity program. That an increased demand for lamb resulted is a debated question, and the western feeders want the matter looked to market at a higher price level than they expected. They hope to do so next year.

Grains Quiet

[illegible] ... corn ... cent ... cent ... corn ... cent ... cent ... corn ... cent ... cent



Again... The *New* Buick sets the Standard of *Style*, *Performance* and *Value* .... for the *New* Year

Mirroring the same spirit of progress that has identified Buick cars throughout a quarter of a century—sweeping far beyond ordinary standards to new goals of excellence—the new Buick has won universal recognition as the leading automotive achievement of 1928-29!

The motorists of America have forced a record production of 130,000 Buick cars during the past five months . . . solely because this newest Buick embodies more improvements, more refinements, more quality innovations than any other automobile of the day!

New Masterpiece Bodies by Fisher inaugurating a thrilling new vogue of motor car beauty . . . new adjustable front seats, full-width rear seats and countless other features of luxury and convenience . . . new engine developments creating a wonderful new order of power, getaway, swiftness and stamina . . . these are outstanding reasons for the overwhelming country-wide demand.

The New Buick sets the new standard of style, performance and value—and is scoring the most sensational success in fine car history as a result!

WHEN BETTER AUTOMOBILES ARE BUILT . . . BUICK WILL BUILD THEM

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Canadian Factories: McLAUGHLIN-BUICK, *Oshawa, Ontario*

The Silver Anniversary Buick

INTERNATIONAL PAPER AND POWER COMPANY

New York, December 5th, 1928

The Board of Directors have declared a regular quarterly dividend of one and three-quarters per cent (1¾%) on the Cumulative 7% Preferred Stock of this Company, and a regular quarterly dividend of one and one-half per cent (1½%) on the Cumulative 6% Preferred Stock of this Company, for the current quarter, payable January 15th, 1929, to holders of record at the close of business December 20th, 1928.

Checks to be mailed. Transfer books will not close. R. G. LAIDLAW, Assistant Treasurer

Reading Robe & Tanning Co.
Reading, Mich.
CUSTOM TANNERS

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Kentucky Bluegrass

(Continued from page 5.)

to the dairy and other cattle industries will be taken up in a later article if the kind editors of this good farm paper so desire.

Development of Kentucky Bluegrass Pastures in Pennsylvania

Each pasture experiment was divided into a number of one-tenth acre plots and treated with limestone and different combinations of commercial fertilizers and manure. The land was plowed and fitted as for seeding wheat. The following summary shows the average annual yields of bluegrass produced on the three soils for a period of eight years.

Green Immature Bluegrass in Pounds per Acre on Limed Soil

Soil Treatment	Soils DeKalb	Westmoreland Volusia land
Superphosphate	6,961	3,835 5,41
Superphosphate and Potash	8,474	6,814 7,06
Superphosphate, Potash, Nitrogen	11,865	10,111 11,52
Manure and Superphosphate	8,363	9,405 9,56

In addition to the yields of Kentucky bluegrass may be included appreciable yields of sweet clover and miscellaneous pasture grasses not included in the above summary. Each field was seeded to ten pounds Kentucky bluegrass, ten pounds sweet clover, and two and one-half pounds per acre white Dutch clover seed.

The bluegrass developed very rapidly on each field and gave yields far in excess of that expected. The results show the necessity of potash and nitrogen in addition to superphosphate. Bluegrass is a rank feeder and requires a rich soil for its best development. The above yields of bluegrass emphasize the importance of nitrogen, for the yields were on an average increased 50 per cent on the nitrogen treated plots.

Importance of Nitrogen on Pastures

The acre yields of bluegrass when nitrogen was applied contains 41 pounds of digestible crude protein, equivalent to 66 pounds of nitrogen or that contained in 400 pounds of nitrate of soda. Nitrogen not only causes a big increase in yields but also increases the protein content of the grass. The nitrogen treated pasture produced a much earlier growth of grass and prolonged the late fall growth considerably beyond the other treatments. The use of nitrogen annually instead of once in two years, as was the practice in case of the above studies, is strongly recommended.

In a new pasture experiment started on DeKalb soil in 1926, the use of 40 pounds of superphosphate and 10 pounds of muriate of potash per acre applied every other year, to which was applied 125 pounds of sulphate of ammonia every year produced in 1927 18,045 pounds per acre of green pasture grass, equivalent to two and one-half tons of bluegrass hay. Such a pasture treatment including limestone at the rate of one ton each four years would cost as an average for each year's treatment about $8 per acre. A high productive pasture of this nature would supply approximately 668 pounds of digestible crude protein per acre, sufficient to meet the demands for maintenance and milk production of a 1,200-pound cow producing 40 pounds of milk per day for a period of 22 days.

The carrying capacity and acre value of differently treated pastures in relation to other cropping systems will be discussed at a later date.

C. B. Dayton of Susquehanna county, Pa., has established an unusual record in cow testing association circles. During the month of October three of his cows led the 20,513 cows enrolled in the 61 cow-testing associations operating in the state. All three of them are pure-bred Holsteins. One of them not only led all other cows in milk production with a yield of 2,691 pounds of milk, but also topped the list as a butterfat producer with 92 pounds fat.

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YARN.—Virgin wool for sale by manufacturer at bargain. Samples Free. H. A. Bartlett, Otisfield, Harmony, Maine.

INFORMATION WANTED

CLARENCE H. LEAMAN, height 5 ft. 6 in., weight 140 lbs., light curly hair, blue eyes, left Lee, Nebraska, April 1, 1927, last seen Media, Pa. Will appreciate information leading to whereabouts of boy. Noah Leaman, R. 2, Gordonville, Pa.

C. B. Dayton of Susquehanna county, Pa., has established an unusual record in cow testing association circles. During the month of October three of his cows led the 20,513 cows enrolled in the 61 cow-testing associations operating in the state. All three of them are pure-bred Holsteins. One of them not only led all other cows in milk production with a yield of 2,691 pounds of milk, but also topped the list as a butterfat producer with 92 pounds fat.

Items of Interest

¶ The Delaware State Poultry Association will hold its annual show at the Community Building, Milford, Delaware, on January 15, 16, 17.

* * *

¶ The Board of Game Commissions at Harrisburg, Pa., has prepared a special bulletin on winter feeding of game and birds.

* * *

¶ Beaver which were flooding fields in Columbia and Union counties, Pa., have been trapped and removed to more suitable locations by district game protectors.

* * *

¶ The State Farm Products Show, to be held in Harrisburg, January 22, 23, 24, 25, will cover 140,000 square feet more floor space than the first show which was held in 1917, according to the Show Management.

* * *

¶ A final analysis of West Virginia's agricultural production for 1928 shows that its fourteen leading farm crops have a total value of $58,517,000 as compared to $58,173,000 in 1927, or an increase of $344,000, says the official crop and livestock report.

* * *

¶ Many of the problems encountered by the West Virginia orchardist are to be taken up in a three-day school to be held at Inwood, Berkeley county, January 28, 29 and 30. This school is a combination of the Inwood packing school and the agricultural short course formerly held at Morgantown.

* * *

¶ C. M. Bird of Somerset county, Pa., known internationally as a producer of outstanding Bronze turkeys, recently received the silver loving cup awarded by the "Turkey World," a Chicago publication, to the man making the greatest contribution to the welfare of the American turkey industry in 1928.

* * *

¶ The New York state college of agriculture will give a short course for beekeepers from January 28 through February 2. Each year the college gives a week of instruction in beekeeping problems in connection with its winter short courses in agriculture. Honey, its uses and virtues, will be the subject of the short course for this year.

* * *

¶ Standard signs for use on the United States Highway System were adopted by the Joint Board of Interstate Highways in September, 1925, and since that time 28 states have completed the marking of the system within their borders, according to reports just received by the Bureau of Public Roads of the United States Department of Agriculture. The signs are of two general classes—danger and caution signs, and standard route markers.

* * *

¶ In a Minnesota lamb production contest K. O. Johnson placed first in the class for owners of 25 to 50 ewes. From 35 ewes he raised 50 lambs and in the 135 days of the contest brought them forward to a total weight of 4,110 pounds, or an average of 82.2 pounds per head and an average of 117.4 pounds of lamb to the ewe.

Mr. Johnson also won the championship for all classes by producing and saving a large percentage of his lambs and putting more than average weight on them. He raised a lamb crop of 142.8 per cent, or almost a lamb and a half per ewe.

TURKEYS

TURKEY HENS, $8.00; gobblers, $10.00; Geese, $5.00; Ducks, $3.00; Guineas, $2.00. Baby chicks cheap. Free circular. Edwin A. Souder, R. 1, Selbersville, Pa.

BOURBON RED TURKEYS—Hens, $10.00; cocks, $12.00 and $14.00 each. Mary R. Sutherland, Adena, Ohio.

PURE BRED MAMMOTH BRONZE TURKEYS, "Baker's Bronze Beauties" strain. Hens, $10.00. Toms, $15.00. Bert Troybridge, Sabinsville, Pa.

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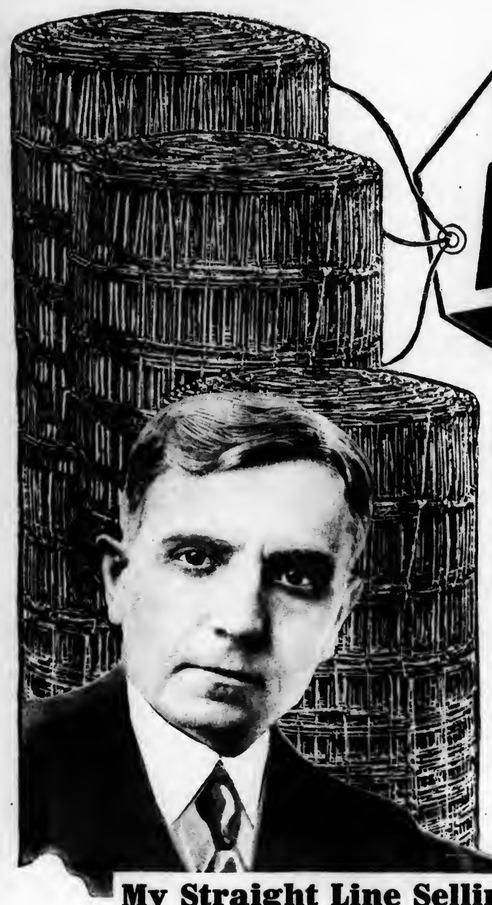
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Farm Facts and Fancies

By ALVA AGEE

A BYSTANDER proverbially has hard luck. Doubtless there was no intent to injure the business of men who own farming land when the Boulder Dam bill was put through a few weeks ago, but so often when something has become a part of the national program the farmer has been hit. The extended use of water of the Colorado river will afford another instance. In time there will be more alfalfa, more cattle, more dairy products, more fruit and vegetables for consumption as a result of the use of this water on land.

The intent directly is to insure water for growing cities in a dry country and for developed land around them, and especially for power to promote manufacturing in the southwestern states that have no coal. The interests wanting extensive newly irrigated areas could not have got far by themselves in the effort to secure legislation. If the conditions of the new law are met, the only injury will befall the farmer. It seems to be his luck.

A Seeming Intent

The apparent intent of the law is to enable those interested to secure the benefit of all this water without charge on the public, excepting the item of flood control. It may seem an ungracious comment that most undertakings of this sort are given that appearance in the beginning. We have some plain irrigation projects that looked like business investments at first and later needed more national assistance than was planned. The main consideration is to get the thing started. If agreements are made by municipalities and other corporations or individuals, and cannot be carried out, proposals are made to modify them in the name of justice, and the public gets under the load. This may not occur in this instance—may not

Plant Food

Drenching rains carry soluble fertility out of the soil. In northern latitudes frost is our friend in locking up the store during the months of heaviest rainfall; farther south it isn't easy to keep land rich. Where rainfall is light, soils hold their store of plant food easily. Not long ago I drove through a ranch of tens of thousands of acres where the land of steep slopes was being prepared for seeding to barley. Five horses abreast, with five mules for leaders, furnished the power to draw a great gang of disks for turning the ground over, and for a drag harrow attached to pulverize and smooth the surface.

Nobody would try to cultivate such steep hillsides in the East, and if it were done the soil would run away when a big rain came. Three inches of rainfall in the fall and early winter lets a good seed-bed be made, and a little more water later on makes seeding safe, and soon these great stretches of bare land are covered with green plants. Nine or ten inches of water for the year make possible big yields of barley, and the land is plowed and seeded year after year and remains productive partly because there is no leaching that plays the mischief with our eastern land.

Pasadena

Possibly no other American city makes as much of the Christmas season as does the old and wealthy city of Pasadena. Thousands of eastern people have built their winter homes, and tourists fill the hotels and apartment houses. We planned to spend two or three weeks there, and went a few days ahead of Christmas to make sure of such quarters as we wanted. Even then Colorado street was a mass of decorations, ready for the Christmas, and especially for the flower tournament on New Year's Day which is the most extraordinarily beautiful display of flowers in this country and probably in the world. Magazines and papers have described it for many years, and I make no attempt. And a great attraction is the mile and a half avenue of electrically lighted trees up in the foothills, a mass of lights in the tall trees with branches spreading over the highway. This is the feature of the Christmas week, while the flowers feature the first day of the new year.

Growing Old Gracefully

In all this tropical country one is interested in the great number of people who have come from a more rigorous climate to spend their later years. I wish more of our older friends could see their way clear to do as these do. But I reckon that the trick of going into extreme old age gracefully is one that can be turned about as well one place as another, and equally failure comes as easily. I have told of a very elderly lady near our home who stays concerned about the world affairs. Just now she is wanting to know exactly why the Senate has been delaying action on the Kellogg treaty.

Our trip to Pasadena was partly on account of another lady ninety years of age whom we wanted to take from her Los Angeles home for two or three weeks entertainment in our temporary quarters in Pasadena. She is mentally alert, using her radio intelligently, and we figured that a change from that mental diet would do her good. That meant that books must be read. Past experience showed that she could be intensely interested in the life of Barnum, though she deplored his willingness to deceive, and Buffalo Bill suited her fine, though she thought him too abrupt in dealings with his enemies. I brought home the life of Jesse James, but very promptly she showed she was out of sympathy, expressing a strong preference for the fourteenth chapter of Saint John. The life of Henry Ford fit into the reading scheme fine, as did many other books containing action.

As I have studied her and others who are quite old I reckon that if the day comes that I must think of getting older I shall try to maintain a lively interest in all those around me and in the progress the world is making.

Hardening One's Heart

I was dragging the hose to the roque court I was planning to use when a young man grabbed it, saying, "Let me do that, Pop"! He had a companion and they had driven from the East having heard that there was work in plenty on the Coast. I began to prepare myself mentally for the natural outcome of the interview, remembering the young man with tuberculosis (?) wanting to go to his mother's home at Los Angeles, the Imperial Valley man who claimed to need railway fare and my new rule in such matters.

It appeared that all these two men needed was the price of enough gas to take them to the oil fields further north—they had tried faithfully to get work in San Diego and failed. At a critical time in presenting their case the older man made an error in tactics, saying that his middle name was "work."

I have heard that expression before and don't like it, there is a flavor of presumptuousness about it. So I called the attention of another rogue player to their search for work, went to my business of spraying the court, and was rather proud that for once I had not been taken in. And yet—who knows—they may have been deserving, and it is better to be imposed on now and then than to let a deserving man go hungry.

THE OPEN FORMULA

A Development of College Leadership



The officers of the College Feed Conference Board. (Left) Prof. A. R. Merrill of Connecticut Agricultural College, President; (Right) Prof. E. S. Savage of Cornell, Secretary.

NO FEED manufacturer originated the idea of OPEN FORMULA feeds. The OPEN FORMULA was not developed as a "good sales argument." Mixing feeds on open formulas was suggested many years ago at a meeting of the larger feed manufacturers by Professor E. S. Savage of Cornell who made the proposal solely in the interest of farmers, and offered the opportunity to the feed manufacturers of America.

"There is no mystery about a good feed" Professor Savage said in effect, "There is no rare or unusual ingredient or combination of ingredients which can make a mixed feed worth ten to fifteen dollars more per ton than a good home mixture. When a farmer buys a ready-mixed feed, he should be able to know just what he is getting, how much he is paying for actual feeding value and how much for service and profit to the mixer."

The idea was considered revolutionary in the mixed feed business, and the American Milling Company was the only feed manufacturer which adopted it; but every farmers' purchasing organization which has since set up has made the OPEN FORMULA a basic principle of service.

Colleges of agriculture throughout the country have become interested in the OPEN FORMULA for the same reasons that they recommend home mixing. They give their approval to no particular brand of OPEN FORMULA feed, but to the OPEN FORMULA itself.

Five years ago the College Feed Conference Board was set up, composed of the dairy feeding specialists of 19 colleges of agriculture. *As a service to farmers*, this Board made up formulas for dairy feeds which were available to feed manufacturers. The Board also agreed to study for rejection, change, or approval OPEN FORMULAS submitted by manufacturers.

The American Milling Company has used this service of the College Feed Conference Board since it became available, and mixes two 20 percent, two 24 percent, and two 32 percent dairy feeds on formulas approved by the Board.

To put approved OPEN FORMULA feeds on the market in competition with secret formula feeds is a great test for a commercial manufacturer or a cooperative. One which not many can meet!

Quality is specified, yet prices must be in line—the mixing charge and profits in an OPEN FORMULA feed can be calcuated by the feeder. AMCO has met the test, because it has great resources, men with a lifetime of experience in the feed markets, and *volume* through its mills.

You can check this statement by going to your nearest Authorized Amco Agent and asking for formulas and prices.

AGRICULTURAL colleges of the following states were represented at the 5th annual meeting of the College Feed Conference Board in Memphis, Tenn. on October 15:

Michigan	*Iowa*
Nebraska	*North Dakota*
Connecticut	*Texas*
Virginia	*Minnesota*
Mississippi	*Kansas*
Tennessee	*Wisconsin*
New York	*North Carolina*
Pennsylvania	*Oklahoma*
Massachusetts	*Maryland*
Missouri	*New Jersey*
New Hampshire	*Oregon*
Vermont	*and*
West Virginia	*Quebec, Canada*

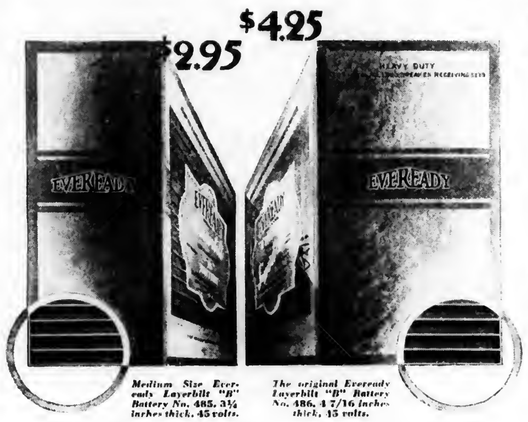
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The College Feed Conference Board approves formulas for feed manufacturers, but accepts no responsibility in supervising the mixing or sale of such feeds, nor does it guarantee the composition of feeds so manufactured. This responsibility is completely taken by Amco Feed Mixing Service.



Medium Size Eveready Layerbilt "B" Battery No. 485, 3¼ inches thick, 45 volts.

The original Eveready Layerbilt "B" Battery No. 486, 4 7/16 inches thick, 15 volts.

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HERE is the favorite prescription for greater happiness and greater prosperity on the farm—use radio! Good, reliable radio sets come at all prices. They will give you not only music, entertainment, and educational features for the children, but market and weather reports that directly affect the business of farming. Listen to the radio!

Most farm radio sets are battery operated. When you buy "B" batteries, get Eveready Layerbilts. The best one to buy is the big Heavy Duty Eveready Layerbilt No. 486, for this is the longest-lasting, most economical and convenient of all Eveready. It costs only 25 cents more than a cylindrical cell Eveready of the same size, but lasts about 30% longer. Economy! There is a smaller Eveready Layerbilt, too, No. 485, costing 20 cents more than the cylindrical cell Eveready of the same size and lasting 25% longer. Either of these will add great convenience and economy to radio on the farm.

Unless you have been buying Eveready Layerbilt "B" Batteries for your radio set, you still don't know how economical radio can be on the farm, how much entertainment, helpful instruction, and invaluable crop, market and weather report service you can get for a given amount spent for "B" batteries.

It is possible to pack more active materials inside an Eveready Layerbilt because it is built of *flat* cells. These pack together tightly, occupying all available space inside the battery case, and eliminating many soldered connections. The waste spaces between the cells of a cylindrical cell type of "B" battery are avoided. An Eveready Layerbilt is all battery. That is why it lasts so much longer. Next time you buy "B" batteries, get Eveready Layerbilts.

Layerbilt construction is a patented Eveready feature. Only Eveready makes Layerbilt batteries.

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TUESDAY NIGHT IS EVEREADY HOUR NIGHT—*East of the Rockies*, 9 P. M. Eastern Standard Time, through WEAF and associated N. B. C. stations. *On the Pacific Coast*, 8 P. M. Pacific Standard Time, through N. B. C. Pacific Coast network.

SEE AND HEAR THE NEW EVEREADY RADIO SETS

NESHAMINY GARDENS

By R. P. KESTER

IN SPITE of the [illegible] criticism that has [illegible] the Christmas season it is still a happy and beneficial festival—[illegible]holiday, at least, which leaves the world better because of it. Most of our holidays emphasize, somewhat, the [illegible] in human nature by [illegible] individual achievement. I think I always understood Christmas, even in childhood days when it was specialized only by an inexpensive meal and a simple, homemade present.

* * *

Christmas Eve and Christmas morning was a gladsome time at Neshaminy Gardens. The entire family, now consisting of three families, was there. The Christmas eve dinner was one that did credit to the noted cooks of the family, and the menfolks showed their appreciation in the most practical way they could express it. After dinner (supper) the three small members of the family went to bed early so that Santa Claus would have a chance to do his work. That he did it acceptably was evident in the faces of the tots the next morning.

* * *

An incident in connection with the purchase of Christmas toys shows what changes have occurred in our lives within a generation. Little Buddy, (he of anti-spinach fame) wished that Santa Claus would bring him a truck with horses hitched to it. What was Grandma's surprise to find that horse-drawn toys were on sale! However, she did Philadelphia stores where tens of thousands of dollars' worth of Christmas toys were on sale! However, she did finally get one, the only one in the store, thus saving Santa Claus' reputation for omniscience.

* * *

There seems to be a natural inclination in families to get together at Christmas time. However much modern life tends to separate and scatter the members of families, the Christmas season revives the sentiments, and reunites those who have been negligent at other times. I wonder how those who have broken up their homes by legal separations feel at Christmas, and how the children who miss the family gatherings at this season will find the joy and gladness that comes only through the unifying influence of family gatherings at Christmas time.

One of the most cherished possessions of my childhood days was a colored picture card given me by my first teacher. It was the picture of a moss rose, and I can recall every line and color as clearly as if I had it now before my eyes. Today, even more beautiful cards are as plentiful as the sands of the seashore, but those circulated so generously at Christmas time to convey greetings and good-wishes are frequently gems of art. I like to think that each one I receive carries a real message, and accept it as such. I am glad I am an optimist, and have confidence in mankind.

From the scores with [illegible] I received this season, I want to pass on a few of the helpful greetings. One is from the Bard of Swarthmore in the form of two little books containing sonnets—little tales by which he would call people back to the simpler modes of life lived in former days. In the preface to one he says:

"I know not why I love them so.
The Quaker days of long ago.
Nor why there lingers such a charm
Round many a memorial mold and [illegible]
I only know I wish to try
And say some word before I die,
To tell to our more restless day
The beauty of that far-away
And happy time they used to know
Our sires and mothers long ago!"

* * *

Then from "the wilds of Pike [illegible]ty" comes a card from my nature-loving friend and poet, Mrs. Gimble, who was raised in the vicinity of Gene Stratton Porter's "Limberlost," taught school, married a forester, and came to Pennsylvania to live. One verse of her poem reads:

"I found a hillside farm among the [illegible]
That no one loved save birds and flowers and trees—
If one may call a stony pasture wide,
Some little fields that tumbled [illegible] divide,
An orchard where the oriole darts flame,
A wood for winter fires, so grand a name."

* * *

Then a friend in Centre county, [illegible]ing my comments on the scenery of central Pennsylvania recently, sent me a photograph taken from Nittany Mountain and showing the beautiful Penn's Valley, in which Centre Hall is located.

* * *

Some of the sentiments from others which I am glad to accept at face value are: "May your Christmas ship come in laden with gifts of joy and health and happiness.

* * *

"May this hearty greeting,
This wish indeed sincere:
May merry be your Christmas
And happy your New Year!"

* * *

"May the candles shine brightly
The whole year through,
To make Merry Christmas
Thrice Merry for you."

* * *

"Whatever will cheer you
And bless you, too,
This gay Christmas Season,
I'm wishing for you."

* * *

These are but a few of the kind wishes that "doeth good like a medicine." "Nothing in this letter that is practical," you say? What do you mean by "practical"? Are not things that make life better and happier "practical"? Have all not yet learned that wheat and cows and chickens and money and tractors will not, of themselves, bring the kingdom of heaven to earth?

Another Pop-Corn Boy

IN a recent issue of the Pennsylvania Farmer I saw Harvey Reckner's report of a big car of pop-corn. His [illegible] is the best I have heard of for long, but for the number of rows I have beat. I have an ear of White Rice pop-corn that has 20 rows of well-developed corn. It is eight inches long.

I am a freshman in the [illegible] high school, 13 years of age. Have been raising pop-corn for three years, two kinds, and have found that the White corn pops the best. I raise red, white and yellow. Have some black which I shall try this year. I have plenty for sale for what I raise, and we use a lot of it.

My plot of ground is manured [illegible] each year, plowed in the spring, worked a few times and planted. This year I wanted to exhibit my largest ear at the Doylestown fair, but it wasn't ripe enough. The stalk on which this ear grew was 12 feet long, and big and strong.

Howard Bolhert
Bucks county, Pa.

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Milling Qualities of Pennsylvania Wheat

By GEORGE A. STUART

THE City Flour Mills, Inc., of Muncy, Pennsylvania, has been a pioneer in a movement to save the milling industry in Pennsylvania and also to save the home market for Pennsylvania grown wheat, provided farmers and millers will cooperate and follow their example in other parts of the state.

Back in the early history of Pennsylvania when housewives baked their own bread "wheat was wheat" and "flour was flour" and that was all there was to it, and when they encountered trouble with the dough they could make a change in the recipe or mills could exchange the flour. In recent years, however, the housewife has stopped baking bread, or at least many of them have, and she goes to the baker or grocer for it. This has resulted in an enormous growth in the commercial bakery and it has been found through severe competition that in the production of quality bread certain types of flour are much better adapted than others. They found that most of the flour made from Lycoming county wheat was not suited for bread-making purposes.

The City Flour Mills of Muncy wished to find out if it were possible for a Pennsylvania mill to utilize different types of wheat grown in Pennsylvania and by blending with other types mill a flour that could be used by the local bakers. Mr. W. G. Goodenow, a native of Muncy and formerly connected with the U. S. government in flour and grain work, was selected to take charge of the laboratory installed at the mill.

The Process of Milling

The flour mills of Muncy is located on West Water street. It is one of the largest mills in the county, and was established in 1900 by Taylor and Baker to serve the lower section of the county. In 1906 C. E. Vermilya, the present treasurer and general manager, acquired the interests of Mr. Taylor.

The mill is completely equipped with modern flour milling machinery. To the novice who enters the mill for the first time, the process of grinding wheat into flour is considerable of a puzzle. He must follow the course of the grain upstairs and down and through a number of different machines before he begins to comprehend how it is done.

The grain is received from the farmers' wagons and dumped into a receiving bin. From this bin the wheat passes through a series of machines to prepare it before grinding. The first machines separate by means of sieves and air currents all foreign material such as sticks, straws, weed seeds, etc. The next machines scour off dirt and foreign materials adhering to the kernel, also a portion of the outer woody coats of the kernel and the "brush" or hairs at the kernel tip.

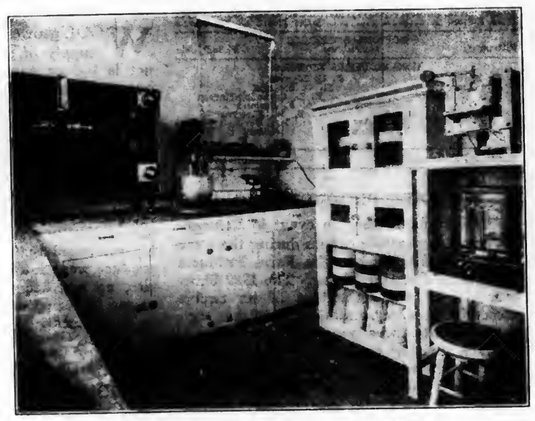
A small amount of water is then applied directly to the wheat and it is allowed to stand one to six hours or more the object being to toughen the outer or bran coats of the kernel and make possible later on a more complete separation of the floury particles of the kernel. The wheat goes now to other polishing machines where it receives the final cleaning and is then ready for grinding.

The grinding is done between steel rolls running at a high rate of speed and the ground material passes to the sifters, where by means of a number of sieves, covered with wire and genuine silk cloths, the material is graded according to size and weight of particles. The floury particles pass through the very fine silk cloths while the bran and other coarse products pass on to other grinding, purifying, and sifting machines, all grading and separating the flour particles from the bran and feed products.

It is quite remarkable how few men are required to operate a mill like this one. A miller with one or two assistants can operate the entire mill, the miller watching the machinery to see that it is functioning properly, while the assistant is kept busy receiving the various products into sacks, sewing the sacks, and storing them in the warehouse. The machinery does the work with what seems to be almost human intelligence.

Flour is made at many points in the milling system and varies widely in color and bread-making character. It is here that the mill chemist finds his work in the mill, for it is for him to study the quality of these different flours and blend them in the proper proportions so as to produce a resulting flour which will meet the requirements of the baker and the housewife. He must also study the different lots and varieties of wheat which come to the mill as it is upon this that the success of his flour very largely depends.

While pure white flour may be coming out at one terminus of a course of machines at another point bran is flowing into the sack, at another middlings, and so on. Graham and whole wheat flours are made by simply grinding the wheat kernels with no attempt at the separation of the coarse particles. Pancake and self-rising flours are flours to which have been added a leavening agent, salt, dry milk, etc. Other products of the mill may be cracked corn, scratch feed for chickens, corn meal, etc. Buckwheat flour must not be forgotten.



The Testing Laboratory in the Muncy Mill

Recently another 12 cents was tacked on the tariff on Canadian wheat, making it 42 cents a bushel. Some millers say that Canadian wheat will now be made into flour and shipped across to Europe and that the market over there for American flour will not be so good hereafter. Then the Lycoming county farmer will not bring his wheat to the miller here to be made into flour to be shipped to Europe but he will have to export the wheat.

This means that the "wheat offal", the bran and middlings so valuable for stock food, will have to be purchased from distant mills at a price that includes the freight charges.

Successful Experiments

Now the problem confronting the millers is this: How can Lycoming county wheat be used for flour for bread-making purposes? In other words, how can the quality of Lycoming county wheat be bettered so that when made into flour, it will meet the demands of the most exacting baker?

Because the City Flouring Mills of Muncy affords a typical instance, its method will be illustrated. First of all the men who run that mill say to the farmer, in substance: "You grow us a good grade of hard wheat, which means you will have to sow good seed, keep the cockle and other foreign substance out of the wheat, and we will endeavor to find a better market for the flour so that we can pay you enough additional per bushel to make it worth your while."

Many farmers are responding. It is being understood more and more that in Lycoming county "wheat is not wheat" any more. It has been found that in some parts of the county a very good grade of wheat can be produced while in other sections, as in low tracts, a softer type not adapted to bread-making purposes results. In the majority of instances a satisfactory grade can be produced provided it has been kept free from weed seeds and other foreign material injurious to bread-making qualities.

Flour used for bread-making purposes is generally produced from a blend or mixture of two or more wheats. The City Flouring Mills, Inc., experimented with flours produced from a blend of one-half western hard spring wheats and one-half Pennsylvania harder varieties of wheats and submitted these flours to a commercial baking test in a large Harrisburg bakery. The result was a great success and the mill filled an order for several thousand barrels of this flour for this bakery. This flour was also used in sixteen of

(Continued on page 35.)



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THE FARM PRODUCTS SHOW

THE major state-wide event in Pennsylvania agriculture occurs during the week of January 22-25 when the Farm Products Show is held at Harrisburg. The 1929 Show promises all the attractions of its twelve successful predecessors and in addition such improvements and expansion as are demanded by a thriving concern. A glance at the program shows that 25 annual conventions will be held during the week, fifteen banquets and 150 speakers will inform, entertain and nourish visitors, while additional space will enable exhibitors to display their products to better advantage than in former years. Any farmer and farm wife in the state will find time spent at the Show both profitable and interesting.

"WARM" ICE CREAM

ABOUT the only objection that can be made to ice cream is that it is too cold if eaten in haste and volume. Even this may be removed, for it is announced that G. D. Turnbow, a California chemist, has produced "warm" ice cream. The product was displayed at an ice cream manufacturers' convention recently. Its temperature is not stated, but the secret is partially revealed by an explanation that the crystals in this cream are smaller than in ordinary ice cream and that it is made by freezing very rapidly at a lower temperature than ordinarily employed. From this we assume that the warmth of the product may be more apparent to the tongue than to the thermometer. However, whether the improvement is real or fancied will cause no alarm, for in its unreformed state ice cream is quite acceptable to the lucky portion of humanity which knows it.

POTATO MARKETING

THE National Potato Association recently held a meeting at New York to discuss the marketing problem. This week the National Potato Committee of Eighteen is holding a meeting at Chicago to consider the same problem. Pennsylvania and eastern growers are not concerned in this matter in the same way as are those who are farther away from markets, but they are concerned in it indirectly at least. There is a general demand, on the part of growers distant from market, for compulsory grading laws or for grading systems by organizations. One purpose of such legislation or organization is to prevent inferior potatoes from getting to market. Another is to make available to big buyers large quantities of one grade or quality. We must recognize the fact that the system of buying potatoes is changing with the system of distributing them. The chain stores are centralizing the buying of potatoes as well as other things. They demand large quantity of uniform quality and they will buy only where they can get what they want. The above indicates the concern of the eastern grower in a changing market for potatoes. It points also to the possible need of altering or adapting the system of marketing here or developing one that will hold the big buyer as well as the little one. There is still plenty of work ahead of potato growers' organizations in this territory.

MADE OF WOOL

WOOL growers are glad to note that the supply of goods made of their product is lighter than for many a day. The overcoatings of the manufacturers are all sold and other cloths are not in excess anywhere. Women are turning again to garments made of wool. School frocks in the future are to be of wool as they were long ago and always should be. Another fact, of which little has been said, is that rayon is not rapidly taking the place of wool. Last year the leading producer of rayon in this country estimated that only one per cent of its product went into woolen and worsted fabrics, no increase over 1927 though the increase in its production of rayon was close to 33 per cent.

MINOR EXPECTATIONS

THOSE who advocate better systems of marketing agricultural products should have a sympathetic hearing. Usually they do, for all of us want something better than we now have. But it is the business of those who advocate new plans to show that they are actual improvements, more economical or better in some respect than what we have now. Too often the ardent and evidently sincere advocates of such plans neglect the fundamental point of economy, just as the proponents of the most popular plan of farm relief are neglecting it now. Too often likewise they regard the new plan as a solution to the problem of surpluses. No marketing plan is or can be that. No legislation will or can relieve us from the effects of a surplus—or a deficiency either. If we accept in advance of legislation the ancient truth that the remedy for surpluses lies in their natural commercial effects we will not be so badly disappointed when we consider the results of the efforts of our federal legislators.

ENGAGED IN RESEARCH

WE BELIEVE in research, whether it is conducted by institutions for industries of small units, by corporations for their own benefit or by individuals for the sake of their welfare financial, mental or moral—or merely "for the sake of euphony" as the old spelling-book used to remark. We believe in larger state, federal, corporate and individual appropriations for research. Just to show our faith in it, and for other reasons, we are now making some investigations about wild ducks and geese on Currituck Sound, North Carolina. We have the assistance of several other scientists interested in the same subject—all of us eager to absorb knowledge and other things. The Carnegie Museum of Pittsburgh, that wonderful repository of everything, has commissioned us to secure a few specimens. A parson, an expert tyer of trout flies, wants some feathers. And our friends have various hopes, usually greater than their expectations and far beyond realization. But all true science benefits somebody, so we embark on this expedition as a real scientist should, full of hope and determination. If we find no more than a golden sunset that will be reward enough.

A PLANTER OF TREES

FIFTY years ago Henry Wickham lected the seeds of the rubber tree a the Amazon river and planted them in l and other eastern possessions of Bri They prospered and became the founda of one of the empire's greatest indust The tree planter died in London rece with a title which he had earned, and knowledge that he had done a great t for his country. Every tree planter have the reward of knowing that he is d something for somebody even if he get other compensation than this.

TWO LESSONS

LAST year produced two striking les in regard to government control supervision of the production and mark of important agricultural products. The ish government, after a thorough trial, a doned control of the rubber industry. just at the end of the year the Cuban ernment removed all restrictions from production, marketing and distribution sugar, providing at the same time for liquidation of the supplies held under gov ment control. All that is left of the Cu experiment now is the export commiss which survives merely as an organizatio supply statistical and other information. the face of these two examples, and in s of the fact that commercial history rec not a single successful attempt of the k we may expect more experiments in gov ment control or regulation. This beca such schemes arise from depression and natural desire to overcome it quickly ra than from consideration of economic f or experience.

THE MENU PASTIME

A POPULAR pastime with dietitians to devise some way whereby meat c be reduced in or eliminated from the d These ways range from a wholesale nunciation of meat as a food to substitu and food combinations which fill the st ach without offense to the palate. Su propaganda is to be expected from food f dists and cranks, but we should expect so thing better from home demonstrat agents. If they will stop to consider t the anti-meat doctrine is not founded on cepted scientific grounds, and that it inju one of the leading industries of Americ agriculture, they will go slow on contri menus with the prime object of reducing eliminating their meat content.

POULTRY INSPECTION

GOVERNMENT inspection of poultry a means of raising the flesh of fowls the estimation of consumers is suggested a produce dealer. With present improvem in refrigeration he believes that poultry be shipped drawn and enjoy the benefits federal inspection which have obtained in case of meat. It has long been accepted a fact that undrawn poultry will keep be than poultry from which the internal org have been removed, but it is also a fact an undrawn chicken reaches the kitchen condition which does little to promote popularity with the fastidious, and it is question whether the undrawn tradition worth holding. If official inspection did m ing more than induce the shipment of poul completely dressed it would be worth con ering, but the advantages of inspection more than that. It is a guaranty of qual which inspires confidence, a protection to buyer and an advantage to the producer.

Eastern Farm Comments

By MILES HORST

WHILE many of the discussions at the National Potato rowers' convention, held at ew York City, Dec. 27 to , were scientific in nature, t many things of practical ue to the average grower re brought out.

To begin with the conven- on was held in a city with population of nearly 7,000,- 00, consuming annually nearly 20,000,000 bushels f potatoes, or about as many as Pennsylvania po- to growers in this year of plenty have for sale. ew York draws on the whole United States for its pply, but the bulk of this supply comes from laine, New York and New Jersey.

It is a fact that the potatoes having the best repu- tion in New York City markets come from Long sland. This was accounted for by H. R. Talmadge, imself a grower of some 500 acres of potatoes an- ually, in several ways.

According to Mr. Talmadge it costs more to pro- uce potatoes on Long Island than it does in com- eting areas. For example, the land on which they re grown is worth from $500 to $1,000 an acre. So he very life of the industry on the island depends on a premium received in the market. With this rge behind them Long Island growers have set tandards of quality and grade above the regular nited States standards and have consistently main- ained these standards in good years and in bad ears. Grading at shipping points either by asso- iations or by large buyers has made this possible. hen too large stocks kept in warehouses at ship- ing points makes it possible to meet orders quickly nd to ship when shortages develop.

It was the general opinion that chain stores are ot a bad influence in the potato market, but that hey are bringing into play new problems. As they uy for a direct retail trade they cut the costs of istribution and bring the consumer and the pro- ucer closer together. On the other hand the chain tore is bringing about a more concentrated buying ower. It may become more necessary for producers o concentrate their selling power, not alone to in- luence the bargaining power of producers but to meet the larger orders which chain stores make.

W. W. Oley, chief of the Bureau of Markets of New Jersey, outlined two aides this Bureau has offered to growers in New Jersey during the past season. An office of information was established in the heart of the potato producing area of the state. This office kept informed at all times of potato movements and potato prices. Growers about to make sales could call up the office and obtain latest information.

A second helpful aid was that of shipping-point inspection. Seven hundred eighty-five cars have been inspected by the Bureau to date and certificates of grade granted on same. This inspection has had a general tendency of raising the quality and grade of New Jersey grown potatoes.

Wells A. Sherman of the Federal Bureau of Agricultural Economics touched on the underlying trouble in the present potato marketing situation when he brought out the fact that certain areas have greatly over-reached themselves in potato production. All the work of departments of agriculture, of colleges and cooperative associations cannot sell more potatoes than the consuming public can use. Furthermore, he pointed out, changes in producing areas are bound to continue to take place, with production gradually gravitating nearer and nearer to the points of consumption.

Mr. Wells explained a number of the grading laws passed by the various states. His conclusion was that compulsory grading laws can be made effective only when the majority of growers in a state are thoroughly acquainted with them and in sympathy with them.

It was evident from later discussions that western producers are far more insistent on compulsory grading laws than are producers in the East. This is because only insofar as they do put on the market a superior quality product can they be able to meet the competition of eastern producers. The eastern growers will do well not to overlook the progressive marketing methods employed by their distant brothers.

* * *

ROSS L. LEFFLER of McKeesport has been reelected president of the Pennsylvania Board of Game Commissioners. This distinction and the confidence of the Board in his leadership is well deserved, for he has proved himself an able and fearless leader in tackling the problems the Commission is facing. He has been open-minded and always easy to approach by those whose interests were affected. His selection as chairman of the Board is well received among agricultural interests.

* * *

THE first indication bearing on the 1929 potato crop for the United States comes in a report just issued by the U. S. Department of Agriculture. It states that a survey made among growers in the early potato states to determine their intentions to plant indicates a reduction of 29 per cent in potato acreage throughout this area. It must be borne in mind, however, that this is only a survey of intentions and not of facts. The acreage can still be considerably larger than the survey may indicate.

* * *

THE West Susquehanna Cow-Testing Association led all others in Pennsylvania during the month of November in the average production per cow enrolled. In looking through their monthly report we find that 13 unprofitable cows were sold from Association herds during the month. This no doubt is one indication of how they attained this enviable position.

* * *

STOCKS of clover seed in the country today are considerably less than they were a year ago and less than they have been for several years. Government estimates place the 1928 alfalfa crop for the United States at two-thirds of the 1927 crop. The red clover seed crop holds the same proportion while the crop of alsike clover seed has been cut even more severely.

The sweet clover seed crop, while not cut heavily, also falls below last year's production. The short crop is reflected in prices paid to producers. Buyers have been paying for good alfalfa seed in the Rocky Mountain states around $18.50 per bushel for ordinary alfalfa seed and $25 to $35 for Grimm and they are paying $25 to $30 for red clover seed at producing points.

* * *

MCKEAN COUNTY dairymen enjoy the reputation of being producers of good dairy cattle. They have established this reputation through the advanced methods of breeding they are following. They are finding, however, that buyers of this kind of cattle are not only requiring that animals be free of tuberculosis but are more and more demanding that good breeding animals be tested for contagious abortion too. So last week they called a meeting of leading dairymen in the county to consider a county-wide campaign of testing for abortion in their herds.

* * *

SEVEN boys, members of a capon club in Lackawanna county, have again demonstrated that there are profits in producing capons in Pennsylvania. Last spring they purchased 138 young cockerels averaging one and one-third pounds. These were caponized, then put on feed for 177 days and sold. They gained in that time 6½ pounds. The market absorbed them very quickly leaving a good profit to the boys.

* * *

THE forests of Pennsylvania are yielding a smaller production of lumber each year and the consequent importation from other states and from Canada increases each year. The latest government releases show our output last year to have been 277,000,000 feet against an importation of 1,850,000,000 feet. All of which should lend encouragement to the owners of timber land and foster better care of the growing timber covering more than half the area of this state.

* * *

A MANUFACTURING company located in Maryland announces the perfection of a stone-picking machine. As demonstrated on a number of farms, this machine picks off the ground stones two to ten inches in size and elevates them into a wagon. This is good news. It would be better still if the machine would do the same with potatoes.

* * *

THREE hundred and forty-five potato growers in Pennsylvania this year had official acre yields of better than 400 bushels. Last year the number was 187; two years ago, 97; three years ago 47; four years ago 53 and five years ago 31. The estimated average acre yield of potatoes in the state this year stands at 130 bushels. Only twice before this year has the yield passed the 120-bu-bel mark.

Ten and more years ago the average acre yield was swinging from 95 to 105 bushels per acre. These figures tell a simple story. It is the story of progress and the pace of that progress is speeding up.

* * *

GEORGE COLE of Westmoreland county, Pa., has won the $100 scholarship awarded annually by the Baltimore and Ohio Railroad to the outstanding club boy living within the territory crossed by its lines. His out-tanding work was accomplished as a member of his local Jersey cali club.

IN spite of the fact that experts occasionally try to tell us that we cannot grow wheat in Pennsylvania at a profit, we still continue to sow about the same acreage year after year. It is true that the acreage this year dropped slightly as compared to last year, but other factors than that of profit were responsible. Wheat fits well into our rotation as a nurse crop. Then too the Pennsylvania farmer, especially in the southeastern section where most of the wheat is grown, is old-fashioned enough to still value straw for bedding down his livestock and conserving animal wastes.

New Jersey Notes

THE annual meeting of the South Jersey Farmers' Exchange will be held at the main office of the association in Woodstown on January 17. Arthur B. Lippincott, manager of the Exchange, states that the morning session will be devoted to business by the directors and in the afternoon the stockholders will join with the officials for the election of the board of directors.—W.

* * *

GROWERS of tomatoes, asparagus, sweet potatoes, peppers and strawberries in the neighborhood of Pedricktown, New Jersey, have formed a marketing organization for the grading and packing of this year's crops. Charles Harbinson, a local grower, was chosen president of the association. This year's operations will deal largely with the adoption of a uniform grading and packing system.—W.

* * *

TURKEY growers in Delaware were discouraged with prices received for birds for the holiday trade. Prices ranged from 25c to 42c a pound and many blocks of toms and hens sold as much as 15 cents below last year's level. W. T. Derickson, director of the Bureau of Markets, stated that there was an overproduction of turkeys this season. High prices in recent years and fine climatic and feeding conditions caused many farmers to turn to turkeys as a profitable sideline.—W.

* * *

"EGGS should be marketed by weight," is the recommendation of the New Jersey Department of Weights and Measures in its annual report to Governor A. Harry Moore, submitted last week. They base their claims for marketing eggs by weight on the ground that unfair prices are being charged the consumer for small eggs.

This report claims that consumers in New Jersey are paying as much for fresh 20 and 22 ounce eggs as the New York City consumer pays for 24 and 26 ounce weights. The New York quotations rule the New Jersey markets and the same prices are charged regardless of the sizes or weights of the product offered. Many producers sort out the large sizes and ship these to New York and sell the pullets and smaller sizes in nearby towns.

It is understood that a bill is to be drafted and introduced at this session of the legislature making it compulsory to market all eggs by weight. This applies to all eggs including those from cold storage.—W.

* * *

SWEET POTATO dealers have again started wrapping potatoes for the New York market. It is reported that a much larger part of the crop will be wrapped in paper this season in the Swedesboro section than formerly. Dealers report a good demand for sweet potatoes wrapped in paper and claim that the returns justify the added expense. Only the best sweets are wrapped.—W.

* * *

THE increase in travel on township roads by cars from outside the state, to the extent that farm communities suffer hardship in their maintenance, has brought forth a request for action from the N. J. Legislative Committee representing the farm organizations of the state. The farmers through their organizations are now preparing to press the matter this winter, urging more state aid with the least amount of supervision possible, and calling for a survey which will bring the facts to the attention of the public and the proper officials.—B.

* * *

TO determine whether there is danger of overexpansion of New Jersey's dairy business in the region that ships to the New York City market, the New Jersey Experiment Station is sending its field men to visit all milk producers north of Mercer and Monmouth counties. Production and marketing methods are being carefully studied in each case and the information tabulated. Dealers in the metropolitan area are being asked to supply data on milk receipts, prices and origin of shipment. It is expected the survey when completed will give clearly the trend of the industry in relation to consumption, so far as North Jersey is concerned.—B.

Harry Jones

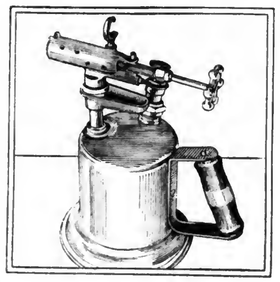
says a blow-torch is as necessary as a harrow

OF COURSE **Harry Jones isn't stirring-up his soil now. But he is doing a lot of repair jobs. And he says he couldn't get along without a blow-torch. It's handy in the summer-time but in the winter—*it's necessary*. That's what Harry says.**

Particularly on these cold days when ice starts to choke your water pipes. You've got to work fast. And the quickest way to thaw them is with a blow-torch. A *good* blow-torch. Freezing pipes won't wait till you fix a broken one. Your blow-torch must be ready to go the minute you pick it up.

What you need is a Clayton & Lambert blow-torch. They're made to swing into action quickly. And they're made to stand up under rough usage. You can count on a Clayton & Lambert being ready when you want it. And think of the ways you can use it!

Perhaps you've some painting to do. Light your Clayton & Lambert—run the flame along the wood and scrape off the old paint. Maybe your wife wants a kitchen fire in a hurry. Lay the fire and apply your torch. You'll have a hot range in an instant.



Here are some actual farm uses for blow-torches. Farmers are continually telling us some new uses. Drop us a line and tell us what you do with your blow-torch.

Thawing frozen pipes
Providing heat for camp stove
Heating glue pot
Cleaning engine
Repairing automobile radiators
Splicing steel cable with solder
Melting metals
Treating old beehives (inside)
Burning brush while clearing land
Repairing gasoline stove cans
Loosening rusty bolts and nuts
Soldering electric wiring
Loosening old spouting
Killing tent caterpillars
Starting back-fires during forest fires
Starting engines in cold weather
Heating for bending piping
Loosening soldered articles
Bending metal
Printing signs on cottages
Use for light at night when soldering
Clearing gooseneck in sinks
Starting hard coal in furnace
Singeing dressed poultry
Heating wax for grafting trees
Melting old inner tube to make gum to put on slipping belts
Wood finishing
Lead and wax filleting
Shaping steel plates (small)
Taking off press-fit bearing easily. For this heat all around bearings
Removing kingbolts
Heating metal for boring wood or a softer metal
Heating flux solder in radio work
Loosening rusted-in wood or machine screws to facilitate removal
For babbitting and for shrinking collars or other parts on small shafting
Charring wood

You can use a Clayton & Lambert in a lot of different ways out in the wagon house. For instance, to warm up your tractor engine. To heat soldering coppers. Loosen rusty bolts or wood screws. Why, there's a flock of uses. Look at the list. Every one is an actual use given to us by farmers.

What's the reason for long service—instant service—and satisfaction in a Clayton & Lambert? Just this—although a Clayton & Lambert has always been the best blow-torch "buy"—we're continually working to make it a better "buy." For 40 years we've been experimenting with blow-torches. That has resulted in many ingenious, patented, and exclusive Clayton & Lambert improvements.

The gas orifice is an example. It is the most delicate part of a torch. The Clayton & Lambert No. 158 has the orifice guarded against carelessness. In the slightly more expensive No. 32 it is *absolutely protected* against ever being enlarged.

The tanks are made of heavy-gauge brass without a seam. They'll stand hard usage. The pump-valve has a double spring for faster and more efficient action. The filler plug has a lead washer. These—with a number of special Clayton & Lambert features—are your insurance for long, satisfactory blow-torch service.

When you're in town, look for a blow-torch with a red handle and a gold stripe. That's a Clayton & Lambert. Be sure it has the C & L trade-mark. Then you're getting the most popular blow-torch in the world.

CLAYTON & LAMBERT MFG. CO.
DETROIT, MICHIGAN

Words and Figures

THE farmer had sold 100 barrels of potatoes, took the buyer's check for $365, and presented it for payment at the bank on which it was drawn.

"Nothing doing," the cashier told him.

"What's wrong?"

"Didn't you notice that it's '$365' in figures all right, but the words are just 'three sixty-five,' omitting hundred," the cashier pointed out.

"I never noticed it, but I think it's good for $365," the farmer contended, "and if you'll refer it to your lawyer, I'll pay for his opinion, if he doesn't say 'pay'."

And the lawyer ruled in the farmer's favor, as the Supreme Court of West Virginia in a case found in 104 S. E. Reporter, 587, in referring to a similar check, says:

"It is argued that the check might not have been paid, even had it been presented promptly, because of the apparent irregularity above noted. This defect would not justify the bank in refusing payment of the check, for the Negotiable Instruments Law provides that where there is an ambiguity in the written language in an instrument such as this, the figures will be looked to to determine what was intended."

M. L. Hayward.

The Farm Cat

I READ with much interest the article by R. L. Scharring-Hausen in December 29th issue, and I fully agree with his attitude on the farm cat.

We always kept three or four cats and as we had several outbuildings besides the large dairy barn and various chicken coops and runs, we needed them. Rats and mice were frequent and at times did much damage. We also had traps set and caught many that way. But had it not been for our cats, which were of the "ratter" strain, we never could have withstood the regularly increasing onslaught of the rodents.

The cats scarcely ever ate the rats, but would bring them to the house and call for us to see them. Then we took and cremated them.

Our cats not only would attack rats and hang on till no breath was left in their prey, although many times the rat would weigh almost as much as the cat, as some of our most valued cats were very small, but the cats caught other noxious rodents, weasels, red squirrels, chipmunks, etc., and one once attacked a skunk but got the worst of the bargain. That was a fearful job for us, as well as the cat.

Our cats seldom caught birds, and



H. D. Ness of York county, Pa., a grower of good corn, much of which is sold for seed. The exhibit he is holding in his hands took first prize at the York County Fair.

there were birds of all the common varieties. As there were many fruit trees we opened up a lot of old stove pipes and tacked them around the trunks of trees so the cats could not climb into the trees, and then hung several bird houses in the trees which were fully occupied yearly. We seldom found bird feathers and scarcely ever saw the cats with a bird, and when we did we punished them.

Clarice Raymond.

Cats and Birds

MR. SCHARRING-HAUSEN certainly to be congratulated on the quality of cats which inhabit New Jersey. While I have no more use for a cat than said cat would have for an additional tail, if I could induce myself to harbor one of the feline race I should like to have a specimen of the Jersey breed, which prefers mice to birds.

In long observation of cats I have never found one that could resist a juicy bird. They spend hours stalking the feathered friends of the farmer and fruit grower, and a confirmed "mouser" is so rare as to be regarded as a jewel by its owner. Most cats are reluctant to hunt mice and are scared stiff at a rat. If starved to it, and no other game is available, they will make life miserable for the mice, but if well fed they will let the mice alone and take the exercise in bird hunting. J. B. D.

An Old Teacher's Memories

MR. KESTER'S reminiscences of his old-time experience as pupil and teacher interested me. I attended my first term of school about 1855 or 1856 (I was born in '49). The term was three months, but was lengthened to four the next term. My father printed the alphabet on a smooth board which I carried to school, and my recollection is that at the end of the term I knew my letters. We furnished our own supplies, started when we wanted to and quit at our own will. Could go until we were 21 years old.

My father was secretary of the school committee and among his old papers are some queerly composed and spelled articles of agreement binding the teachers to faithfully teach the English language for the term of four months for from $15 to $18 per month, with free board and lodging among the patrons.

We had no examinations, knew nothing about grades, just advanced from the primer to McGuffey's fifth reader.

I attended a three-months term of summer school taught by the local pastor. I taught my first term of school in 1868 and for that day carried a fair certificate, although I could not have passed the eighth grade examination as it is held today. But any damage my teaching may have caused is long since outlawed. I received $8 for four months, 22 days per month, and had to make up time spent at teachers' institute. Paid eight dollars per month for board.

Although Osgood's readers and spellers and Dean's arithmetic were the authorized books I had classes in Ray's, Dean's and the Western calculator in mathematics and in McGuffey's readers and spellers. When I saw the poorly dressed pupils and visited the poverty-stricken homes I did not have the heart to compel the parents to supply the proper books. Later I got $25 per month. About 1875 the term was lengthened to six months and wages shoved up to $30.

Yes, those were strenuous times and crude methods of education. But some of the boys and girls wrote their names on the scroll of fame and all made good American citizens.

O. C. Sigworth.

Venango county, Pa.



W. R. Whitacre and Son

Whitacre is author of the weekly "Market Place"

Local Markets

WE ARE inclined to look at our local markets through the wrong end of the telescope. Actually, Pennsylvania markets for farm products look bigger to producers in the West and the South, thousands of miles away, than these same markets look to us from our own doorsteps.

Many of us do not realize that the urban population of Pennsylvania living outside of Philadelphia and Pittsburgh is the equivalent of two cities the size of Philadelphia. Moreover, since Philadelphia receives annually more than 40,000 carloads of fruits and vegetables, there is a potential market in Pennsylvania outside of the two largest cities for the equivalent of at least 60,000 carloads of fruits and vegetables, making due allowance for redistribution from the two largest centers.

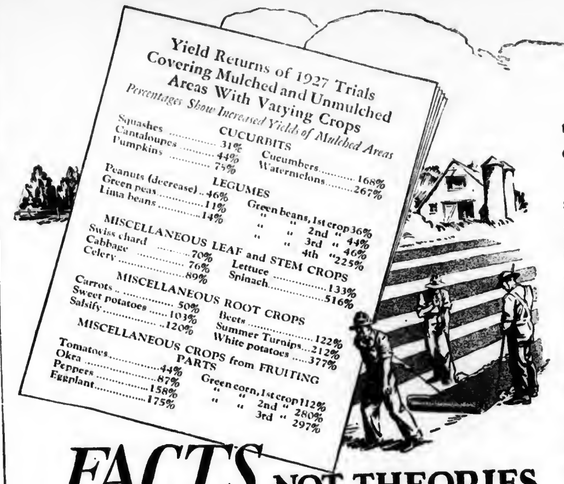
The Small Market

What is the situation in our local markets today? These markets are absorbing a portion of the fruits and vegetables of every surplus producing state in the Union. Approximately 42,000 carloads of apples, cabbage, celery, grapes, lettuce, onions, peaches, potatoes and turnips—products grown commercially in Pennsylvania—are received each year in the fifteen principal consuming centers of this Commonwealth from other states. About 15,000 carloads of these products come from west of the Mississippi River, and it is estimated that nine out of every ten of these carloads are carefully graded. The writer estimates from available statistics that more than 2,000,000 bushels of graded apples and 4,000,000 bushels of graded potatoes are received in these Pennsylvania markets on the average each year.

Competitive Graded Products

In the face of such figures, the important point for the Pennsylvania producer who is depending on local markets to remember is this: No matter what method of marketing is used, the time will soon come when his product will have to sell in competition with a shipped-in product, the grade of which has been definitely established either by the state or the federal government or both.

In other words, the Pennsylvania producer will soon, if he has not already been obliged to do it, have to put his product alongside the well-graded, neatly displayed product of some distant point, and take a price based on the consumer's own conclusions. This is exactly what the Pennsylvania carlot shipper of fruit has been doing for several years in the larger markets. For him it has been a quality competition and prices have resulted accordingly. Consequently he has given much attention to the grading of his product. Local producers will sooner or later have to come to the same conclusion if they expect to gain more or even hold their present proportion of local market sales. G. F. J.



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Farmers' Week
presents opportunities

EVERY month and every business has its conventions. The most outstanding and unusual of these is the one conducted by the State Agricultural Colleges in New York Central territory during January and February under the name of Farmers' Week.

Embodying all the features of the ordinary convention, it is also a seminar—it presents a post graduate course to those engaged in agriculture. Here is an opportunity for the men in the field to exchange ideas with the agricultural scientists. By personal contact, the theoretical meets the practical and the business of agriculture is benefited.

Better soil, better crops, better cattle, better farmers, and better citizens! Fascinating subjects worthy of discussion, as well as profitable.

Progressive farmers throughout the New York Central territory ascribe much of their success to the information and inspiration which they receive from their State Agricultural Colleges through these Farmers' Weeks.

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* * *

Pennsylvania's Record Acre Yield of Potatoes-696 bushels will be on Exhibit in Pyramid Form



The Two-Row Planter Enables the Grower to Use a Two-Row Cultivator and a Two-Row Digger

Round-Table Talks

By W. D. ZINN

WHEN I took up my work in Harrison county as county agent I told my executive committee that I felt the first thing I should do was to get acquainted with the farmers. I do not believe any one can do successful work until he knows the people for whom he is working. The county seat, Clarksburg, is centrally located and a great many of the farmers made it a rule to go to the county seat to do their shopping and banking on Saturday.

I thought I saw the opportunity of getting acquainted with the farmers by announcing that I would hold a round-table every Saturday afternoon in the court house. I put the question up to my executive committee. They very kindly told be to try it if I chose to do so, but one of them said he did not believe I could hold the farmers together very long in that way.

The announcement was made in each daily paper that the county agent would be in the county court room from one p. m. until four p. m. each Saturday until notice should be given to the contrary. The meetings increased in interest and attendance month after month. Farmers would often come in and without taking a seat ask a question and after securing the answer retire.

The county agent stood most of the afternoons from one until four o'clock answering questions and discussing them. It was like a movie, the reel was run over and over again. I have had farmers say to me if I did not do anything except stand in the court room three hours each week and answer their questions I would earn all the money the county paid me. I was in the county four years and three months, but there was never a Saturday that I did not spend three hours in the court house. I make the above explanation that my readers may understand why I am so fond of round-table talks.

Farmers' Week at Morgantown, W. Va.

WEST VIRGINIA farmers should begin now to make arrangements to attend Farmers' Week at Morgantown, Feb. 4-9, inclusive. There are several reasons why farmers should attend this meeting. The first is that many farmers never take a vacation and no class of people is more entitled to have one. It does one good to meet with people of his class. The social pleasures to be had at this gathering are worth all the trip will cost. Farmers need to get together oftener and talk over their problems. The information to be gathered from the lectures is very worth while, but I believe the inspiration to be had at Farmers' Week is the best of all.

In these days of high taxes and slim profits on the farm we need a little inspiration occasionally to spur us on to greater efforts. I have no patience with the teachings of certain pessimists who are saying that farmers are certain to become peasants in the near future. We have the biggest business on earth and one that requires, if we would succeed, as much straight thinking as any other one. To be able to cope with this job we must become better prepared for our work.

Cottonseed Meal

A WEST VIRGINIA farmer writes that he will have to pay $60 for 43 per cent cottonseed meal if he feeds any and asks whether he can afford to do it. Not if he can buy the same amount of protein in any other carrier for less money. I doubt if he can do it however. Wheat bran contains some minerals that cottonseed meal does not contain, but it has only about 13 per cent protein and it will cost from $35 to $45 per ton and therefore is more expensive. Oilmeal has 32 per cent protein and it will cost as much, but some of our stations claim it is worth as much per ton for feeding cattle as cottonseed meal. When fed with timothy hay I would buy it even if it cost a little more money, but I have always found cottonseed meal a safe feed if fed with silage.

There is a consideration in feeding cottonseed meal that should not be overlooked and that is, if fed on a cement floor, it has a manurial value of $22 per ton.

Fodder Silage

Our silage is about gone and we have an abundance of fodder tied up in good shape. We would like to cut it and fill silo and have been told that if we run water in on fan of cutter it would pack and would not mould. Is this true? How much water in gallons would you advise per ton of fodder? Is there anything in the way of salt, or molasses, that could be added to the water that would make it palatable?

H. B. P.

IF THE fodder has kept well and the farmer has his own filling machinery I think it is a profitable business to put the corn fodder in the silo. After having fed part of our silage out I have refilled the silo with the fodder from the field and was pleased with the results. If one has to hire all the machinery and a good deal of labor there is some question as to its profitableness.

Authorities say that as much water should be applied in terms of pounds as there are pounds of fodder. We ran a half-inch hose of water into the cutter as the fodder was being cut and we had no spoiled silage.

If the molasses could be bought cheap enough it would pay to spread it over the silage, but this ought to be done when the silage is being fed and not run into the silo.

Nothing should be construed from what I have said about fodder silage to induce farmers to take the corn out of the fodder thinking they would gain in the operation. The corn is worth more to feed when it goes in with the corn fodder than it is worth when husked and put back on the silage. This has been proved at one of our experiment stations. I have known farmers to husk their corn, crush it and put it back on the fodder silage. This was a great loss both in food value and in labor.

Mechanical Power

By R. U. BLASINGAME

MANY potato growers in Pennsylvania are using two-row potato inters. The illustration on the opposite e shows a two-row potato planter ned by Mr. S. E. Rineard, who lives r Harrisburg, in Dauphin county, nnsylvania. With the use of the two-planter one is enabled to employ two-row cultivator and also a two-digger. I have noticed this comation being used by several of the ding potato growers in the state.

Mr. Jacob S. Wile of Montgomery unty, Pennsylvania, told me last ring, when I was on his farm, that used a two-row planter which was lled by a team. He said he had obrved that the wheels of the planter llowed directly behind the team and doing so the wheel dropped into the rse's tracks and gave a rapid sud-n motion to the planter which relled in the pickers on the planter rowing the seed potatoes and some-nes caused the planter to miss. He tates that he will, from now on, emloy a tractor to pull the planter.

With comparatively large acreages of otatoes, by this I mean 20 acres and ore, the two-row planter seems to be very profitable machine. I know of ne potato grower who had about 90 cres of potatoes this past year and on ccount of the lack of sufficient equipent he was almost two months planing the 90 acres. With an outfit such s is shown here one should be able o plant possibly an acre in about an our and a half or two hours.

I noticed last January, during the Farm Products Show, that there was reat interest shown among growers, ot only in two-row tractor planters, ut also two-row mechanical cultivaors and two-row diggers. I heard one rower make this statement: "This is the day of machinery in every line of business and it is my idea not to try o save money on my crop, but to make money on it."

To Prevent Rim Rust

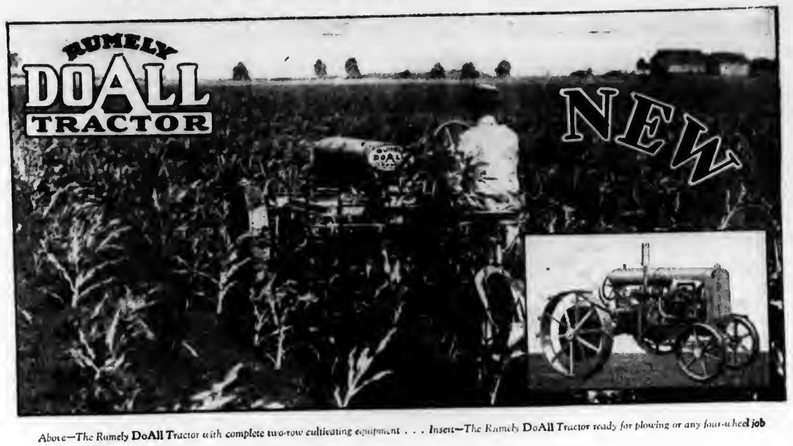
T. K. writes: "I have a 1924 touring car on which I have a lot of trouble keeping my tire flaps (breaker strips) in good order due to the excessive rust, which gets both thick and hard, and about three or four months is as long as the flaps will last. Have sand-papered it off, but this is hard work and I have an idea that the loose sand is hard on the flaps and tubes, which also give trouble due to the poor flaps. Can you offer any suggestions how I can keep my rims from rusting and causing this trouble? Do you think hard grease would be a good thing to use?"

IF GOOD service is to be secured from breaker strips and inner tubes, it is very important that the rims be kept as free from rust as possible. Sandpapering them does little good, as most of the rust is still left to show up again as soon as any moisture gets under the tires. Painting over the rust does little good, as the rust will increase under the paint and cause it to peel. Nor can hard grease be used, since grease will quickly ruin the inner tubes.

About the only way this problem can really be remedied after the rims have started to rust is to take the car to a garage or tire shop and lay it up for a few days, remove the wheels and tires and buff off the rims thoroughly on a wire buffing wheel, being careful to get in under the rims.

Then give the rims all a coat of red lead and linseed oil or of a good asphalt or graphite paint, and hang them up in a warm room to dry. Then put on one or two coats of graphite paint, and I believe your troubles from rusting will be over. I have had pretty good results from buffing, then applying two coats of white lead and oil, but it is not so good as the other method, and the casing has a tendency to stick to the white lead paint.

I. W. D.



Above—The Rumely DoAll *Tractor with complete two-row cultivating equipment . . . Insert—The Rumely* DoAll *Tractor ready for plowing or any four-wheel job*

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Strawberry Culture

By GILBERT S. WATTS

SEVERAL years ago a friend asked me to advise varieties of strawberries for a sizeable planting. I suggested that half the area be planted in Howard 17 (Premier) and that Chesapeake, Big Joe, Sample, Wm. Belt, Aroma, Gandy and Gibson set in the remainder. Today I received a letter stating that the plantation he expects to make next spring will be 75 per cent Howard 17.

This variety is not as good a shipper as some, but has proved one of the very best money makers for local market growers producing under average culture. With very intensive culture, fertile soil, heavy applications of plant food and possibly irrigation, Chesapeake may prove best. This berry is exceedingly handsome and holds up well, but yields will not be satisfactory unless everything is favorable.

• • •

A RELATIVELY new strawberry pest, one that is exceedingly difficult to control once it is introduced and which it is practically impossible to eradicate, is the Cyclamen mite, commonly called "red spider." Spring planted fields may not show injury until August or later and it is about the time the fruit begins to ripen in June of the year after planting that serious injury occurs. The characteristic appearance is a distortion and bronzing of the foliage, in severe cases the leaves drying up or "burning." In such instances the crop is likely to be a total loss.

When arranging for the purchase of strawberry plants next spring insist on stock which has been inspected and certified. Then to be doubly safe make a careful examination at the express office when the plants arrive. Open up several bundles of plants and examine with utmost diligence the young leaves. Even the bunches of unfolded leaflets in the centers of the plants may be harboring places. Some of these should be unfolded. Look for what might be taken as a light dusting of very fine ground red pepper. Do not expect the pests to be very active. Possibly no movement at all will be noted. If you find mites under no circumstances take the plants home.

• • •

EXTENSION Circular No. 106, entitled "Strawberry Culture in Pennsylvania," may be secured on application to the Division of Agricultural Extension, State College, Pa. This publication is an indispensable guide to the inexperienced grower and raises a number of points worthy the consideration of veteran berry growers.

• • •

DURING the next three months gardeners everywhere will be contracting for seeds, fertilizers, equipment, packages and other supplies to carry on their businesses. Especially in the matter of supplies surprising economies often may be effected by standardizing and by combining several small purchases into one relatively large order.

For several years I have been buying No. 30 rubber bands for bunching celery hearts. Quarter-pound lots cost me 30 cents. We usually bought a pound at a time at $2.20. The other day I asked the same dealer to secure me the best possible price on a 25-pound package of exactly the same make and grade of bands. He quoted $1.35 a pound. On 25 pounds there will be a saving of $21.25.

• • •

THE greatness of the lowly is no better exemplified than by the onion. This healthful vegetable is a staple the world over and deserves even larger use. The onion is mentioned in the fifth verse of Chapter Eleven of the Book of Numbers as one of the things for which the Israelites longed while in the wilderness. It is said that one time there was an inscription on the Great Pyramid stating that $1,000,000 was expended for certain vegetables including onions to feed the laborers.

The wisely managed home garden includes a few Perennial Tree (Egyptian) or Winter) onions to use extra early. Spring set onions follow and are used raw while young and tender. Then comes the poppies—more than 60 varieties of flowers—all of colorful tissue paper. Make them for your home, church, club or school, make them for gifts or to sell.

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Christmas Trees

I am interested in the raising of Christmas trees. We have late frosts and I am trying to find something that will not be harmed by them.

I would like to know the best kind to grow, kind of soil needed, if cultivation and fertilizer will help growth, what kind of fertilizer if any, how much space should be given each tree. My idea is to plant a few thousand this coming year and a few thousand each next two years.

Butler county, Pa.

WE WOULD suggest your planting Norway spruce, Balsam fir and Douglas fir. If I were setting 10,000 trees, I would put in about 3,000 each of the first named species and distribute the remainder fairly even between the Balsam fir and Douglas fir.

These young trees are more finicky as to the kind of soil. Let me know what kind of soil you have both from the standpoint of moisture and texture, that is, whether sand, clay or gravel, so that I can make definite recommendations on this point.

Fertilizer is seldom used in connection with Christmas tree plantations unless the soil is extremely thin and poor. Cultivation hastens growth the first two or three years, but it usually runs the cost up to such an extent that we do not ordinarily recommend cultivation except for lands which are in a high state of cultivation and which, consequently, the weed growth during the first several years is likely to be rather heavy.

Your trees can be planted as close as three and one-half feet by three and one-half feet. Some of the plantations are even putting them as close as three feet in a row but are then widening the rows out to four feet apart. You will see that it doesn't take a large piece of ground on which to plant 5,000 trees.

I might say that on the average you will be able to cut your first Christmas trees of average size at six to seven years if transplant planting stock is used. Table trees can be got quicker.

C. R. Anderson
Penn'a State College.

Raspberries

FOUR years ago we started a red raspberry patch. Planted about one hundred and fifty bushes, mainly the Latham variety. Our first berries were marketed two years later. The patch has grown to 900 bushes now, by planting young bushes from the original plants and their offspring.

Though our land is rather rich our plants are thriving. Each year we haul a few loads of good, well-rotted manure on the patch. Then the plants are cultivated and kept free from weeds.

Last year, instead of cultivating the original patch, we mulched it heavily with leaves. This kept the land entirely free from weeds and kept it from drying out. Though the weather was very dry, our oldest plants yielded heavily and the berries were large and juicy.

In the fall we cut out all the old canes, which are then piled up and burned. This makes the hoeing and picking easier, gives the new canes a better chance to develop and helps keep down disease.

S.

The MARKET PLACE

By W. R. WHITACRE

ACCURATE records of expenses and receipts are a great help to the fruit and vegetable grower. They enable him to determine which crops show a profit and which are unprofitable. I know one prominent celery grower who has accurate records of what his celery has brought on the market for a period of over ten years and also a record of what it has cost to produce it.

This grower told me that his records showed that from 1911 to 1915 his celery brought seven to fourteen cents a bunch and his labor costs were fifteen to twenty cents an hour. In 1919 labor costs advanced to fifty cents per hour and he received from fifteen to twenty cents per bunch. In other words, while the price he received for his celery increased the proportion of expense was much larger.

Uses Better Methods

This record caused him to look for more economical methods of production and by better cultural methods, careful grading and packing he has been able to obtain top prices consistently. His celery is the best that comes on the market and brings the highest prices. Records also show that under present conditions it is most profitable for him to market as much of his crop as possible direct from the field. He figures that stored celery generally brings an increased return of from two to four cents a bunch over that sold direct from the field. This depends largely on market conditions and some years the figures would vary.

This grower has discontinued the practice of trenching celery and is using the cold storage. He reports that the natural shrinkage of celery in the trench alone would almost pay the cost of cold storage, where shrinkage is negligible. In the trench, no control is maintained over temperature or disease and the loss is often severe. The labor involved in getting celery ready for cold storage is about one-half that of trenching. The time spent in preparing the cold storage celery, for market is much less than in the case of trenched celery. This grower's records show that on one day twelve men prepared 60 crates of trenched celery for market while six men working all day and one man a half day had 65 crates of storage celery ready for market.

His records have shown the way to many improvements and the facts learned from them have helped him show a profit when production costs are advancing.

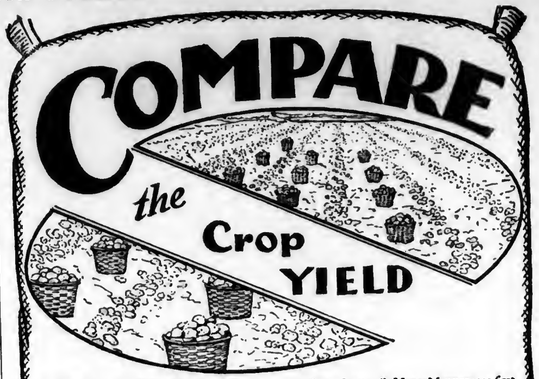
The Time to Start

This is the start of a new year and is the time to go over old records and study how the coming year can be made more profitable. It is also the time to start new records, especially if none has been kept before.

• • •

Onion growers will be interested to know that the duty on onions was increased from one cent per pound to one and one-half cents Dec. 22 through a proclamation by President Coolidge. The new schedule becomes effective January 21, 1929. Immediately after this was announced contracts for many thousands packages of Holland and Spanish onions were canceled. The contracts contained a clause which provided that if the duty was raised this season the buyers would have the privilege of annuling the agreements. There were contracts for 100,000 bags of Holland stock and 122,000 cases and half-cases of Spanish onions.

COMPARE the Crop YIELD



YIELD, Quality, Profits. These are the results you want from the fertilizer you buy. Mapes results are so remarkable, so outstanding, so evident, that you have only to see them to be convinced that the slogan, "*cost little more—worth much more*", is a modest statement of the true worth of Mapes.

Mapes Manures produce bigger yields, better quality, and larger profits. That is why Mapes users are so loyal to Mapes. And that is why more good farmers use Mapes every year.

Two fertilizers of the same analysis may produce widely different results, because of the difference in the materials from which they are compounded. Mapes Manures have always produced outstanding results because they have always been formulated on the basis of crop yield and crop quality. We go to the crop; we ask it what materials it likes best; we put these materials into Mapes Manures. That's why Mapes "cost little more—worth much more." Mapes Manures are first made right, then priced as low as possible.

Try Mapes this year. Compare the results—yield, quality, profits—with the results from any other fertilizer. Write today for list of crop brands and prices—also for Special Trial Offer.

Test It Yourself for YIELD-QUALITY PROFITS

The Mapes Formula and Peruvian Guano Co., Dept. P-2
270 Madison Ave., New York, N. Y.

Without obligating me in any way, please send me your list of crop brands and prices, and Special Trial Offer.

I use.....tons of fertilizer on the following crops:.....

.....

My Name is.....

P. O.....State.....

MAPES Manures

cost little more ~ worth much more

OSPRAYMO

Double the dollars at harvest with OSPRAYMO SPRAYERS

High pressure, low upkeep, slow depreciation



Reaches the topmost boughs



Brushes pores of nozzle clogging

There is an Ospraymo for every need. High pressure guaranteed.

Every Ospraymo Machine is strong—built to last and for hard usage, easy to keep in order. Equipped with the reliable Ospraymo automatic system of agitation, throttle valve, a pressure regulator and gauge.

Stiff brushes on the revolving paddles clean the suction strainer on every turn — prevent pipes and nozzles from clogging—prevent costly delays in orchard, grove or field.



Ospraymo gets all plant enemies

Insist on an Ospraymo when you buy and put an end to your spraying problems. Send for our illustrated catalog. We help you select a sprayer suited to your needs. Find out about the best. Address

FIELD FORCE PUMP COMPANY
Dept. M Elmira, N. Y.

World leaders for 47 years

THE SPRAYER THAT NEVER CLOGS

MYERS Hand and Power Spray Pumps



A COMPLETE line for every purpose from the smallest size hand sprayers to the largest stationary and portable power sprayers. Famous for their dependability. Send today for catalog and name of nearest Myers dealer. 856

THE F. E. MYERS & BRO. CO., 305 Orange Street, Ashland, Ohio
Manufacturers for more than 50 years — Pumps — Water Systems — Hay Tools — Door Hangers



$1,014.00 Profit in Six Months from "Kerlin-Quality" Leghorns

5,000 Eggs a Month from 225 Pullets

Think of it! Low cost "Kerlin-Quality" White Leghorn Chicks develop into pullets that give net profit of over $4.50 each in six months after all feed expenses are paid. That is real profit, such as only "Kerlin-Quality" S. C. White Leghorns can earn.

Mrs. Thos. Estes, Burghill, Ohio, writes: "Kerlin-Quality" chicks stand the test. We have had chicks from other hatcheries, at the same cost, but we could not recommend them, as quality was not in them. From 500 Kerlin chicks we put 225 pullets in the laying house in very fine condition. From October, 1927, to March, 1928, they produced 4,700 to 5,000 eggs a month. We made $1014 net profit for our time and labor. 'Kerlin-Quality' are recommended very highly by us."

Pennsylvania Woman Says: "We Can Raise More 'Kerlin-Quality' Chicks Than Any Other Strain."

Mrs. R. T. Tomer, Murrysville, Pa., writes: "For the past three years we have raised 94 11-18% of all Kerlin chicks received. This is a far greater percentage than of any other strain we ever tried to raise. Kerlin chicks develop into the nicest, largest, red-headed laying hens we have ever seen."

Bargains in Baby Chicks

Yes! *"Kerlin-Quality"—300-Egg Blood Line* Chicks are truly bargains. Their cost is low. The quality is high. The net profit per bird so big. Over 50,000 satisfied customers have proved it.

Mountain bred. White diarrhoea free. Strong, sturdy, healthy. 29 years breeding for perfection. Big beautiful birds. World's Great Egg Producers.

Vitality Supreme
Many customers raise 98% to maturity—pullets laying 60% at 6 months old. Customers obtain flock averages of over 200 eggs.

Order Now!
For early fall eggs and big winter profit. You can't get better chicks anywhere regardless of price.

Get Your Chicks From the Finest Breeding Establishment in Pennsylvania.
We're right near your home. Your chicks will reach you within one day from time they are hatched, 100% live delivery guaranteed. We have supplied Pennsylvania and all other states for 29 years with highest quality chicks at lowest prices. Buy from Kerlin this year—and you will make no mistake.



Big, Strong, Active Winter Layers, Big topped-comb, clear eyed, wedge shaped money making egg machines.

Big White Eggs, that command Premium Prices. Customers report pullet eggs weighing 26 to 28 oz. to the dozen.

Big Free 4-Color Catalog
Tells how you can make biggest profits in the chicken business. Describes World's Greatest Layers. Quotes low prices on highest quality baby chicks and stock. Send for it today. BIG DISCOUNT on orders placed now—for delivery when wanted.

Free Feed With Order
20 lbs. Free Feed Prepaid with each 100 chicks.

"Feeding Formulas and Methods," free book to all customers. Another added help to success.

FOR GREATER PROFITS
Hatchery Chicks

KERLIN'S GRAND VIEW POULTRY FARM
BOX 89 CENTRE HALL, PA.

Stop "Keeping Chickens"—Let "Kerlin-Quality" Chickens "Keep You"

BEST CHICKS YET
Ohio Accredited chicks—every breeding bird banded. Strong, healthy, well bred flocks carefully bred for high production.
WE SHIP C. O. D. $2.00 will book order. On orders placed before March 1st we will give 10 chicks per 100 extra. Illustrated catalogue and price list on request. Write today.
BLUFFTON HATCHERY, Box H, Bluffton, O.

Chicks, Barron Eng. White Leghorns
Common Leghorns, Barred Rocks, Light & Heavy Mixed, as low as 8c each. 100% guaranteed. "New Circular Free." Prepaid.
TWIN HATCHERY, McAlisterville, Pa.

FERRIS STRAIN WHITE LEGHORN CHICKS
$12.00 per 100 $57.50 per 500 $110 per 1000
Special prices now for March and April chicks.
CHIX Juniata Poultry Farm, Richfield, Pa.

Special Prices on Quality Chicks
LIVESEY'S HATCHERY, Limited, Fonthill, Ontario
For ordering Early Write Now.

HERBSTER'S QUALITY CHICKS
Barred Rocks, R. I. Reds and White Leghorns, good, strong, livable chicks, true to breed, which develop into profitable birds. Get our low price and catalog. Hatch all year.
HERBSTER'S POULTRY FARM,
(Formerly Brookfield Poultry Farm.)
Box 171, McClure, Pa.

CHICKS Will ship C.O.D.

	25	50	100
S. C. Reds	$4.00	$7.50	$11.00
Barred Rocks	4.00	7.50	11.00
White Leghorns	3.50	6.50	12.00
Heavy Mixed	3.50	6.50	12.00
Light Mixed	2.75	5.00	9.00

500 lots 4c less, 1,000 3c less. Free Range, 100% Delivery. Circular.
W. A. LAUVER, McAlisterville, Pa.

CHICKS From Choice Flocks, culled for laying. Barred Rocks, White Leghorns, mixed. First hatch in Mar. 100% live delivery guaranteed, postpaid. Bank reference. Write for special prices.
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BABY CHICKS
Ready for shipping Jan. 1, 1929. Barred Rocks, White Rocks, White Leghorns. Parkway Hatchery, Geo. J. Sipple, Box 25, Scranton, Pa.

Hampton's Black Leghorn DAY OLD CHICKS
The Kind that lay. Circular free.
A. E. HAMPTON, Box F. Pittstown, N. J.



A General View of the Sharon Duck Farm

Ducks and Dollars

By R. L. SCHARRING-HAUSEN

SOME of our farm economists tell us that the solution of the so-called farm problem lies in better marketing methods. Many Massachusetts farmers, selling direct to a tourist trade, have found this to be the case, and I know of no more successful examples of direct selling than can be found in two duck farms which I recently visited there.

Both of these farms have grown from small beginnings to large and highly profitable business enterprises, in which the ducks raised on the ranges and in the ponds and streams are turned into dollars—and a good many of them—through the restaurants which are a part of the establishments. These farms are the Sharon Duck Farm and the Weber Duck Farm, located at Wrentham, Mass., on the state highway midway between Boston and Providence.

The Sharon Duck Farm is operated by Chas. W. Sharon, and at present has a capacity of 50,000 ducks. One thousand breeders, in the proportion of one drake to five ducks, are maintained to furnish eggs for hatching purposes.

The eggs are hatched in hot-water incubators, and the ducklings are transferred to heated brooder houses, where they receive their first feed of commercial duck starter. This is soon changed over to a mash composed of bran, middlings, meal, meat scrap and chopped greens, and after six or eight weeks the growing ducks are transferred to cool brooder houses. The proportion of corn in the ration is increased, until at 12 weeks the ducks weigh five to seven pounds and are ready for market.

Feed and Labor

I was told that it took 25 carloads of feed a year to grow these ducks, and six men to prepare the feed and take it to the ducks in trucks or wagons, and do the other necessary work about the farm. Picking the ducks is a piecework job which is taken care of by ten additional hands who are experts at getting the feathers off.

The cost of picking a duck is 12c, and the pickers account for 80 to 90 each in the course of a day. The restaurant operated in connection with the duck farm employs twelve additional persons and this restaurant, in tion with a retail store in markets all the ducks raised farm.

Adjoining the Sharon Farm largest duck farm in Massachu not in New England, known Weber Duck Farm. This farm prises over a hundred acres of pens, ponds and streams, with a ity of 100,000 ducks. An inc with a capacity of 40,000 eggs tu the ducklings, which are handled as has been described. The las weeks of their lives they are a to swim in the ponds, which acc to the manager, Mr. Hadley, them clean and improves the qu

It takes 30 men to run this and each duck is supposed to pounds of feed in the twelve w its existence, to bring it to the of six or seven pounds. Feather in considerable income, as they to four tons a year, worth 70c a p The farm also sells breeding stoc no eggs.

A Duck Inn

The most interesting feature farm is the Duck Inn run in co tion with it. The Weber Far been in existence 40 years, and or ly supplied fancy White Pekin to the Boston wholesale market. five years ago the operators com the idea of opening a high-class restaurant in order to sell dir the consumer and retain the retail it themselves.

This was the beginning of the Duck Inn. This is a beautiful ing, set apart from the duck proper in a natural grove, equ with the most modern kitchen a ratus such as electric ovens in forty ducks can be roasted at one and a refrigerator room holding dressed ducks waiting their turn roasted.

The Inn specializes in a duck and a duck luncheon, and also in roast ducks to be taken away or by parcel post. The charges are er high, but not unreasonable e ering the good service and exce of the food, and after we had there it was not hard to under



A Few of the 100,000 Ducks on the Weber Duck Farm

Beware of Thin-Shelled EGGS!

WHEN hens lay thin-shelled eggs, it's a danger signal. To create them, the birds are exhausting the stored-up calcium in their bodies. Unless the calcium supply is renewed, they're likely to break down with leg weakness or rickets. And egg production is sure to be reduced.

PEARL GRIT Pays a BIG Profit!

Feed PEARL GRIT. It provides the lime that's absolutely necessary for maximum egg production. The cost is a mere trifle. Nothing else you can feed your poultry pays such a big profit.



Build Up the Earning Power of Your Flock

Keep PEARL GRIT in your breeding pens. Get the birds in condition to produce eggs of high fertility. PEARL GRIT supplies the calcium which makes virile chick germs and furnishes the foetus with the material required for bone formation. It insures a higher percentage of hatchable eggs. It provides bigger, stronger, baby chicks. That's the very foundation of poultry profits.

If your feed dealer doesn't handle PEARL GRIT, write us at once. And ask for our valuable PEARL GRIT book. It contains information worth real money to you.

MAIL THE COUPON TODAY!

Pearl Grit Corporation,
3312 Wayne St., Piqua, Ohio
Send me your free book, "The Poultry Raiser's Pay Envelope," and give me the names of dealers who handle PEARL GRIT.
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Address.....
P. O. ..... State.....

LEOLA BROODER HOUSE



Leading agricultural colleges and successful poultry farms use the Leola to raise their chicks—they demand the best! The remarkable results that the Leola brings to poultry raisers makes it an unusual'y profitable house to own. Write for a folder describing the advantages of the Leola.

IT'S ROUND

If you would like to sell Leolas we will be glad to send you our dealer proposition on request.

H. M. STAUFFER & SON
BOX A, LEOLA, PA.

Ask for the Best Beef Scrap by Name—
DIAMOND PICK
"It's Better because It's Pure"
ATLAN MFG. CO.
142-E Logan Avenue Jersey City, N. J.

POSITIV-LAY Used in mashes by 21 State Poultry Experts
The Oyster Shell Products Co., Phila., Pa.

why 87,000 people came to the Duck Inn for a meal in one year, or why business is constantly increasing.

Some Small Establishments

This farm also maintains a retail store at which dressed ducks are sold, and disposes of about half its output through the store and the Inn. The rest of the ducks are sold in Boston. Both Mr. Sharon and Mr. Hadley told me that if they should be compelled to market their ducks through the usual wholesale channels their profits would dwindle decidedly.

While both these places were doing business on a very large scale, I noticed several small farms and roadside stands advertising "Duck Patties" as a specialty, but was too full of duck dinner at the time to investigate further. No doubt some of these little places were on the way to prosperity through marketing their farm products as a specialty which would appeal to public taste; and I feel certain that for many of us a similar opportunity may be waiting, no matter what we may produce, if we only realize that the opportunity is there and are able to take advantage of it.

Nest Box Notes



I HAVE just been going over some interesting material quoting the results of experiments at different state experiment stations, showing that limestones of the proper calcium content and hardness are at least as good as oyster shell as a source of material for egg shell formation.

* * *

I HAVE just recently learned that Mrs. Helen Baker, the well-known Maryland turkey breeder, was presented with a silver cup at the International Turkey Show held in Chicago during December for the most outstanding service to the turkey industry during the past year. The Baker turkeys have been written about in these pages at least twice in the course of a year or two.

* * *

LOCAL egg prices took a drop of seventeen cents a dozen in the two weeks following Thanksgiving. The only encouraging side is the fact that production keeps increasing so that greater volume makes up for lower prices. I do not think that high prices always mean greatest income, unless the poultryman is successful in getting heavy production at that time. Very often the largest net returns come at a time of low prices and heavy laying.

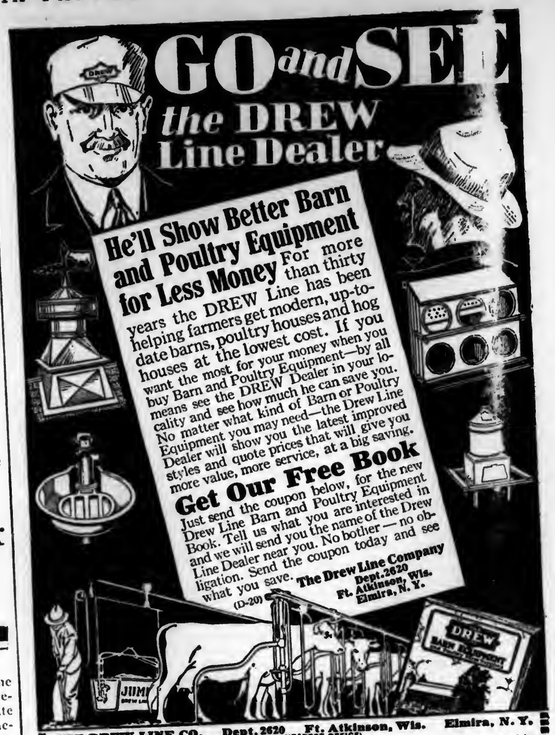
* * *

PULLETS which have been under lights as a rule are a very poor source of hatching eggs. Most poultrymen prefer yearlings or older birds as breeders, and are not anxious to have them lay more than moderately well during the hatching season. Lack of fertility, poor hatches and weak chicks are only too likely to result when breeders are forced to lay heavily.

The best hatching eggs come from birds which come into production after a molt and resting period, and which have milk, green feed, cod-liver oil and outside range.

* * *

EVERY once in a while a reader wants to know where he can get plans for a poultry building, whether for a brooder house, a laying house for a back-yard flock or a large house for a commercial flock. Practically every state experiment station has plans of such houses available for free distribution, which will be sent to persons writing for them



THE DREW LINE CO. Dept. 2620 Ft. Atkinson, Wis. Elmira, N. Y.
(MAIL TO THE NEAREST OFFICE)
Please send your Free Book and Catalog on Barn and Poultry Equipment. I am interested in
☐ Barn Equipment ☐ Poultry Equipment
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KERR'S 1929 CHICKS

Chicks with an official heavy-laying ancestry

Most baby chicks are bought for the ultimate source of egg production. The sooner a pullet starts laying aster she is mature the greater will be her egg yield and the cheaper will be the eggs she produces, providing she comes from a heavy-laying ancestry.

Kerr's chicks are bred to lay. They have an exceptional egg-laying inheritance based upon four generations of public egg-laying contest winnings. These winning records are as high as 294 eggs in White Leghorns, 280 in R. I. Reds and 277 eggs in Barred Rocks.

The type, constitutional vigor, livability and rate of growth of Kerr's chicks are strictly in keeping with their unusual inheritance for egg production. Both utility and special matings chicks furnished from flocks that have passed the blood test for Bacillary White Diarrhea.

Write for booklet with prices, giving illustrated account of the Kerr way of producing living, profitable chicks. Liberal discounts on orders up to February 1st.

KERR CHICKERIES, Inc.
Department 6
Frenchtown, N. J. Trenton, N. J. Binghamton, N. Y. E. Syracuse, N. Y.
Lancaster, Pa. Danbury, Conn. W. Springfield, Mass.

NATIONAL "SUPERBRED" CHICKS—500,000 Super-Quality Chicks for 1929



Insure your future poultry profits by ordering NATIONAL SUPERBRED CHICKS NOW.

	25	50	100	500	1000
S. C. White, Brown & Buff Leghorns	$3.50	$6.75	$13	$62	$120
S. C. White, Brown & Buff Leghorns	3.75	7.25	14	67	130
Tancred & Hollywood White Leghorns	4.25	7.75	15	72	140
Barred & White Rocks, R. I. Reds	4.25	7.75	15	72	140
Black Minorcas & Anconas	4.25	7.75	15	72	140
White Wyandottes & Buff Orpingtons	4.75	9.00	17	82	160
White Minorcas & Blue Andalusians	5.50	10.25	20	95	190
White Minorcas & Blue Andalusians	7.00	13.00	25	120	230
Jersey Black Giants	3.00	5.50	10	50	100

Mixed or odds and ends.....
Send for our Free Catalog with prices on Chicks from our SPECIAL MATED FLOCKS. All chicks sent prepaid by either Parcel Post or Express, prepaid. Bank references on request. Delivery guaranteed. Write us. You will save money by ordering Superbred chicks NOW.
NATIONAL CHICK FARMS, Box 404, Millintown, Penn's

S. C. WHITE LEGHORNS From Pedigreed Males

If you want Leghorns of unusual quality we can furnish them. Cockerels heading our flocks are from dams with records of 200-280 eggs. Grand dams 299-305. Flock of 150 hens trapnested under Ohio Record of Performance made average of 275 eggs last year. Hen No. 1051 made record of 342 eggs this year. Last year she made 331 eggs. Hen No. 4871 made 299 eggs two year, 242 second year and 223 this year. Majestic of Ideal in our special matings is from dams with records of 305 eggs. Five of our flocks have averaged over 200 eggs per bird.
Write for Catalog of stock. All stock from pedigreed males—many are from trapnested females. Get the details. WAYNE POULTRY FARMS, Box 108, Wooster, O.

LANCASTER QUALITY CHICKS



Our Chicks come from flocks culled for Egg Production and Standard Quality by poultrymen trained at the Ohio State University. OUR CATALOG is chicken from cover to cover. Write for it.
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Navy Brand Concentrated Buttermilk
From Tuberculin Tested Cows
28 per cent milk solids, 6% per cent lactheid, thick as custard with no foreign ingredients. Reduces acidosis, aids digestion, increases egg production and promotes fertility and hatchability. Good for chicks, brooders and laying hens. Sold direct from the factory in barrels of 200 lbs. Write for prices about 180 lbs.
TITUSVILLE DAIRY PRODUCTS CO.
Titusville, Pa.

HILLPOT
Quality Chicks
Leghorns Rocks Reds Wyandottes

Have This Important Book Before You When You Order Chicks This Year

This beautiful free book should be in the hands of every man and woman interested in making money with poultry which is one of the most fascinating means of increasing your income or of achieving financial independence. The book, which is finely illustrated in four colors, describes my breeds fully; tells of my careful methods of mating and rearing; discusses most profitable sizes for flocks; contains house plans, construction details and concise and easily-followed Feeding and Rearing Charts. It is a book that you will find full of suggestions and inspirations and which you will want to keep handy for frequent reference. Some of my customers claim that they owe to it their first steps toward the comfort and peace of mind that come with an assured income.

W. F. HILLPOT, Dept. 128, FRENCHTOWN, NEW JERSEY



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TEN CHICKS FREE

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Every bird in our breeding flocks is banded and a record kept. Our flocks are inspected by experts trained and authorized by Ohio Poultry Improvement Association. Find out about our guaranteed plan. Sixteen Breeds. We have limited number Chicks from Ohio R. O. P. pedigreed stock. Write today.

HOYTVILLE ACCREDITED HATCHERY, 117 Main Street, HOYTVILLE, OHIO

HUBER'S RELIABLE CHICKS

Ten Free Chicks — On orders booked before March 16th, we give 10 Chicks free with each 100 ordered.

When we say RELIABLE—we mean RELIABLE in every way. Breeding stock of highest quality of 19 years of carefal development. Special attention paid to health of flocks and records kept. CATALOG FREE—CHICKS SENT C. O. D. IF YOU WISH. Write for details—get our illustrated catalog which tells all the story. Our prices reasonable. A book on Raising Chicks worth many dollars given free with each order of $10.00 or more. Big discount for early orders.

HUBER'S RELIABLE HATCHERY, N. Main St., FOSTORIA, OHIO

CHICKS (Investigate before you Invest) FREE POULTRY BOOK

MONEY SAVING COUPON FREE. Write for our early order coupon. Saves money. Fine chicks with special breeding and pedigreed males behind them. If you want real producers we have them. We can fill your requirements if you will let us know what you want. Catalog is Free It will help you make more money from your poultry plant. Write today. If you have a poultry problem and we will give our best advice and help.

Write Today—We Can't Tell the Whole Story Here.

COOPERATIVE BREEDING & HATCHING CO., Box 126, TIRO, OHIO

WOLF SELECTED CHICKS WITH EACH 100

10 FREE CHICKS ORDERED BEFORE MARCH 1st.

Don't miss this chance to get a start with Wolf's extra quality pure-bred high producing stock. Every breeder produced on free range and health of chicks is safeguarded.

GET OUR CATALOG AND PRICE LIST IS SURE

Tells about prizes won by our birds. Read about Mary Heinert who made over $1,000 profit in one year with birds of our breeding. All leading breeds. Prices very attractive. Chicks shipped C. O. D.

WOLF HATCHING & BREEDING CO., Box 42, GIBSONBURG, OHIO

QUALITY Blood-tested Baby Chicks

All pure-bred State blood-tested and certified. Carefully selected and inspected for perfect health and high production. Reds, Rocks, White and Br. Leghorns. Send at once for Informat'n.

QUALITY HATCHERY CO., Box PF, Lynchburg, Va.

Hatchery Chicks for Greater Profits"

May We Send You A COPY OF THE 1929 EAGLE NEST CATALOG FREE?

THE EAGLE NEST HATCHERY CO., Box 60, Upper Sandusky, Ohio

Baby Chicks from High Egg Laying Flocks

11 years reliability. Satisfied Customers our specialty. Prices Reasonable. Write for catalog and price list.

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PROFIT BRED CHICKS

County Line Chicks are from proven producers. They can be secured in five breeds, S. C. White Leghorns, Reds, Barred and White Rocks and White Wyandottes. All from range mated healthy bred to lay parents. Send for folder which gives prices and information every poultry raiser should know.

COUNTY LINE POULTRY YARDS AND HATCHERY, Box 12, Telford, Pa.

Metal Brooder House 150 Chick Size $30

BUCKEYE Larger sizes at correspondingly LOW PRICES. Equipped with all Modern and Practical Features necessary to GUARANTEE success in raising Baby Chicks. Send for our SPECIAL PRICES and Booklet FREE. Investigate TODAY.

The Thomas & Armstrong Co., Dept. 13, London, Ohio

Buckeye Corn Cribs—COPPER-ized Metal Silos

STRICKLER'S SUPER-QUALITY CHICKS

High Egg Producers Bred. Healthy, Vigorous

Large size Tancred-Barron English S. C. White Leghorns, 278-316 egg line matings. No lights used; chicks are extra hardy and vigorous. These quality pins chicks shipped parcel post prepaid, 100% live delivery guaranteed at $16 per 100; $47 per 300; $77 per 500; $150 per 1,000. 10% books order. Catalog free.

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NEW ENGLAND BRED Leghorns

The Largest Specialty White Leghorn Farms in the eastern states distribute a 64-page illustrated Yearbook free to poultry keepers east of the Mississippi. Gives housing, trapnesting, pedigreeing, breeding and feeding plans our 25 years' experience has proved most successful, and reasons why we can sell Chicks guaranteed to be more profitable than any others you can buy.

LORD FARMS, 90 Forest St., Melhuen, Mass.

Pullets — Chicks. Eggs from high-egg-bred inspected flocks. Get Rocks and pullets at 25 and make you money. Hy-grade Chicks, Barred Rocks, Leghorns, Wyandottes, Reds, Orpingtons, Anconas. Low prices. Catalog free. Write today. Mary Manors Farms, Box 201, Portland, Ind.

QUALITY GUARANTEED

White Leghorns, Barred Rocks, Rhode Island Reds at extraordinarily low prices. Write for circular.

MARYSVILLE HATCHERY, Box 15, Marysville, Ohio

BABY CHICKS

Feb. March and April Delivery 100% live arrival guaranteed.

	25	50	100	500	1000
White Leghorns	$5.00	$9.50	$12.00	$57.50	$110
Barred Rocks	5.00	9.50	11.00	52.50	100
Rhode Island Reds	5.00	9.50	11.00	52.50	100
Silver Laced Wyandottes	5.50	9.50	16.00	75.00	
Light Mixed	4.50	8.50	12.00	57.50	80
Heavy Mixed	5.50	9.50	12.00	57.50	110

These chicks are hatched from healthy free range stock. Write for Catalogue

THE RICHFIELD HATCHERY, Box 166, Richfield, Pa.

BARRON LEGHORN CHICKS

From Large Type Barron English S. C. White Leghorns. Hens weigh up to 7 pounds. Extra Quality chicks from free range selected stock and week after week Live Arrival Guaranteed. 10% books order. Catalog Free.

ROBERT L. CLAUSER, Box N, Kleinfeltersville, Pa.

FOR GREATER PROFITS Hatchery Chicks

CHICKS FROM JANUARY TO SEPTEMBER, 1929

Barred and White Rock, White Wyandotte, Rhode Island Reds, White Leghorns, Anconas and heavy mixed. Our flocks have been culled by Mr. Lloyd Baker a graduate of Pennsylvania State College, also having several years practical experience. Write us your wants.

L. R. WALCK HATCHERIES, Dept. G, Greencastle, Pa.

American Breeds Gain in Popularity



By H. C. KNANDEL

MUCH has been written and said concerning the merits of the various breeds and varieties of fowls. Some contend that the most profitable variety of fowl is the White Leghorn. To substantiate this, it is claimed that Leghorns will consume less feed in a year than most other varieties; that they can be crowded more than the Plymouth Rocks and Rhode Island Reds and that they will lay more eggs than their American sisters. These statements may be true in part, but there are many champions of the general-purpose breeds of fowls.

Those who favor such breeds as the Plymouth Rocks, Reds and Wyandottes point with pride to the fact that recently in egg-laying contests throughout the country the general-purpose breeds have quite well held their own. While the highest official egg record of a hen or a pen is held by the White Leghorn variety, yet the Rocks and Reds have made phenomenal scores. In most egg-laying competitions the White Leghorn entries equal those of all other competing breeds, so the chances for obtaining high records are greatly enhanced in the case of the Leghorns.

A Market Premium

In recent years there has been in many of our large markets a distinct preference for Barred Plymouth Rock and Rhode Island Red broilers. During the early part of the season these broilers bring a premium over White Leghorns. This premium is paid throughout the entire season and amounts to a spread at times of at least ten cents per pound. In certain localities the White Leghorn broiler is a drug on the market.

One farmer, who has a large flock of White Leghorns, told me the other day that last year he added several hundred Barred Plymouth Rocks to his flock, so that in the spring he would be able to dispose of his White Leghorn cockerels. Whenever he made a sale of broilers, half of them were Rocks and half Leghorns. By this method he was able to dispose of his Leghorn broilers at a fair price.

It is human nature to want something we cannot readily obtain. If all the farmers in the country should raise only Reds, Rocks and Wyandottes for the market the buying public would then want Leghorns. However, it is always a good plan to produce that which is in demand and it is very reasonable to suppose that for the next few years, at any rate, the heavier breeds of fowls will be greatly desired.

The Leghorn Has a Place

While it costs more to feed a heavy fowl, the market value of that fowl is also greater than the Leghorn. It brings more not alone because of greater weight, but because of the minimum which is paid on heavy fowl. This difference may amount to as much as ten cents per pound. Even at a difference of five cents a pound, on a four pound bird, the owner would be able to feed the heavy fowl ten pounds of grain per year and still receive, from the market poultry standpoint alone, greater net profit.

Unquestionably, the Leghorn has a very definite place on the commercial poultry farm and no effort has been made to belittle its importance as an efficiency. The farmer who maintains a flock of one or two hundred hens, however, would do well to consider the heavier breeds of poultry, and next the time to lay plans for the coming spring. These heavy birds should be hatched in February, March and early April in order to mature properly so as to lay heavily throughout the late fall and winter months when egg prices are highest. In the purchase of hatching eggs or chicks, remember that it is the strain that counts. All Rocks, Reds and Wyandottes are not good layers any more than are all Leghorns. Purchase from a reliable breeder who has honestly tried and succeeded in the production of a high-laying strain.

Crooked Breast Bones

I want to know through your paper what is the cause of crooked breast bones in turkeys. D. M. B.

THERE are several causes for crooked breast bones in fowls, but at one time the cause of crooked breast bones was laid entirely to the fact that the birds roosted too soon. This is a fallacy and little evidence points to the fact that such is the case. It is sometimes believed that crooked breast bones are an inheritable characteristic. This is probably true to a limited extent.

By far the most common cause of crooked breast bones is the improper balance of minerals. Turkeys, of course, because of their large frame need a sufficient amount of calcium and phosphorous. These two minerals should be fed in a very definite proportion. Just what this proportion is, no one has definitely stated and no experimental evidence is conclusive on this point.

Perhaps a satisfactory way would be to supply, in hoppers, a high grade calcium carbonate (ground limestone) and edible bone meal.

If turkeys are over-crowded, there is a possibility then that the breast bone may become crooked. It is imperative, of course, that in the case of turkey production the breast bones be straight in order to bring the highest market price. H. C. K.



Bronze Turkeys on a New England Turkey Farm. Note the Pine Bough Shelter in the Background

Look out for ROUP!

WATCH your fowls for signs of roup — sneezing, swollen eyes, watery discharges, cheesy formations in nostrils.

At first signs, crush and dissolve Dr. Hess Roup Tablets in the drinking water. That will immediately remove the sources of infection, and your flock will begin to doctor themselves.

In chronic and advanced stages, bathe the head and swab out the mouth and throat with a stronger solution.

They stay in solution. Only one thorough stirring is necessary. Your birds get the same medicine whether it be the first or last drop. That's important.

GUARANTEED

Dr. Hess & Clark, Inc., Ashland, Ohio

Dr. Hess ROUP TABLETS



METAL BROODER HOUSE

Stop your chick losses by brooding your baby chicks under proper housing conditions. Only metal can give you the exact conditions you need—but there is a big difference in Metal Brooder Houses. Internal heat by the Dickelman Manufacturing Company and properly tested by it, it is only natural that the Dickelman Metal Brooder House contains many exclusive features such as corrugated walls, better ventilation and more light—reducing chick mortality and increasing poultry profits. Get our free catalog that shows the difference. No obligation at all.

Over $1000.00 Profit in One Season

L. M. Wilent, Shreve, Ohio, paid for his houses, chicks and feed and had $1000.00 profit from chicks raised in four Dickelman Houses in one season. Houses are built in 50-chick size, circular type or in long type built in 500-chick size, according to your wishes. They are shipped "knocked-down." Any man and boy can erect it quickly. Houses are available in either galvanized or plain walls. It's Cheaper to Own a Wooden One. Write for FREE Booklet on Modern Poultry Housing. Patent No. 1,670,322.

Remember a "Dickelman" Pays for Itself

DICKELMAN MANUFACTURING CO., 326 Main Street, FOREST, OHIO



YOUNG'S Portable Poultry Houses

BUYS THIS FINE $45 BROODER HOUSE

The 8x8 ft. "Amherst" House shown above is just right for brooding. Later, take out the stove, put in roosts and you have an ideal Colony House. Complete with windows, shutters and paper for now, $45.00 f. o. b. Elliot, if wanted, $9.75; roosts, nests and dropping board, 4½ rounds, nests and dropping board, 4½ rounds. FREE CATALOG of Poultry Houses, Pigeon Houses, Rabbit Hutches and Dog Kennels.

E. C. YOUNG COMPANY, 95 Depot St., Randolph, Mass.

KING'S POULTRY SPECIALS

We are distributors of high class ingredients of poultry feeds including the following:

King's Pure Blood Skimmilk, Kibbled Corn, Alfalfa Leaf Meal, Cottonseed Meal, Soybean Oil Meal, Nopco Vegetable Tested Cod-liver Oil, Rich Grade Fish Scrap.

Let us know your wants.

KING BROTHERS & COMPANY, 224 The Bourse, Philadelphia, Pa.

Raise 90% of Your Chicks

EVERYBODYS POULTRY MAGAZINE tell you how. Latest scientific discoveries in feeding, breeding, marketing, etc., every month written by successful poultrymen in a style you'll like. Free poultry house plans. Attractively illustrated. Send 25c for 9 months trial; 1 yr. 50c; 3 yrs. $1.00.

Everybodys Poultry Mag., Box 296F, Hanover, Pa.

FAIRMONT'S BETTER PURE FLAKE BUTTERMILK

EASTERN DISTRIBUTORS, CARLOADS WEEKLY. ALWAYS FRESH. WE QUOTE DELIVERED. ONWAKE BROS., GREENCASTLE, PA.

Additional Baby Chick Advertisements on Page 25

Questions and Answers

Success with Chickens

I have a flock of Barred Rock chickens. I always had very good luck until last year. I hatch all my chicks under hens, never feed until 48 hours old, clean hen house and brooders of droppings once a week, and lime and disinfect. However, the chicks developed bowel trouble in which the discharge was white and pasty, changing in color sometimes. The chicks were weak, slow to grow and feather. Do you think rolled oats a good feed starter for little chicks? The chickens were thus affected at all ages. The death rate was very high. I got eggs from my neighbor's stock of healthy birds, and they became infected like the others. W. M. G.

THERE are certain prerequisites in the successful raising of chickens. A knowledge of the business, disease-free chicks, suitable rations, comfortable and sanitary buildings, and economical marketing of the product. It is impossible to state the exact disease or diseases which were responsible for the high mortality in your flock. It is imperative that you buy stock free from bacillary white diarrhea. We know of no method by which this disease can be cured after the chicks have contracted it. Given healthy baby chicks, the next essential is that they be properly fed. The following ration is suggested to be fed to baby chicks from hatching time until twelve weeks of age: 200 pounds yellow corn, 100 pounds bran, 200 pounds local flour midds, 150 pounds ground rolled oats, 100 pounds alfalfa, 50 pounds meat, 100 pounds dried milk, 50 pounds fishmeal, 20 pounds oyster shell, 10 pounds cod-liver oil, 10 pounds salt, 10 pounds homemeal. At 12 weeks of age the dried milk may be reduced 50 pounds. This will help to cheapen the ration and will produce just as good growth H. C. K.

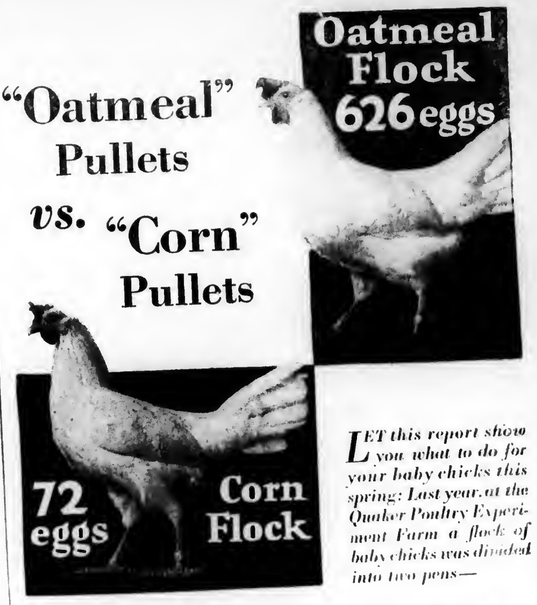
Chicken Pox

We have a flock of 180 White Leghorn pullets eight months old. We had them laying 55 per cent. They are now slacking up in laying. We noticed some scabs on their combs. Were told they had chicken-pox. Is there anything we can do for them? Most everybody's pullets around here have it. Jacob A. Jones.

YOUR pullets evidently have the pox, which is prevalent this fall. Undoubtedly production will suffer, but unless the outbreak is especially virulent you should not have serious losses otherwise. There is no cure for this disease, which will have to run its course, but you can help the birds to get over it by adding B-K to the drinking water as directed on the label, feeding five lbs. of green feed per 100 birds per day, and keeping the houses especially clean and littered with fresh straw. Probably your birds will come back into production within a few weeks. R. I. S.

Ten thousand dollars in cash prizes has been offered by the National Baby Chick Campaign for the best 500 letters on "Why It Pays to Buy Chicks from a Hatchery," according to announcement made recently. This contest, which closes February 28, 1929, has a special appeal to farmers and rural families throughout the country because of the practical knowledge which they possess concerning poultry raising. Any one is eligible to submit a letter or essay except hatchery operators and employes of hatcheries and their families. Letters must not exceed 500 words in length. The name and address must appear on the upper left-hand corner of each sheet of paper used. Letters must be mailed to Contest Editor, Campaign Headquarters, 705 Third National Building, Dayton, Ohio, on or before February 28, 1929.

"Oatmeal" Pullets vs. "Corn" Pullets



LET this report show you what to do for your baby chicks this spring: Last year, at the Quaker Poultry Experiment Farm a flock of baby chicks was divided into two pens—

PEN No. 1—raised on Quaker Ful-O-Pep Chick Starter, and Ful-O-Pep Growing Mash, in which cornmeal was substituted for the regular oatmeal content.

PEN No. 2—raised on regular Quaker Ful-O-Pep Chick Starter, and Growing Mash, with the usual content of good, pure OATMEAL. (These are the feeds that you can buy.)

THE "OATMEAL PEN" (No. 2) developed into big, vigorous pullets of fine laying type with smooth plumage. And in the first 28 days of egg record, this pen of 50 oatmeal pullets laid 626 eggs.

The "CORNMEAL PEN" (No. 1) 50 cornmeal pullets laid only 72 eggs in the same period. They were excitable, and lacked the apparent vigor and good flesh of the oatmeal-raised birds. They were the long-legged, long-necked, shallow-bodied type you recognize instantly as inferior producers.

Raise your baby chicks the Ful-O-Pep way. Ful-O-Pep Chick Starter contains both cod liver oil and cod liver meal, and just the proteins and minerals that enable the good oatmeal to do its best work. It costs less to use because it goes farther. Easy to feed, too.

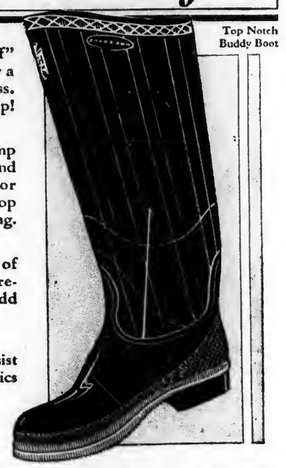
Near you is a Quaker Dealer who can help you have the most profitable flock of baby chicks you have ever enjoyed. They'll live, they'll thrive, they'll be good producers, or better meat birds if you start them right on Quaker Ful-O-Pep Chick Starter.

Quaker FUL-O-PEP CHICK STARTER

THE QUAKER OATS COMPANY
CHICAGO, U. S. A.

BUY THE FEEDS IN STRIPED SACKS

It will Outwear Any other Boot!
..and feels good on the foot



The boot that "stands the gaff" because made in *one-piece* by a patented vulcanizing process. Not a weak spot from toe to top!

Special gum-driven fabric vamp and leg prevent snagging and cutting. The famous ribs or muscles, another exclusive Top Notch feature, prevent cracking.

Extra thick soles and heels of toughest rubber—10-ply tire-construction back stay—add months to the wear.

Get your money's worth. Insist on Top Notch Boots, Arctics and Rubbers.

BEACON FALLS RUBBER SHOE CO.
BEACON FALLS CONNECTICUT

TOP NOTCH

A GUARANTEE OF SERVICE

BACKED BY 28 YEARS OF MAKING GOOD



A BAKER OUTFIT MEANS Economical Threshing
BUILT IN STANDARD SIZES

Hyatt Roller Bearing equipped, 15 bar, 5 tooth track cylinder. Three distinct motions in straw. Double eccentric driven. Two clearing fans. Double belted. Reasonably priced and generous terms. The purchase of a Baker is not an indebtedness—only an investment. Complete tractor and thresher catalogs free.

Two Sizes 22-40 and 25-20

This tractor with the answer. Strong, substantial frame. Heavy duty Foote Transmission. Heavy solid axle revolving on roller bearings. Four plate heavy duty clutch. Recently designed drive pulley shaft with three bearings. The harder the tractor pulls the closer it hugs the ground due to special draw bar hitch. Moderately priced. Terms fair.



THE A. D. BAKER COMPANY
Swanton, Ohio

INSTANT White Light from KEROSENE—FREE
For TEN DAYS TRIAL



Agents Wanted

Make your home bright and cheerful, **saving one-half** on oil. Government and leading University tests prove this wonderful new Aladdin nearly five times as efficient as best round wick open-flame lamps. **Burns 50 hours on one gallon** common kerosene (coal oil). No odor, smoke or noise; no pumping up, easy to operate, won't explode. WON GOLD MEDAL. GUARANTEED. Prove for yourself, without risk, by

Ten Nights Free Trial

that Aladdin has no equal as a white light. If not satisfied, return at our expense. $1,000 given anyone showing us an oil lamp equal in every way to this New Instant-Light Aladdin.

GET YOURS FREE We want one user in each locality to whom customers can be referred. In that way you may get your own without cost. Be the fortunate one to write first for **10 DAY FREE TRIAL OFFER** and learn how to get one FREE.

MANTLE LAMP CO., 330 Aladdin Bldg., Philadelphia
LARGEST KEROSENE (coal oil) MANTLE LAMP HOUSE IN THE WORLD

Make big money spare or full time. Our easy selling plan makes experience unnecessary. We start you without money. Sample sent for 10 days trial and **GIVEN FREE** when you become a distributor.

Agricultural Lime

Hydrated Ground Burned Burned Lump	Our lime, burned from Western Pennsylvania high-calcium grey limestone and sold in these three forms for the past 18 years, represents the standard, unfailing and economical method of sweetening the soil. The wonderful results enjoyed by our many customers over this period of time prove these facts. Can anyone afford to waste both time and money by using substitutes? If your dealer cannot furnish our Agricultural Lime write to us for prices. Rose Point Stone & Lime Co., New Castle, Pa.

When writing advertisers please mention Pennsylvania Farmer

The Small Farm Loan

By FARM LOAN AGENT

IN OUR section many farm owners who have been living in town for six, eight or ten years—some even longer—are going back to their farms. Some are forced to do this because the farm cannot keep them in town, some are so vexed with incompetent or careless tenants that they can endure the waste and depreciation of property no longer, and some frankly say they are going back to put the farm in order to sell. All of them are sure farms will come back in the near future, and they want to be ready for that coming.

These men range in years from forty-five to sixty-five, some even older. They have seen themselves economizing to the limit during the past few years, because the money from the farm diminished year by year, and they have not found town life all that fancy pictured it. Very sensibly they are going back on a different basis from that which they once felt necessary, and they will succeed because they have been watching others who have made the attempt and are perfectly satisfied with lass work and small, safe returns.

But they have not the ready cash to buy stock, make improvements and repair damages. They need a thousand dollars or less and must borrow it. Somebody tells them that the federal loan is a complicated thing, a millstone about their necks for years and so forth and so on, so many of them borrow at a high rate of interest and a formidable commission and go back to try their luck.

Ease of Payment

As a matter of fact a small loan is no more complicated than a big mortgage and it provides a simple and easy plan of paying it off that will not embarrass any farmer, even if that farmer be past what is usually called the prime of life. By its low interest and graduated payments it should appeal to all hard-headed business farmers, and if the farm is to be offered for sale in a few years there is no better way to attract buyers than to have a small loan already placed.

Moreover, with an old homestead that has been in the family for years without being mortgaged or having leins of any kind on it, as many of the farms owned by conservative farmers are, it is far easier and less expensive to get an abstract or to have the present one brought up to date. People come in with abstracts that are inches thick, or so it seems, complicated in many ways, but some of the good farms in our section can be run straight back to the government in a very few pages. Of course this can be said of any kind of loan obtainable, as an easy abstract is an asset in any case, but where a man pays five per cent commission in advance and gets an expensive abstract made the first cost seems almost staggering.

The Best Loans

Usually the best loans come from the farms that have not been kicked about from pillar to post, for the better class of farmers are scarcely attracted to that kind of property. A fine fertile farm well located and productive rarely attracts the man with a few thousands of dollars, because the conservative owner will not sell on a shoe string.

Everything is to be said in favor of placing the small loan in the right place. If the money comes in rapidly from the farm, and it rarely does when the owner has been out of touch with the farm for some years, he can make arrangements to pay it off in a short time, and if things are a bit slow he will be grateful for the time to get adjusted without having to renew the loan in a few years.

Those who have done so and are now paying year by year are loud in the praise of the plan. They have not been stinted in living, have been able to make repairs and to get their hand back into real farming that does not involve hard work, for they rent the fields on the shares and use their part of the crop for livestock that builds the farm in its lost fertility. Some of them say that if they never live to pay it all out the farm is good for it, and that is a sensible view. Others say that the small amount year by year is an incentive to save that would be lacking if the loan did not come due in installments.

All around the best advertisers for the small federal loan are the farmers who went back to their farms and are now paying small amounts yearly, the amounts getting beautifully less as the years go on because the interest decreases with the principal.

Friendly Talks

By Edgar L. Vincent

A TRAVELER not long ago back from a trip to Europe says that he set out one day to climb to the top of one of the highest peaks of the Alps in Switzerland. When away up near the summit he came face to face with a steep crag. For a moment he thought that he was going to be defeated in his purpose of scaling the last height. When about to turn back he discovered that some one had been there before him and had cut deep niches in the rock by which to place the hands and feet, and so pull one's self up to the top. With new hope the American sprang to make use of these niches and it was not long before he reached the peak and was rewarded with a scene of beauty such as he never had looked upon before. The traveler who had gone that way before him had, by carving at great pains those notches in the rock, made it possible for him to realize one of his heart's greatest desires.

Our farmer folks are every day doing fine things for the day and generation in which they live. If they did nothing more than to raise a few more bushels of potatoes than they need themselves, or a good crop of apples or grain or anything else that will help to supply the need of the world, and placed these things on the tables of consumers, it would be enough to satisfy the ambition of any reasonable man. It is a God-given work we are doing in thus keeping the world from being hungry.

In other ways farmers perform a great service for humanity. It is no small thing to live so true, so honest, so dependable lives that it is conceded that by our votes and by our public actions generally we are a stabilizing force in our country's affairs.

But we do not always remember that all the little things we do are just as surely niches in the rock by which somebody may climb a bit higher. The good work we do out on the farm; the fences we keep up well, and the attractive houses and barns we maintain are helps for others in their upward climb. And so the world is made better.



California jury values feet at $75,000!

Have your feet a cash value? Yes! A California jury recently awarded $75,000 for a pair of permanently disabled feet! And accident insurance companies in their standard policies set the very conservative figure of $11,200 as the *average* cash value of a pair.

You wouldn't set *any* price on *your* feet or their *comfort!* Feet that are busy every day, rain or shine, cleaning the barn or feeding the stock, certainly need to be kept warm and dry. That is why there is nothing that deserves to be made with greater care than your boots and overshoes.

And now a new and finer comfort is yours because of the skilful designing and longer wearing qualities of the new "U. S." Blue Ribbon rubber footwear. These super foot-protectors are built to fit like an old glove and wear like a mule's hide. From start to finish they are made to outwear others. 'Finer quality of rubber and workmanship never went into boots. And to make extra wear double-sure, the Blue Ribbon Testing Laboratories put this merchandise through 12 punishing tests far more severe than your every-day service requirements.

United States Rubber Company



Blue US Ribbon





This explains the longer wear

In the "U. S." Blue Ribbon Testing Laboratories a machine presses the sole against swiftly revolving emery—very much like holding a boot against a grinding wheel. The soles in some brands of rubber footwear chafe away at the rate of 4-5" per hour. The standard of "U. S." Blue Ribbon Rubber is 1-5" per hour. *No wonder many farmers say these amazing Blue Ribbon Boots outwear others!*

The 300-Farmer Test

All told, Blue Ribbon Footwear must pass 12 laboratory tests. On top of that, 300 farm workers help us check up Blue Ribbon wear in the hard grind of actual service. They wear cross-mated boots—a "U. S." Blue Ribbon Boot on one foot and a competing boot on the other. By watching these results we make *certain* that Blue Ribbon Boots outwear others!

Make this test yourself

Twist a "U. S." Blue Ribbon Boot. Then let go and watch it snap back! It's as live and elastic as a rubber band. You can stretch a strip cut from the upper more than five times its own length! Where constant bending cracks inferior footwear *this rubber stands up!*

"U. S." Footwear for the Whole Family

1. Notice the liveness of the uppers and the tough, oversize soles of these sturdy "U. S." Blue Ribbon Boots. Heavily reinforced against wear by from 4 to 11 layers of Blue Ribbon rubber. Made with gray soles and red or black uppers.

2. "U. S." Blue Ribbon boots of the same construction as above are made in three lengths—knee, medium, hop. They have gray soles and red or black uppers.

3. The "U. S." Blue Ribbon Walrus (all-rubber arctic). Slips right over your leather shoes. Kicks off in a jiffy. Washes clean like a boot. Gray soles, red uppers. 4 or 5 buckles.

4. This good-looking "U. S." Portland galosh has a long wearing gray or red sole and a fleece-lined cashmerette upper. 4 and 5 buckles.

5. This "U. S." Blue Ribbon Giant Booter has a white upper and a black extension outside. Made with 6 eyelets or 4 eyelets. Well reinforced and shaped to the foot. Other booters with red or black uppers and red, gray or black soles.

6. "U. S." Blue Ribbon Rob Roy high lace boot. A light weight, gray-soled, red or black upper, high lace all-rubber shoe. Plain vamp; corrugated toe. Made snug at ankle and snow-excluding. 2 heights, 10" and 15".

7. "U. S." Rubbers are made in whatever type you prefer—storm, high-cut, footholds, for heavy service or dress.

8. Keds are the most popular boys' and girls' shoes in America. Made only by the United States Rubber Company. They give barefoot freedom—encouraging the foot to healthful exercise—yet afford the protection you want.

9. Guytees is the trade-marked name of the new tailored overshoes made only by the United States Rubber Company. Beautifully designed. New styles, new patterns, new fabrics. Smart as a Paris slipper. See them! Also a complete line of overshoes with Kwik-glide fasteners. Of course, for women's use around the farm, nothing will ever beat the trim "U. S." cloth-top, buckle galosh.

Blue US Ribbon



"U.S." BLUE RIBBON heavy footwear



FREE BOOK! *The Care of Farmers' Feet*

Every farmer who wants comfortable, healthy feet should get this free book. Written by Dr. Joseph Lelyveld, Podiatrist, Executive Director of the National Association for Foot Health, it discusses such problems as bunions, corns, ingrown nails, chilblains, callouses, fallen arches, how to care for itching feet, and many precautions that lead to health and comfort for those feet of yours.

It also tells how to greatly increase the life of your rubber footwear by following a few simple rules. Write for "The Care of Farmers' Feet." Address the United States Rubber Company, Dept. 101, 1790 Broadway, New York.



The Sure Way to Buy Good Seed

YOU CAN'T raise good crops from poor seed any more than you can make water flow uphill. No matter how well you prepare the soil, you must sow good seed if you expect to get a profitable harvest.

What have you a right to expect in quality seed?

It must be pure and free from weeds. Two or three per cent of weed seed will do untold damage to your land and will establish a growth that you may be years getting rid of.

It must be of the right variety, true to label so that it will produce what you want, not some cheaper, less useful variety.

It must be strong and full of growth. Weak seed just barely alive cannot grow into profits or fill your hay mows and bins.

It must be of a strain suitable to your climate and local conditions.

Remember that it takes just as much work to prepare the land, just as much work to sow the seed, and just as much work to harvest the crop whether the harvest is abundant or thin. Figure the total expense of producing a crop and you will discover that the cost of seed is a comparatively small item. A few dollars apparently saved on the price of seed may mean a hundredfold loss on the harvest.

The one sure way to buy good seed is to deal with the men who advertise seed in the columns of this paper. They have a good product. They have built up their businesses on quality. Their testing laboratories are maintained to protect that quality and to protect you, the purchaser.

Cheap seed is one of the worst enemies of profitable farming. There is no surer way to lose money than to attempt to economize by buying cheap seed. Buy good seed from the advertisers in this paper and an abundant and profitable harvest will be your assurance of good judgment.

Buy Quality Seed from Our Advertisers

BIG, EASY-TO-WIN 243 cash prizes!

To guide us in our work of encouraging farmers to build modern, attractive, sanitary, economical and permanent farm buildings, or improvements, we want more information about how our product helps farmers.

Naturally we don't expect you to give us your time for nothing. To make it worth your while to tell us your experiences, we have set aside for farmers $3075 in cash. To make it easy for any entrant to be a winner, we will award a total of 243 prizes. And to make sure that everybody who helps us is rewarded, we will send a valuable Registered-Number, Double-Duty Key Chain to every farmer who enters the contest.

Prizes will be awarded to farmers for letters on the subject "How Building with Concrete Improved Conditions on My Farm." The judges will give extra consideration to letters accompanied by photographs, specifications, and working drawings (even though crude), of the concrete construction you write about.

Read over again the long list of big prizes and then decide right now to be one of the winners. The replies which in the opinion of the judges will benefit large numbers of farmers, will be awarded the prizes. The judges will be guided in their decisions on how you answer such questions as:

1. Why you undertook this construction.
2. Why you used concrete instead of other materials.
3. How you planned and did the work.

Cost figures should be included, but all concrete work, no matter how common-place, has an equal chance of being the subject of prize-winning letters.

The contest is open now. All letters must be mailed by midnight, May 31st, and all building must be under construction by that time.

It is easy to win a prize. Your ideas may seem very commonplace to you but very important to the judges. We're not looking for fine language or fancy writing. It's ideas we want and ideas that count.

Read the rules in the column headed "How to Win." Then mail your letter, photographs and drawings. You can secure an official entry blank from a Lehigh dealer (we'll send you the name of one near you). The dealer can furnish you with the Lehigh Farm Structograph Book or make other suggestions to help you win.

Lehigh Portland Cement Company
Allentown, Pa. Chicago, Ill.
Offices in Principal Cities

Lehigh Farm Building Contest

1	Grand Prize	$1,500.	in cash
2	2nd Prizes	100.	each
5	3rd Prizes	50.	each
10	4th Prizes	25.	each
25	5th Prizes	10.	each
50	6th Prizes	5.	each
150	7th Prizes	2.50	each
Total 243 Prizes			$3,075 in cash



Concrete is firmly tamped. The stiff mixture gives an excellent bond to top coats.

A thin layer of 1:3 cement mortar (one part cement and three parts sand) is now placed.

Striking off the concrete, using the metal templets as guides for the straightedge.

Second course completed. This brings the concrete to the level of the templets.

Above are typical photographs from the Lehigh Farm Book of Structographs

HOW TO WIN
(Rules of Contest)

1. All letters must be on the subject "How Building with Concrete Improved Conditions on My Farm."
2. The contest is now open. All building must be under construction by May 31st, 1929, and all letters must be mailed by midnight of that date to Contest Editor, Lehigh Portland Cement Co., Allentown, Pa.
3. All entries must be accompanied by an official entry blank which can be secured without obligation from your Lehigh dealer.
4. Name and address of writer must appear at top of each page of letter.
5. All letters, photographs, specifications and working drawings to be the property of the Lehigh Portland Cement Company.
6. Your letter must list definitely all materials used, and their quantities.
7. In case of tie, each tying contestant will receive full amount of prize.
8. Employees of the Lehigh Portland Cement Company are not eligible.
9. All prize winners will be notified by mail. The first 93 awards will be published in the August, 1929, issue.
10. The judges: William Boss, Chairman American Soc. of Agr'l. Eng.; R. U. Blasingame, Head of Farm Machinery Dept., Penn'a State College; I. W. Dickerson, Agr'l. Eng. Editor, Standard Farm Papers.



A Free Book to help you win

Get the Lehigh Farm Structograph Book. Farmers call it the most helpful construction book they have ever had. It tells by pictures and short descriptions how to use Lehigh Cement on the farm. (Only a few words to read.) You will find it full of building suggestions farmers have given us, and among them may be ideas that will help you win the contest. The photographs on this page are part of the series showing each operation in the building of a dairy barn interior. Use the coupon or write for the Structograph Book, today, or get it from your dealer. It is free.



Free to all contestants

After you enter the contest you will receive this Registered-Number, Double-Duty Key Chain. It has a tag bearing a serial number and the words: "If found, notify Lehigh Portland Cement Co., Allentown, Pa." We keep a record of serial numbers and to whom each key chain belongs. In case of loss your keys are returned to us, and we forward them to you, thereby avoiding any misuse if found by an unscrupulous person. The chain also has an ingenious device for separating the keys you use continually from the keys you use infrequently.

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RADIOLAS are built for two kinds of operation—from the electric light circuit or with batteries.

The quality of broadcast reception is the same in both classes of instruments. Musical range and fidelity of tone—realism of reproduction—are independent of the kind of power used.

If your home is not served by an electric power line, Radiola 16 is the instrument for you to use.

If you have the advantage of alternating-current service from a central station, you have the choice of the battery-operated "16," or the new Radiola 18 that does away with batteries. This receiver operates directly from the electric outlet just like an electric fan or vacuum cleaner. It takes no more current than a 50-watt electric lamp.

Whether you choose a "16" or an "18," you will have a radio receiver to be proud of—an expertly-designed instrument perfected in the research laboratories of RCA and its associated companies—General Electric and Westinghouse.

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Large scale production by the world's largest electrical manufacturers makes possible such fine instruments at such low prices.

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RCA RADIOLA 18—For direct operation from A. C. house-current. Employs special A. C. tubes and rectifier. Electrically lighted dial. Finest set of its kind. $95 (less Radiotrons)

RCA LOUDSPEAKER 100A $29
RCA LOUDSPEAKER 103 . . . . . $37.50
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EDUCATIONAL HOUR
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RCA Radiola
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An Old Timer

I HAVE read with great interest the letters which were printed in this paper some time ago regarding the cold lunch for school children.

Of course the West Virginia mother has a lot in her favor where they have natural gas to burn. It would not be much trouble to prepare a hot lunch in another room. But here in our one-room school houses I think it would be all different.

In one issue "A Farmer's Wife" has unpleasant memories of cold lunches, while I remember them with great pleasure. I was the youngest girl of a family of ten children, and there was always a lot of us to go to school at one time. Sometimes the teacher boarded with us, and we had to take a large basket to carry our dinners. The teacher always ate with us, and there never was anything left over. I do not think I ever have tasted anything so good as the mince pies my mother used to make. We had quite a ways to school then; had to cross fields and wade snow pretty deep—and that part was the worst of all.

Plenty of Clothing

But I want to tell the mothers of today that they dress their young girls scantily to what we wore then. We had warm clothes, always had heavy home-knit wool stockings and calf-skin shoes; home-made flannel dresses and skirts and canton flannel underwear, as the nice underwear like they have today was not manufactured yet. We were always warm, though the school house was not an extra warm building. Our lunch was always eaten with a relish, and I was always hungry. I am afraid if the teacher had tried to prepare anything in the school at that time I would not have had my mind on anything but the eating, and the books would have been neglected.

Now we are two worn-out farmers, my husband and I. We never went to school except in the old one-room country schools, but I think we children had great advantages over the children of today. We did not have the fancy living and clothing of today, but we had the necessaries of life for a child; always milk, butter, bread and meat, and such nice apples (did not have to spray the trees then like we do now). How times have changed.

Results of Exposure

This is what comes to our door now—they want you to buy Red Cross stamps to help stamp out tuberculosis. I surely think the mothers of today want their children to have tuberculosis, as a thirteen-year-old girl in the neighborhood rolled her stockings last winter in January. I could not keep still when I heard her mother say, 'Well, I would have had to have a fight with her, as all the other girls did the same thing." I sure would have had the fight.

I was glad we did not have that style fifty years ago. I never bought any half hose for my children. I dearly love to see children barefooted in summer, and the thin clothing then will do, but for young folks to wear low shoes, silk stockings, and then rolled below the knees in January here they surely can't expect health.

The cold lunch surely would not hurt the digestive powers if they dressed according to the weather, went to bed early every night and had two good meals at home. They would have good health as I did.

And I want to tell the Farmer's Wife that I enjoy the cold meals yet. Our son brings us a gallon of milk every time he comes to town, and we have a great feast of bread and milk for supper. I never will think but what a cold meal is good.

Mrs. F. E. Krout.

Don't Let Your Crops Go Hungry!



A CASE E-B spreader leaves no bare spots to starve your crops. It spreads any kind of manure so finely and evenly that every stalk gets its share of vital nourishment and your yield per acre will be increased.

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It's so low you can load it easily in jig time and as for handling—you can drive it right through a six-foot door and turn square around. The light draft makes it easy on the horses too.

When it comes to durability no one knows yet how long a Case Spreader will last. We heard of one the other day that was fifteen years old and know of many that have been in continuous use for five or six years without any repair expense whatever.

Few machines ever designed for farm use will save you so much time and labor and be so profitable from a money making standpoint.

Call on your nearest Case dealer the first time you're in town and see this spreader or write direct to the Case Factory for full information.

J. I. CASE T. M. CO., INC., *Racine, Wisconsin*
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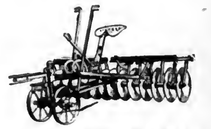
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CASE Tractor Plow. Power lift. Quick detachable shares. Easily handled. Remarkably long life.



CASE—*Grand Detour Horse-Drawn Disk Harrow. Long lasting, specially heat-treated disks. Extremely light draft.*

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The small farm is just the place where compact and efficient work will be done by the

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In several styles and types; one at least, just what you need. Disks are forged sharp—dust-proof oil soaked hardwood bearings.

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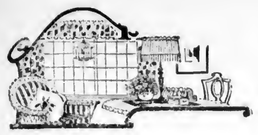
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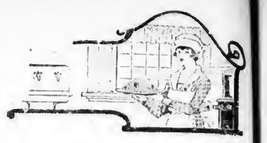


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The Farm Home



Improvements

By HEPSY NEFF

HAVING taken our invoice and learned the actual conditions of our stock, if we are not in debt, the next step may be considering possible improvements. If the work can be done by home workers any improvement is brought a step nearer. One of the cherished dreams of every woman, and the farm woman is no exception, is a water system; water at the turn of a faucet or the lifting of a pump-handle, and some sort of a bath room.

Not the least of the arguments for some real improvement in the farm home during these winter months is the depressing effect of stagnation, getting nowhere. If any man can go on indefinitely working with enthusiasm and getting nowhere it might pay him to offer his secret at a dollar per. But it simply cannot be done. Now, a cistern is always possible to a man with a shovel. I have a cistern that holds 125 barrels of water and it works.

A Simple Water System

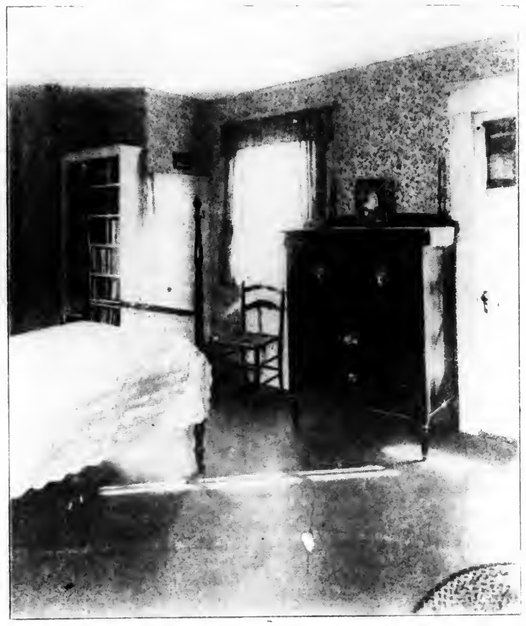
A cistern that is within ten feet of a pump can be the beginning of a good water system. The drain can start in the same trench that brings a small lead pipe from the cistern ten feet away to the pump and sink. An ordinary pitcher pump can be used. If a bath room directly above the kitchen sink is possible then a force pump will serve both kitchen and bath room. This will need a tank hung from the ceiling of the bath room or placed in the attic above the bath room. If placed near a chimney and well protected it will not freeze even in zero weather. The last item necessary is a strong arm to operate the force pump. The big boy of the family made a game of this once-a-week job by counting the strokes of the pump-handle necessary to fill the tank and watching for the first trickle from the small tell-tale pipe over the sink. The total cost of such an arrangement could be figured by any capable workman.

Next to bringing water into the house a woman wants a plentiful supply of cupboards. The old-time pantry has been supplanted by cupboards built in the kitchen wall. A small cupboard outside the window, reached by raising the window, will lessen the demand for ice during warm weather. Just why so many of us should have endured a work table, even that superior, zinc-covered table of our dreams, yet having nothing under it but four legs, is still one of the mysteries. A 36x60 foot work table with nothing under it simply wastes two good 8x6 foot shelves as well as three good drawers, ready to the worker's hand dozens of times a day. If it can be enclosed with hinged doors or sliding doors, such as can be seen on show cases, so much the better.

A Real Danger

Here's hoping that our daughters will really be smarter than we have been in some things. It will be a long time before they catch up with us in learning how to be real partners in the business of home-making as our pioneer mothers learned it. Necessity always has and always will be the best teacher, the best developer of both mind and character. Imagine a pioneer woman considering salads a necessary part of at least one meal every day; a salad made of six different kinds of materials, not counting the dressing.

Imagine a pioneer mother skillfully taking the core out of a perfectly sound



The Book Corner in a Pleasant Colonial Bedroom Shows a Pleasing Way of Utilizing Corner Space

Jonathan apple, dividing it mathematically equal from stem end to near the blossom end in eighths, opening them out to resemble a pond lily, filling the sleider space with a blend of chopped orange and pineapple and serving on a white plate garnished with green lettuce leaves. Shades of Pocahontas defend us! I had rather live in a wigwam and eat corn bread and water cress than be doomed to that kind of slavery.

Here is a real danger which we must not be afraid to face. If the farm cannot grow enough common sense to save the farm home from that kind of foolishness no farm relief that Congress can offer will do any good. If the independence of spirit which tossed a perfectly good cargo of tea overboard and wrote the American Constitution cannot be produced on the farm, where shall we look for it?

Osnaburg for the Closet

By GERTRUDE S. STEWART

IN FURNISHING a room, a closet has perhaps more bearing on the charm of the room than is realized from the start. Even apartment dwellers of these apartments consist chiefly of a large dress living room, which is turned into a bedroom at night by extending a davenport and opening a closet door, revealing a dressing nook within.

A closet of this kind must have room for a chiffonier or chest of drawers with a mirror, and places to store all the little accessories that are usually visible in a bedroom. A good drop light is needed. If the closet is big enough, there may be a pole at one side for garments on hangers. Or, as in the case of this room photographed by the United States Department of Agriculture, the room may have another closet for outer clothing.

Convenient wall bags or pockets for shoes and hose line the doors of this closet. They are hung on curtain rods top and bottom to keep them in place and make it easy to take them down for washing.

These wall bags are made of osnaburg, to match the draw curtains and upholstery covers used in the room. Osnaburg is a strong washable cotton fabric recently come into wide use for household furnishings. It is easily laundered, inexpensive, and if not dyed in natural color can be dyed



A Closet May Conceal a Dresser or Chest of Drawers

Cabbages and Plain Folks

I'M ALL kinds up to cabbage, meaning cabbage. This kind is not associated with "kings" but comes in a covered wagon to plain folk like ourselves and has won, just recently, such an enthusiastic welcome on the part of my neighbor that I have been puzzled ever since. She is a conscientious little woman, this lady across the way, with three children, all of whom I have noted as always looking very frail and thin and showing a very unchildlike lack of animation. Something stirs them sufficiently to get them from place to place—but never into mischief. Indeed, I have always thought there would be great rejoicing in that family if one of them should commit some childish prank. Once I saw one of them climb a tree and fall out and since then the three usually sit on the porch and play jacks. They often lose the ball because it rolls under a loose board and nestles beneath the steps. I suppose that if one of them had the energy to crawl under the porch, he would find balls enough side by side to start a miniature ten pin alley. However, as their mother is so indulgent a parent and keeps a supply of pretty colored bouncers on hand, the three children are never without a game.

Now, I have been quite sure that it could not be any fault of my good neighbor that these children are so lacking in energy. She has fed them milk regularly. The barn yard has been recruited into service. Often I hear a hen cackle, the back door slams and next a plump figure hastens to the chicken house. Then in a short while an egg-nog is given to the child that seems most puny.

Candy or Vegetables?

I felt sorry for my neighbor one day last month when I was calling on her. "Johnny, The Elder," as he is called, had just come in from school. He had taken his ball and jacks and was about to play when he asked his mother for a candy.

"No, dear, I'll get your milk for you in a minute," she answered.

"Aw, Mother, please give me a candy," he begged. "You know I ought to have a candy 'cause the nurse in school said, today, I was under-nourished."

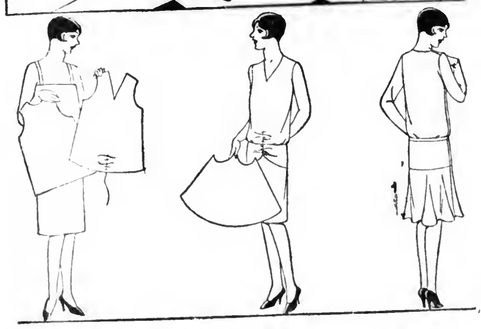
"Under-nourished! She said you were malnourished!"

O, my poor neighbor! How mortified and embarrassed she was, and how on earth could I tell her that at that time? She explained to me at great length the quantities of milk she gave her three children, and I could vouch for the fact that it made little difference. [illegible] She [illegible] to me [illegible] to scold, [illegible] to me [illegible] I never saw her lose temper.

"We've all been to college," she said to me one day when we met at the provision wagon. "We have cole-slaw or some raw vegetable and a cooked green every night."

"Is that so?" I asked, and "put my thinking cap on" as they used to say. What amazed me most, though, happened yesterday as I looked out of the window. "Johnny, The Elder", was jumping rope!—Mary Eagleston, The National Kindergarten Association.





Distinctive Smartness

THE nodded hipline assumes a most important place in daytime clothes, as illustrated in Style No. 2602, made doubly smart by bib flaring skirt. Slanting through the centre of bodice and shaped hipyoke creates a swathed movement decidedly effective and slenderizing. A plaited jabot frill is fastened at end of V-outlined collarless necktline. To add to trimness, belt tops normal waistline.

The [illegible] diagrams will help you choose this attractive dress, for they explain how utterly simple it is to make. Pattern can be had in sizes 16, 18 years, 36, 38, 40 and 42 inch bust, and takes but 3⅞ yards of 40-inch material for the 36-inch size. It is especially chic for semi-formal and afternoon and evening occasions in rich printed rayon velvet, with belt of harmonizing soft faille silk crepe ribbon; for the slim debutante, in almond green flat silk crepe, the smartest daytime shade; in tomato red sheer velvet for luncheon or theatre; or black sheer velvet for the youthful matron. Printed silk crepe in tweed pattern, black lustrous crepe satin, midnight blue canton-faille crepe with flesh colored jabot of georgette crepe, sheer tweed in mauve-brown tones with jabot of faille silk crepe, and sapphire blue georgette crepe, are becoming combinations that will give fashionable slenderness.

Address Pattern Department, Penn's Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Minerals and Your Health Inventory

DO MINERALS matter? Indeed they do. Perhaps the word mineral seems a bit unattractive to associate with the tempting word "food". Yet how important our minerals are be it calcium, phosphorus, iodine or iron.

Now let us take our mineral inventory. Calcium comes first. It constitutes three-fourths of the mineral content of the body. Milk is by far the best source of calcium. Other foods high in calcium are cheese (especially cottage cheese), egg yolk, almonds, fruits and vegetables. An important aid for the proper utilization of our calcium is the mineral phosphorus. It is found in such foods as milk, eggs, cheese, peanuts, almonds, walnuts, lean beef, kidneys, whole wheat and oatmeal.

Iodine is needed for the proper functioning of the thyroid glands. Foods rich in iodine are the following: Sea fish, lettuce, beets, turnips, green peas, radishes, tomatoes, carrots, parsley and potatoes.

No iron, no blood, no life! Iron builds rosy cheeks and keeps one from the anemic class. It must never be omitted in a mineral inventory. The iron-rich foods are: Egg yolk, molasses, spinach, all other greens, red meat, lentils, whole grain cereals, prunes, raisins, figs, dates, milk, oranges and carrots.

You will find the recipes for Spanish cream, stuffed fig salad and peanut cookies high in mineral value.

Spanish Cream

Two and one-half tablespoonfuls granulated gelatin, three cupfuls milk, bites of three eggs, yolks of three eggs, one-half cupful sugar, one-fourth teaspoonful salt, one teaspoonful vanilla.

Soak gelatin in a little of the cold milk, then dissolve in scalded milk. Mix sugar and lightly beaten egg, add hot milk to this slowly. Return to double boiler and cook until thickened, stirring constantly. Remove from range, add salt. Add flavorings and whites of eggs beaten stiff. Turn into individual molds, first dipped in cold water and chill; serve with cream. May be garnished with whipped cream. Serves eight.

Stuffed Fig Salad

Mash cream cheese, moisten with heavy cream and season highly with salt and cayenne; then make into balls three-fourths inch in diameter. Wash and dry figs, make an incision in each and stuff with cheese balls. Arrange in piles on a plate covered with a lace paper doily. Serve as an accompaniment to dressed lettuce or any light dinner salad.

Peanut Cookies

Two tablespoonfuls butter, one-fourth cupful sugar, one egg, one teaspoonful baking powder, one-fourth teaspoonful salt, one-half cupful flour, two teaspoonfuls milk, one-half cupful fine chopped peanuts, one-half teaspoonful lemon juice.

Cream the butter, add sugar and egg well beaten. Mix and sift baking powder, salt and flour; add to first mixture; then add milk, peanuts and lemon juice. Drop from a teaspoon on a buttered sheet one inch apart, and place one-half peanut on top of each. Bake twelve to fifteen minutes in a slow oven. This recipe will make twenty-four cookies. One pint peanuts when shelled should yield one-half cupful.

Avoid Winter Colds by Rest and Care

ARE you going about these days with a reddened nose and teary eyes? Most people we meet seem to be cherishing some secret sorrow but investigation usually reveals that they're suffering from "a cold."

The word "cold" is misleading, health authorities tell us. It is nothing to do with the temperature, although chilliness is one of the characteristic symptoms. A cold is really an infectious disease like typhoid fever, diphtheria and a host of other communicable diseases.

One of the most important reasons for the widespread prevalence of colds every year is that a cold does not generally make the victim feel sick enough to stay in bed. He goes about his daily business mingling freely with people, at home, in public conveyances, in offices, stores and workshops. Thus he multiplies his opportunity for spreading disease. He coughs and sneezes his way through crowds. His hands, contaminated by frequent contact with nose and mouth, leave unwanted gifts upon everything he touches.

Dr. W. W. Peters, health specialist, gives a number of practical suggestions for diminishing the annual crop of colds.

"Wash your hands before eating or handling food," he advises. "Don't shake hands with persons who have a cold, unless you wash your hands carefully at once. Keep away from common drinking cups, roller towels, pipes, pencils and other objects contaminated with fresh secretions.

"Give coughers, sneezers and spray takers a wide berth. Don't let them come at your face. Keep away from people who say they have the flu. Eat only from dishes washed clean in hot, soapy water, and rinsed in water as near the boiling point as possible. Avoid sudden change of temperature, close and stuffy air and fatigue, and maintain as high an internal resistance against infectious agents as you can by daily attention to bodily cleanliness, exercise, daily elimination of waste, and by rest and diet."

If, in spite of these precautions, you succumb to an attack of the stealthy cold germ, try to keep from contaminating others. Cover coughs and sneezes with your handkerchief and change to fresh ones frequently. Wash your hands thoroughly and often to prevent transmission of the cold germs. Rest and careful attention will not only benefit you but will help to end the danger you might otherwise spread.



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It is always safe to give a Bayer tablet; there is not the slightest harm in genuine Aspirin. You have the doctor's assurance that it doesn't affect the heart. And you probably know from experience that Bayer Aspirin does banish all sorts of pain in short order. Instant relief for headaches; neuralgia, neuritis. Rheumatism, too. Nothing like it for breaking up a cold. At all druggists, with proven directions enclosed.

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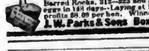
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The Split-Log Drag

By CHARLES H. WASHBURN

MR. AGEE'S and Mr. Lighty's discussions of dirt roads and the split-log drag are not only timely but constructive. Both the drag and the dirt road are being neglected. When we consider that a large percentage of farm people must live and continue to live on dirt roads, this neglect will be seen to be not only unfair but wasteful.

The same money that will maintain a hard road will, if properly expended, keep a dirt road open for travel most if not all the year. The split-log drag is perhaps the most useful tool used in the upkeep of a dirt road. But, as ordinarily employed, its use is open to several serious objections.

In the first place, there is a tendency to try to make the drag do all or most of the work of keeping up a dirt road. This it cannot do. It cannot widen roads, mend mud holes, or do the dozens of other little things that are necessary to be done along a dirt road if it is to be kept in repair. It is easier, however, to stand on a drag than to do hand labor; and where the supervisor uses his own team it is easy or liable to him.

Too High in the Middle

Another objection to the drag is the tendency to crown a road too much. The road on which I live has been dragged each summer for over twenty years, and is worse now than in the beginning. It is narrower, and in some places has a crown of two feet or more with a width of less than fifteen feet.

The result is that in summer a car travels sidways, like a hound-legged fiest. In other words, while the driver can, with much exertion, hold the front wheels on the road, the rear wheels are continually sliding toward the ditch, and are sometimes two feet or more out of line with the front wheels. This is tiresome to the driver, and puts an unnecessary strain on the car.

In wet weather it is necessary to keep in the ruts in the middle of the road. When meeting another car it frequently happens that both cars go into the ditch in trying to pass. I observed this same tendency last summer to overcrown dirt roads in northern Ohio.

Another fault of the drag is to make the ditch a part of the road. That is, the road is made to slope more or less regularly from its middle to the bottom of the ditch. A person cannot walk on such a road when it is wet without sliding into the ditch; and skillful is the driver who can keep his car out of that same ditch.

Road Grows Narrower

When the ditch is part of the road, as just mentioned, there is always a tendency along side-hill cuts and sunken roads for the ditch to encroach on the road and narrow it. Water, as proverbially known, "seeks the path of least resistance"; and as the side slopes are much steeper than the slope of the road the water "eats" into the road itself. There are places along the road on which I live that have been thus narrowed five or six feet in the past few years.

Overcrowning alone, with its tendency to contract the ditches, will make a road narrower. The profile or cross-section of a road is really the segment of a circle. Overcrowning a road makes its profile the still greater segment of a smaller circle, and the road becomes narrower in effect if not in actuality. In other words, the greater the crown of the road, the nearer the middle of the road must the vehicle travel to avoid sliding into the ditch.

It will be noticed that along all properly constructed modern highways a berm of earth several feet wide is left outside the hard surfacing with the ditch beyond the berm. By this construction, and by keeping the ditches close to the slopes, there is no danger of the water encroaching on and damaging the road. The berm serves other purposes also, but this form of construction might be used to advantage along our dirt roads. By using the plow and pick more the ditches could be thrown against the slopes. If the water cuts into the slopes, all the better; the tendency will be to widen instead of narrowing the road.

One-Way Roads

If this were done, and other efforts made to widen dirt roads where necessary, if only an average of a few inches each year in a few years all our dirt roads would be wide enough to permit traffic all the year. As they are, in many instances, our dirt roads are one-way roads—and bad way at that.

It has been said and written that the capacity of the split-log drag is to shape and crown a road so that rain will run quickly and freely. All right; one until the next drove of cattle pass—the first team, or the first car over that road after a rain. Of course, I believe a car does a dirt road the least damage. A car makes but two wheel tracks; a wagon and team uses two wheel tracks, and in addition the hoof tracks in which the wheels stand; and a drove of cattle will puddle a road until it is ragged.

I am not prejudiced in favor of the automobile: all I have in that line is an old mud-jumping flivver; and as for the Ford enemy has quit making that model, and if road conditions remain as they are in my section, I think my next purchase will be a sled, with the runners about two feet higher than the bed. I also drive a team and sometimes have stock on the road.

But my observation has been that a wagon and team will do more damage to a road in one trip than will a car in a dozen. And as ninety per cent of the traffic even on dirt roads is by motor vehicle, I believe that such roads should be so maintained that cars can travel on them at all seasons of the year.

Examine after Rain

A dirt road subject to modern traffic, even small in amount, cannot be kept up by the split-log drag alone, no matter how often or how skillfully used. Most road officials claim that a dirt road kept under such conditions cannot be made, at all, and don't even try. It is true that a dirt road cannot be kept up by the methods usually employed. But I do not underrate the use of the drag. But it is all right when used right. A dirt road will not take the ruts out of it will fill up, or widen that road; and it will not mend mud holes. And it has been my observation that if not properly used the crown a road and narrow it. A dirt road that has been frequently dragged is examined after a rain, which is the proper time to inspect any road—it will be found that the ruts on the sides of the road, under the wheel tracks, is draining the ditches. It will also be found that water from the middle of the road between the wheel tracks, and runs into those tracks, or ruts, and from the middle of the road, where there is little traffic, will soon be dry.

If there is the slightest grade, the water from the middle of the road will flow down the wheel tracks and ruts. If the road has no grade, or is practically level, this water will stand in the wheel tracks or ruts and soon overflow them. Where the water stands it forms mud holes; where it flows down a grade it will form other mud holes at the bottom of the grade, or wherever its flow is interrupted, and it is permitted to stand.

Road Material

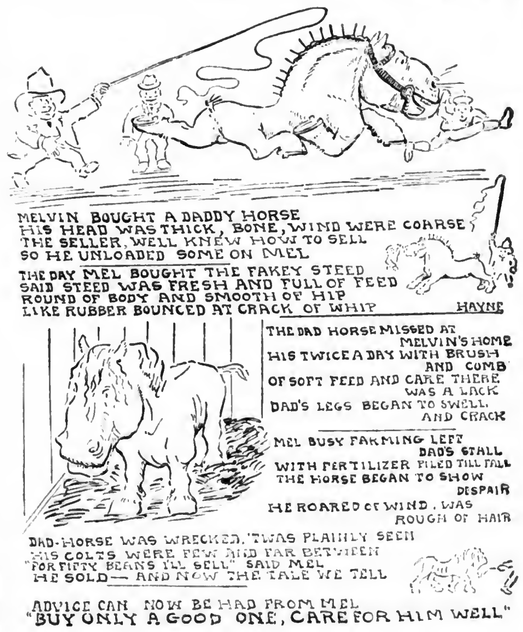
Some eminent (?) road engineer once promulgated the doctrine that a dirt road should be repaired with the material of which it is composed. As a consequence our road engineers down here in my county in West Virginia have forbidden all supervisors to use stone in the repair of dirt roads. Dirt must be used to fill ruts and mud holes, and the result would be laughable if it was not so swearable and expensive.

The doctrine of using dirt to repair dirt roads may be all right in some places. It will depend on the kind of dirt. Down here in West Virginia we have 57 varieties of clay, each more sticky and water retaining than the last, and when shoveled into ruts and mud holes these 57 varieties of clay become more mud in wet weather and clouds of dust in dry weather.

The Cure for Ruts

There is only one cure for ruts and mud holes in a dirt road, and its name isn't mud; it is stone, and it is not applied with a drag either. If the holes and ruts are drained and then partly filled with crushed or broken stone, well tamped or rolled down, the trouble is ended, at least for a long time. The ruts should not be completely filled; on a slippery road the ruts should be deep enough to hold the wheels from skidding. If the ruts are too full the wheels will slide off and form new ruts. About two-thirds full is about right, depending on the depth of the rut. A little dirt or shale may be placed on top the stone to make travel smoother.

If the holes and ruts are filled too full of stone, the next time the drag passes it will dislodge some of them. Road authorities would really do well to keep a supply of crushed or broken stone at convenient places along all much traveled dirt roads. Whenever mud holes or deep ruts begin to develop—begin is the word and the time—they should be promptly filled and the stone tamped or rolled down solid. In this way, and with little if any more expense, together with the proper use of that valuable tool the split-log drag, I believe that our dirt roads can be kept passable the year 'round.



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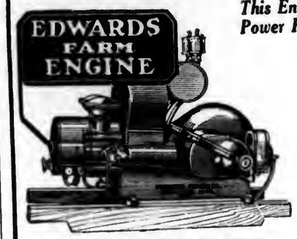
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Walker Visits Paris

MUCH has been written about the night life of Paris and the perils that beset the path of the unwary traveler, but to have left the city without a look at the pink lights at least one of the crimson ones would not have been quite, so we took a guide and in company with a Boston gentleman and his wife started for Montmartre, the home of the giddy life.

The Moulin Rouge is supposedly the most smart cabaret of the town, but aside from the fact that many negro women were dancing with white women the scene can be duplicated in a hundred American cities. We suggested that we wished to see something that Parisians went to rather than show places for tourists, so we were conducted to a few underground cafes where humor of a very broad character was dispensed. The refreshments were on a par with the performance, so we concluded to call it a night and turned in at 1:00 a. m.

Everybody who visits Paris goes to the Louvre and the cathedral of Notre Dame. I took one look at the exterior of each as I was going in and out of the city and decided one could not do the Louvre properly under a week and that to me would belong the distinction of being the only tourist in captivity who had succeeded in getting out of the city without having done time inside those walls. My French interpreter when I told him that such was my intention rolled his eyes to heaven, thrust out his hands in supplication and finally gasped, "But not to have visited the so noted places, impossible!" But I succeeded in making good and now I can claim a distinction for being unique if nothing else.

Battle Scars

We left Paris the 30th for Rheims to see the cooperatives there and then on to Brussels. Part of the way was through the war area and here the marks were plainer. Rows of trenches, shell-shot forests and demolished houses were still in evidence, but the work of restoration was still going on and really one saw little in comparison with what we expected to see. In a few hours we were in Brussels where ton Belgian horses and 50 to 100-pound dogs furnished the motive power.

The market was near the hotel, so we wandered through it and were amazed to see carcasses of deer offered for sale. A wild boar with his hide and

(Continued on page 30)

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TODAY WRITE US

In Enemy Country

By James Willard Schultz

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Synopsis

Many Swans, a Sun medicine man, Lone Woman, his wife and Bear Plume, their son, who tells the story, leave the lodges of their own Blackfeet tribe and after perilous adventures, have joined the enemy tribe, the Crows. Lone Woman and Bear Plume cannot understand the move and Many Swans' only explanation is that he has done some secret wrong and must be punished. A tame wolf has joined the trio and is the constant companion of the boy. At the Crow tribe they find a welcome, much to their surprise, and Bear Plume and Black Elk, son of Chief Dusty Bull, pledge everlasting friendship. Comes a day when Many Swans gives a feast and smoke to Dusty Bull, Long Bow, Low Horn, an aspiring leader, and other chiefs and warriors. After the feast, the guests tell of their war trails and the coups they have made. Low Horn tells a tale of bravery and killing but is exposed as a liar by Many Swans and is severely punished by his own people. Lone Woman is warned that the disgraced chief has sworn revenge. Many Swans leads the Crows in battle against the Assiniboines and in the absence of the warriors, Bear Plume and Black Elk are required to provide meat for the families. Buffalo and antelope become scarce and the boys start out on a secret journey for game. They are surprised and captured by the Spotted People. At night they plan to escape.

HE moved then until he faced me, until our knees touched, and even then the night was so dark that each was but a dim shadow to the other. He drew my hands against his hands, and, by lightly touching them, following their movements, I was able to understand him.

"These men here are Spotted Men," he began. "They wanted to learn if we had seen that they seek, a white buffalo, so did not kill us. They gave you and me their pipe to smoke. I know their thoughts. The Spotted People capture boys, girls, of all tribes with which they are at war; make them the same as their own children, so that their tribe may be many and strong. This chief here, we are his captives. Now, out here on the plains, we cannot escape. We have to go with him to his people, to his lodge. We will be watchful, and in some future night escape from him and return to our people."

"Yes," I signed.

"I am a Crow. My father is a chief, a great chief. I am proud of it. I shall never be a Spotted Man," my friend went on.

"As you say, so do I. Now, let us sleep," I signed back, and again we lay down side by side.

Day had not come when the two watchers of the party built a fire, and we were all of us soon up and broiling and eating meat. We then went out to the horses, saddled them, gave them water at the creek, and the chief signed to Black Elk and me to load our two pack-horses with the meat of the cow that we had killed. Sun was just coming in sight when we all got into our saddles and set off down the valley of the little creek, the chief in the lead. We noticed that he carried a seeing instrument. In those days but few of the people of the plains had such instruments. In my own Blackfeet tribe there were but two of them.

Sun was but a little way up in the blue when we arrived at the mouth of the little creek, crossed Tongue River, and went up onto the east rim of its valley and dismounted. There the chief got out his seeing instrument, one of four joints and great power, and with it looked long and carefully at each of the herds of buffalo that were in sight. And while he was doing that, the oldish man, who we now saw was a Sun man, got out his sacred pipe and prayed and smoked, undoubtedly for discovery of the white buffalo, for during one of his songs, in which the others joined, he repeatedly made the sign for buffalo. We remained there for some time, and when others of the party were using the chief's seeing instrument, he had much sign talk with us. He said that the great camp of his people was well up toward the head of Powder River; that, ten days back, some of his people hunting west of that river had discovered a white cow in a herd of buffalo, but had been unable to overtake and kill it. On the following day all the hunters of the camp had gone out to look for the animal and failed to find it; and at last, the head chief of the camp had sent parties in all directions in quest of the white cow. He had with his little party looked over the herds of buffalo that the Crows were hunting on the Rosebud River; had looked for the white one in the herds up and down Tongue River; and now would examine the herds that we should find as we traveled east to Powder River, and then up it to the camp of his tribe. He asked me what the Blackfeet tribes did with a white buffalo, and I replied that the killer of one gave the meat to Sun, and, later, its well-tanned robe was sacrificed to Sun when the people built a great lodge for him. That, the chief replied, was just what his people did with a white buffalo.

Then, turning to Black Elk, he signed: "I know that your Crow people also give to Sun the white buffalo that they kill."

"Yes. I have seen my people give two white robes to Sun. White buffalo are very few," he replied.

"True," the other signed. "I am of forty-five winters, and I have seen only three white buffalo. I have promised Sun that, if I can find and kill this one that I seek, I will give him of my body."

WE went on. Now and then a herd of buffalo fled from our approach. We rested on every ridge, every butte that we topped, and first the chief and then some of his men examined the fresh herds that were in sight, failing always to find the white cow that they sought. As Sun was going down to his far-off lodge, we made camp on the shore of a small lake and broiled our evening meal before little fires of buffalo chips. The oldish man then got out his sacred pipe, and the others joined him in smoking and praying to Sun for help in their quest of the white cow. Dark night came. For a short time we sat around a dim fire of buffalo chips and twice the oldish man filled and passed his pipe. The chief then, as on the night before, named two men to go on watch, and we others all lay down and slept. Wolf hated, feared these men. In the middle of the night he awakened me by pressing closer to my shoulder and snuffingly growling at the watchers when they came in from the horses to arouse two other men to take their places.

Again, on the following morning, we ate very early, and then the chief had his men smother the fire, because, he signed to Black Elk and me, the odor of burning buffalo chips carried far and would frighten off any of the herds that might be coming in to drink. Even then we could hear from far the moaning grunting of bulls. At that, the chief gave an order to his men, and they began gathering sagebrush and piling it to form a small circle. Black Elk and I helped, and, when it was breast high, we all sat down within it, all but Wolf, who would not mix in with our captors. Now came day, and we saw three herds were approaching the lake; one from the south, another from the east, and a third one from the north. Smiling, the chief said something to his men, and signed to my friend and me: "This is good. The wind is from the east; the coming herds will not smell us." So anxious was he to discover the white one that his hands trembled as he got out his seeing instrument and looked through it at the nearest herd, the one to the south, and of not more than a hundred animals, calves and all. I saw my friend's lips rapidly working as he stared at the coming herds. He told me afterward that he was then praying that the chief nor any of the Spotted People should ever again so much as see the white cow that they sought.

Came first the south herd and then the north herd—also small—and plunged into the lake and drank, paying no attention to our grazing horses, now, having drunk between it and us, they started to examine our horses, most likely thinking that they might find among them a colt that they could easily kill. Wolf had never, so far as I knew, paid any attention to those of his kind, other than sometimes answering their mournful howls, but now, as these three approached, he got up and with high tail walked out to meet them. His sudden appearance startled them; they ceased trotting, and stood and stared at him. He went on more slowly, and when quite close, began circling past them, they turning about to watch what he would do. Suddenly, all three raised their heads and sniffed the air; and then the east wind gave them full scent of Wolf, and they turned and fled from him as fast as they could run, he standing and staring at them, his mouth wide open, tail drooping; and so foolish was his appearance that we all laughed. He heard us and, I am sure, understood that we laughed at him; with drooping head and sideway glances at the brush within which we sat, he came sneaking back and lay down where he knew that he was close to me.

Signed the chief: "Your wolf's brothers, they got not only scent of him, but scent of you that he has always in his hair; so was it that they had great fear of him."

"Yes," I replied. "I am glad of it. Never will his kind make friends with him and so get him to leave me."

"Not so," the oldish man signed. "He is still young. With the coming of next summer, when the wolves take wives time comes, he will leave you."

"Will leave me not!" I angrily signed.

To that, the man made no answer; he only smiled and turned his back to me.

The chief spoke to his men, and signed to us two: "We will saddle our horses, and go on."

We all gathered up our weapons and stepped from the circle of brush. The near buffalo saw us and ran; all the others took fright. The south herd and the north herd merged with the east herd, and off they went with thunder of hoofs, off north to the top of a low ridge and over it out of sight.

ALL that day we rode eastward, stopping on ridge after ridge and butte after butte, to examine the herds of buffalo that were in sight, but in none of them was there one of white color. We made camp that night on Powder River, and the next day went up it, crossing and recrossing it, and from the rims of its valley examining the herds upon the plain. It was a rich country; never had I seen elsewhere so many herds of buffalo as were there; and in the river valley were great numbers of elk and deer; real bears, too, some of them of great size; and generally of very light-colored fur.

When we made camp, that evening, the chief and his men were, as Black Elk and I could plainly see, very low-hearted. They spoke but little while broiling and eating slices of the meat which we furnished them. Later on, the oldish man got out his sacred pipe outfit, and they all joined him in smoking, praying and singing to the Above Ones to give them success in their quest of the white buffalo. Their last song was a song of the wolf; for during the singing they frequently made the sign for wolf, the while the oldish man howled; and every time he did that, my wolf sat up and howled, until, at last, wolves around us, near and far, howled in answer to him. At that, the oldish man signed to the others to cease singing. They all sat motionless, smiling, listening to the howling until it ceased; then the oldish man put away his pipe, and placed it in the bundle of sacred skins of animals and birds in which it was carried.

He then signed to me: "The wolf is a very powerful animal; very close to Sun."

"Yes," I answered. "I, my Blackfeet people, we think the wolf is the best hunter of all the meat-eaters. We have a wolf song; before going out to hunt we sing it." And with that, I sang the song, just once, and those Spotted Men carefully listened, signing that it was a good song.

The chief then signed: "You would not be sitting here with us but for your wolf. That night when we discovered you, back at that little creek, I told my men that we should sneak up close to your fire and kill you both. And then I saw that you had a wolf; a gentle wolf; a Sun animal. I knew that we must not kill you; that we must be friendly to you. I told my men just what to do. So was it that we closed in on you, took your gun, your bows, and then gave them back to you."

Now that surprised us. I think that I trembled a little. I looked at Wolf and so did Black Elk; but for him these Spotted Men would now be carrying our scalps. I could not help but sign to the chief: "You, your men, good your heart."

And then Black Elk quickly, strongly signed to the chief. "You say that you are our friend. Back in our camp, our mothers, our fathers, are mourning for us, are thinking that we are dead. Chief, let us go to them and wipe away their tears. Chief, as you love your own children, let us go."

At that, the chief suddenly dropped his head and stared at the ground. I noticed that his men looked not at him. Sad was his face when he at last replied: "One more day we look for the white buffalo. Near night, we shall arrive at our Spotted People's many lodges. You two shall rest in my lodge. There I shall now say no more about this. Later on—later on—later on you shall know my heart."

At that, Black Elk angrily stared at him, but he turned his face from us and began at once talking with his men. Myself, I could not somehow feel angry at him. I felt that he really liked us, and would soon let us return to our people. Of one thing I was sure; he was not going to harm us.

On the next day we did not look very long for the white buffalo. Sun was no more than half-way up to the middle of the blue, when, again topping the east rim of the valley, we saw, off to the south, a large herd of bucks on the run, pursued by a number of riders. We then all dismounted, and the chief got out his seeing instrument and looked through it at the riders, who by that time had given up the chase and were turning back to their kill to butcher them. He looked at them but a short time, and, laying his seeing instrument across his lap, spoke shortly to his men; and then signed to us two: "They out there are from my camp. Our search for the white one ends."

REMOUNTING, we went on. The buffalo runners discovered us, thought that we might be an enemy war party, and got together on their horses. The chief and several others of our party began making the peace sign, and also the sign for the Spotted People, and the hunters soon came on and met us. There followed quick talk between the chief and one of them, who—and his companions too—looked curiously at Black Elk and me, although they pretended not to see us. Then the men of both parties talked with one another. But they did not talk as would parties of my own people have talked upon meeting in that way. There was no joking, no laughing; not one of them so much as smiled; and I felt that the hunters were telling of some great misfortune that has come to the Spotted People tribe. We soon parted from them, they returning to their twenty and more kills of buffalo, we going on again to follow up the valley of the river.

Presently the chief signed to me: "Those buffalo runners, they told us that which makes our hearts sick; the white men have killed more of my Spotted People. Very bad are the white men; they come more and more of them; they take more and more of our plains; kill off our buffalo, our antelope. I hate them."

"Yes," I signed. I did not know what more to say. I saw that his eyes were wet, his face, oh, so sad.

"My sons, two, good, brave, one winter back, the white men killed them. I have no children," he went on. Truly, I had pity for him, enemy though he was.

And then, after a time, he gave us more news: "The white buffalo," he signed. "Many parties of my people have been out looking for it, ridden far, and found it not."

"I think, maybe, my Crow people have killed it," Black Elk signed.

"Maybe so," the chief replied.

After Sun had passed the middle, we met more and more parties of Spotted People hunters going out after buffalo, and passed others that were slowly going homeward, their pack-horses heavily loaded with meat and hides. And then, at last, we entered a long wide bottom of the valley, and there at its upper end was the Spotted People's camp; a circle of several hundred lodges. At sight of it, of the many people going to and fro, great fear came within me. Though the chief, I thought, meant well by me, and Black Elk too, surely there were among so many of his kind some who would soon put an end to us. Ha! My heart was low as we rode up that grassy bottom. "Haiyu, Sun!" I silently prayed. "Help me in the midst of these always-enemies of my kind, help me! Help me to live on!"

Now, though great fear was within me as we approached this camp of the Spotted People, still were we not quick to notice several things about it. As in camps of my own people, the entrance way of the circle was in its east side; but in this camp there were no Sun priests' painted lodges, save two, each painted black below and red above, and they were part from the other lodges, both in the southern part of the big grassy clear space within the belt of the camp. We passed through the entrance, and our party separated, Black Elk and I following the chief across the circle, and passing many people, who gave him greeting, but looked unsmilingly, curiously, at us.

The chief led us to a large lodge on the west side of the circle, and, as we got down from our horses, two women came out, fine-appearing women, well-dressed, hair smoothly braided. At first their eyes were all for him; glad eyes as one after the other they embraced him. He spoke to them, and they looked at us and smiled as they said something which we took for words of greeting. "My women," the chief signed. Came running a youth of our own age. "My brother; named Lone Antelope; he will care for our horses," the chief went on.

The youth looked at us, stared at my gun, turned and looked at our horses, questioned the chief, who answered shortly, and then signed to us that we were to enter the lodge. We followed him in, and he motioned us to sit upon a couch that was to the right of his own couch at the back of the lodge. It was a very large lodge, with a complete leather lining that was painted with his coups. We quickly looked them over, and knew that he was a great warrior. The lodge was well-furnished and neatly kept.

The two women came in with our saddles and piled them at one side of the doorway; they then rebuilt the fire, got out some dry meat, broiled it, and set it before us, all the time talking with their man.

Then, when we had finished eating, he signed to us: "Maybe you would like to go out into the timber; maybe you would like to go to the river and swim. Do as you will about it."

That was just what we were wanting to do; go where none could see us sign-talking to each other.

"Tonight we shall not try to escape; he, his women, will be watching us."

"Yes, they will watch us. Now, see, this is my thought," I signed. "This chief wants us to live with him, wants to make us two of his fighting followers. We must pretend that we are glad to be with him; glad to do all that he tells us to do. So shall we, some not-far-off night, leave him and return to our people."

"Yes. And we will take with us many of these Spotted People's horses; our own horses, too. Now, let us stay out here a little time and see if we are being watched."

I AGREED. We went on to the river, bathed, recombed and braided our hair. Wolf, who swam with us, shook himself many times, and licked his fur. We moved back into the timber and sat there, talking of many things, planning how, in some night to come, we would take a large band of the horses of the Spotted People, and, traveling night and day and night and day with never a stop, proudly drive them into the camp of the Crows. None came near us. Sun went down behind the mountains. With Wolf at our heels, we returned to the lodge of our captor. As we entered it, he and his women looked up at us, smiling, nodding their heads. We saw that, during our absence, two new couches—one like with buffalo robes on top of thick layers of dry grass; and upon the one on the north side of the lodge were my weapons, and on the other, at the south side, was Black Elk's bow-and-arrows case.

Pointing to the couches, the chief signed to us: "Yours; your couches; my women give them to you. Be seated; you two, here with us, let your hearts be glad."

We went to the couches. Smiling more than ever, one of the women signed to us: "We went to our mother, to our other relatives, and got these robes, these back-rests for you."

Signed the other one: "You two, here with us, we want you to be well-dressed; we give you some things."

And at that, the chief's sits-be-side-him woman handed me a pair of new deer-leather leggins, a blue cloth shirt with white buttons, and a pair of quill-embroidered moccasins; and at the same time the other woman gave Black Elk like presents. We needed them; our moccasins were worn out, our leggins old and soiled. The women were good to us; we signed to them that they were. And now, of one thing we were sure: this chief wanted us with him; he would protect us from those of his people who might want to end our lives. Yes, we were safe where we were, and on some not-far-off night we should surely escape and rejoin our people.

We laid aside our presents, to put them on in the morning. The chief signed us that his women wanted meat, so, on the next day, we should all three of us go out after buffalo. I replied that we should be glad to go with him.

Came in then four men, and Black Elk and I made room for them upon our couches. The chief filled, lighted, and passed his pipe, and there followed much talk, which, of course, we did not understand. Then, after a time, these visitors questioned us, me mostly, about my own people, our country, and the tribes to the north and the west of it. One of the men was so swift with his signs that I several times had to get him to repeat them, and more slowly.

It was quite late when the visitors left. Then, as we were all about to lie down and sleep, we heard much loud talking on the other side of the camp circle. The chief went out and was gone for some time. Returning, he signed to us: "Here have arrived six riders, Big Bellies. They say that their whole tribe will arrive tomorrow."

"Good! Good! The Big Bellies and my Blackfeet people are real friends," I signed. "Long ago—very long ago, maybe a hundred, two hundred winters back—my people took pity on them, told them that our country was also their country, to live in, travel in, hunt in as they would. Only this last winter they camped with us on the North Big River, where is the trading house of the North white men."

Signed the chief: "No. These who arrive tomorrow are South Big Bellies, brothers of your Big Bellies. Long have they and my Spotted People been close friends."

Of course. I was crazy to have thought that they who were coming were the friends, the allies, of my people, of those Blackfeet tribes. I had heard much about them, long had they been separated from the North Big Bellies. Yet they remained friends. I had only seen a few men of the South tribe in the camp of our ally. (To be continued.)

The Big Bellies to which the chief referred were the Arapahoes, brother tribe of the Gros Ventres of the Prairie, long one of the tribes of the great Blackfeet Confederacy. Parting from the Gros Ventres, or, as the Blackfeet name them, the Utsena (Entrails People), the Arapahoes moved south and east early in the eighteenth century, and became closely allied with the Cheyennes and certain tribes of the Sioux, all of them bitter enemies of the Crows and also of the Blackfeet tribes.

A Reply to

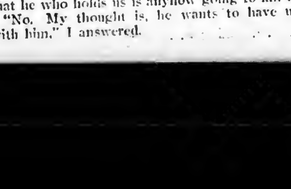
The Cheerful Plowman

J. E. T. sits before the fire and pats his own broad back, for being such a noble cuss and cleaning up the shack. He thinks his wife, on her return, will shout with joy unchained because he washed the china ware and dusted off the range.

Poor disillusioned mental man, how sadly he'll arise to find his proudest efforts a loss before her eyes. The dirt he thought he'd surely had she'll find beneath the bed, the burnt pots he so grandly scoured will cause her to see red. The dust upon the sideboard and the grease spot on th floog will hit her like a ton of bricks, and then she'll look for more. She'll find a broken teacup and a sock that's lost its mate; she'll scrub the hearthstone silly and she'll burnish up the plate. She'll find the mud upon the stairs, the hoorhair in the sink, and she'll work from dawn till Monday, and she'll made old J. T. think.

For men of good intentions soon weary of a mop, and their work of cleaning up a house is pretty much a flop. Their wives of double vision have a mania for dirt; they can see it if it isn't, and if they can't they're hurt.

B. B. D.



The Cheerful Plowman

BEWARE OF KEROSENE

OUR hired man wouldn't take advice, he knew too much himself, and now he's bandaged smooth and nice and lying on the shelf. "Be careful when you start a fire", I said to him with pep. "Or you will owe for doctor's bire and hobble when you step. When steaming up the kitchen stove take crumpled paper, man, and slice some shavings off, by dove, that is the safer plan. It takes a minute, that I know, to start a fire that way, but it is best and safest so and in the end will pay!"

He did it once, he did it twice, then when I wasn't near he grabbed the can of oil in a trice to start the fire, I fear. Well, all went well for seven days, or eight for all I know, then, lo, he made a fearful blaze that towered a yard or so. Then he went back to my old way, used shavings like a man, but soon there came another day when he grabbed up the can. One morn the stove had heated cooks all well concealed by ash, then he poured in about two bowls, he lit a match, and CRASH!

I heard a bang like seven guns, I heard a fearful noise, my wife dropped seven dozen buns and lost her native poise. All crumpled in the corner there we found the man we hired all sunbled, and black, and burned, and sore, all sizzled up and fried!

We rushed a doctor to his side and bandaged all his burns, and now while he is partly tried we're sitting up by turns. He has twelve yards of bandage mapped on shoulder, neck and hands, while on each leg the doc wrapped some ninety-seven bands. In time I guess he'll be all right but all his bearded cash is slipping from him day and night with constant drip and splash. "Next time I start a fire," says he, "I'll not be smart and mean; I'll whittle shavings fast and free and use no kerosene!"

J. E. T.

We took up our weapons, were getting upon our feet, when the chief went on: "Your gun, your bows, leave them here. Go out where you will, let my people know that you do not fear them; so shall I be proud of you."

We dropped back upon the couch and looked at one another. "I am not afraid." I signed to Black Elk.

"I, the same," he answered, and we laid aside the weapons and left the lodge, turned about, and wended our way past the ten or twelve lodges back of the chief's lodge. Some of the people around them scowled at us; others smiled; still others pretended that they did not see us. We entered the narrow strip of timber there bordering the river, came to a stand, and made sure that no one was within sight of us. Black Elk signed: "We cannot now leave here; we should be seen, overtaken, killed. I think that he who holds us is anyhow going to kill us."

"No. My thought is, he wants to have us live with him." I answered.

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Walker Visits Paris

(Continued from page 27)

head on lay on one stall. Little pigs with slits cut in their cheeks and their front legs run through them and their hind legs shot through slits in their sides were peacefully awaiting the roasting pan. Chickens and ducks dressed and weighing from one and a half to three pounds were priced from 25 to 45 cents each. Belgian hares, pheasants, plover, snipe and pigeons were stacked in piles and the voices of the vendors shouting their wares were punctuated by the stamp of their wooden shoes on the pavement.

Fromage de Brie

We had Brie cheese for supper. There were bits of straw imbedded in its sides and one or two spots which looked like it had been kept for some time in the sheep barn. Eating the cheese confirmed our suspicions, the aroma of ammonia was plainly to be discerned. Our waiter insisted the spiced chevaux (horse meat) was very fine, but my wife had reached the place where she balked on commental dishes. I wanted to try snails and truffle but couldn't make them out on the bill of fare, so had to leave that for another time.

Belgium is a wonderfully productive country and every inch of it seems to be utilized. The fields are small. About every other one was a turnip patch evidently sown after some other crop had been earlier removed. Flocks of thatched stacks of hay and grain were seen everywhere and small bands of sheep were busy eating turnip tops.

Horses were much in evidence hitched to four-wheeled carts with two large wheels in the rear and two small ones in front and the horse hitched to a loose hanging singletree and six to ten feet away from his head. The country is quite flat, so no danger is experienced in the load running on the horse.

Dogs were seen in teams of twos and threes sometimes under the carts which would be guided by a man in the cart with a lever working the single front wheel. Some of these dog carts carried loads that we would have said could not be moved by such power, but apparently the dogs didn't know it as they were doing the job.

Down to Ostend and across the dirty gray North Sea to Dover and into London where we are now located.

• • •

British Baths

Today is Sunday and about all we have done is to watch various types coming into the hotel, the largest in town. We pay $2.50 apiece for a room without bath or heat and $1.75 per day for heat. If we want a bath we call a maid who unlocks the bath-room door and turns on the water. I prowled around last night till I located the bath only to find I had to go back to the room and ring for the maid. When I inquired what the bright idea was in keeping the room locked and if they were afraid somebody would steal the tub she simply said, "Oh no, sir." And when she told me to ring for her when I was through taking my bath I told her I could still use the towel to dry myself with, and then she informed me it was to signify I was through with the room. This seems one point on which our guide books lack definite instructions.

Today in reading the Times the following gem of poetry was seen in an obituary notice commemorating the death of a man's wife who had been dead some years:

"I never knew what pain she bore,
I never saw her die,
I only know she went away
And did not say good-bye."

It is quite evident the poor husband had no chance to gloat over his wife's condition and could only be thankful he was spared the ordeal of listening to a last lecture at the time of the demise. He in all likelihood thought the circumstances so unusual that mention should be made of it. Looking at it another way one might come to the conclusion that the lady in question was in the habit of dying, but never in the presence of her husband. Anyway there's the verse—do with it what you wish.

Ancient Ways

A few days later:

We have tramped in and out and up and down London till I am ready to go. Have seen two wool auctions, visited the Fat Stock Show at Smithfield, made all possible contacts in connection with my errand and still have time on my hands. Business does not start here till about ten in the morning and by three p. m. it is dark, or rather darker, as there is a steady grayness to dark brownness in the air at all times.

We did find time, thanks to a postponed appointment, to visit London Tower and were shown the crown jewels and given all the detailed history of the murders and executions within its walls. A party ahead of us tipped the guide a sixpence and had only a few murders. We gave ours a shilling and got the whole works. An Englishman who trailed around with us, but did not contribute in the finances, remarked, "We English certainly were a grewsome lot in those days."

The guide explained, "You see nobody could read, so it was necessary to make public executions to show the people crime was being punished or to stick the head on a traitor to the King on the spikes on top of the Tower to prevent others from following his example." I remarked it was the same as the African native who advertised a death in his family by putting out the corpse where the wind would strike it, but the guide failed to follow my logic.

Sharp Medicine

We walked through rooms filled with ancient armor and weapons of war, but the thing that stuck in my mind was a club with a round iron head studded with two-inch spikes which was used in early days by doctors on the battle fields. Whenever they found a soldier too badly wounded to be worth repairing an application of the club was prescribed which always resulted in a notation—"Operation a success." Medicine was much quicker in its action in the good old days.

We also had dinner at The Old Cheshire Cheese, a tavern still standing in the heart of London just as it stood two hundred years ago. Here is the bench where Johnson sat and later Dickens, and others of like mind frequented its rooms. We sat on Dickens' favorite bench and greatly offended our waiter by refusing their famous "veal, lark, kidney and oyster pudding" composed of one veal, one lark, two kidneys from the veal and one oyster, all baked in a single dish, in favor of a chop and baked potato. We did have some of the cheese, however, and found it delicious.

We wandered into St. Paul's for evening services and heard a wonderful choir of boy singers and of course did Westminster Abbey and the tomb of the Unknown Soldier. One is continually impressed here with the talk of war and the veneration to warriors. It is the same thing in France. Europe has not yet emerged from war mania and on an average I think about 75 per cent of the current conversation is on some phase of war.

The old Duke of Wellington and Lord Nelson have been jerked so often out of their graves and made to parade before the people that they must be heartily sick of being heroes and Napoleon, poor soul, is not given an instant's rest in France. The paths of glory! We humbler folk have our advantages, for at least we live and die fairly in peace. We did not find any statues to the memory of the Revolution or war of 1812 heroes. They must have all been killed off in America.

J. F. Walker.



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EVENTS CAUGHT BY THE CAMERA



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1. Russell Johnson, 13-year-old golf caddie who walked 1,100 miles to earn $223.58 and become president of the Gary-Wheaton Junior Bank, and who sent a telegram to Henry Ford after the auto magnate advised boys to "spend the difference", asserting that "no successful boy ever saved any money". Russell's telegram said in part, "How could you have started without someone's savings to start on?" His bank was formed to teach the young to save.

2. President Coolidge recently spent a week's vacation as the guest of Howard E. Coffin, Detroit millionaire, on romantic Sapelo Island, one of the first spots to be settled in America, located off the Georgia coast, near Brunswick, Ga. Photo shows one of the natives of Sapelo Island on her way to town with an ox-drawn farm wagon. (This photo is copyrighted by and used with the special permission of the National Georgraphic Society of Washington.)

3. A. N. Finn, of the Bureau of Standards at Washington, operating the impact machine, a scientific, accurate device developed by the Bureau to determine the strength of chinaware by allowing a weighted pendulum to swing against it from various distances until it finally breaks.

4. Flying without wings! An intricate performance on the part of a skillful ski-jumper at Adelboden, in Bernese Oberland, Switzerland, where the season for winter sports is now in full swing. Winter sports are receiving more attention than formerly.

5. Orville Wright, left, first man to fly in the airplane invented by him and his brother, the late Wilbur Wright, photographed with the tablet which was unveiled on the gray granite boulder at Kitty Hawk, North Carolina, which marks the starting point of the epochal flight.

6. A street vendor in Jerusalem ready to do a good day's business by selling cookies and home-made candy. Notice the make-shift stand composed of old boxes and tin cans.



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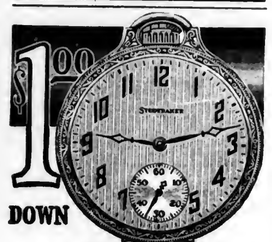
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Water for Hogs in Winter

"A HOG will be a hog," said a young farmer to me as we looked at his drove of fattening hogs on a frozen winter day. At one side of the cement floor was a pile of straw, cobs and manure that had been scraped from the sleeping quarters and was damp and warm. The hogs were rooting holes in this pile clear down to the cement and could be heard sipping and sucking up the scant liquid from the bottoms of these holes—going back every little while to see if there were not more of this "darned hoodoh," as the owner called it.

It was noon and I had taken a cursory look about, including the troughs. I had been sizing up the hogs—and they would heat two hundred pounds in weight. The air was crisp and dry; every puff of breath from every hog condensed into a small cloud of steam, losing moisture at every puff.

"I'm a friend to the hog," said I, "and he is guilty of many misdemeanors, but what you see is not a misdemeanor nor a dissipation in strong drink." With that I took a silver dollar out of my pocket and said: "Lay your stake on top of mine, and if those hogs won't drink a quart of cold water to the head you have won a dollar, but if they drink a quart per head I have won your dollar and shall ask you to take back the bad things you have just been saying about the behavior of hogs."

Hiram Dobbin.

High Stepping Pigs

A CONDITION somewhat simulating stringhalt of horses has been observed in swine for a number of years. This affects the hind legs and produces a jerky, high-stepping walk. It usually becomes so severe as to interfere seriously with the health of the animal, though the animal may partially recover, start to gain normally and may breed and reproduce.

This condition does not seem to be limited to animals on any particular ration, but it does seem to be limited to certain lines of breeding, according to R. L. Warwick, scientist of the Ohio Experiment Station. There is some breeding evidence, he says, that makes it practically certain that heredity is the basis of it.

Further breeding tests are being made at the Ohio Station to determine the mode of inheritance and the best procedure for its elimination. On the basis of present knowledge, elimination of sires and dams of affected animals, as well as the affected animals themselves, is advisable.

"Ragweed Hay" for Sheep

WHEN I was in the southern Appalachian mountains I frequently saw farmers making "ragweed hay" for their sheep. They didn't beat around the bush for a better or polite name for the "hay." They called it just what I am calling it—"ragweed hay."

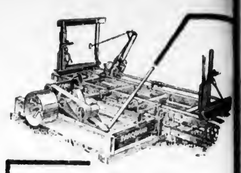
I never have been anything at all on that old stuff about a sheep "cleaning up the farm and living on what would go to waste," but the man who has thought sheep thoughts for years and watched sheep by the year with a thoughtful mind is bound to say that there were a lot of ragweeds cut down to rot last summer that sheep would much prefer to the tough and tasteless timothy so widely on the bill of fare for sheep this season. G. P. W.

The Passing of the Straw Stack



If hogs have reason to mourn and shed hot tears for a good thing gone forever, no douht that justifiable mourning would be for the passing of the old time straw stack. When I go to a farm and look at the miserable straw dump that stands where upstanding straw ricks stood in times past I feel like cursing.

How can a hog expect its owner to get a dry bed out of such a contemptible sponge? How can a litter of day old pigs ever expect to arrive at one week old lying on straw from a mess like that? H. D.



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Mr. Phillips wants every household to try his wonderful healing ointment. He will send a liberal FREE TRIAL package to anyone answering this ad.

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Breed History

MUCH breed history has been written at the International Livestock Exposition. Each year in the wake of this stupendous show will be found shattered records with new marks of attainment that may serve as goals for future exhibitions. Such was the case in 1928. Among the several records newly established none is more outstanding than that made by the now well-known Percheron sire Laet 133886. To this sire goes the distinction of being the first and only one in the history of Percheron affairs at the International to have sired both a grand champion stallion and a grand champion mare at this show. This occurred when Sir Laet 190277, a two-year-old, owned by Woodside Farms, Columbus, Ohio, garnered the purple and Laet's Magic Queen 190170, owned by F. B. Foster, Phoenixville, Pa., took the same honor in the female division.

Grand Champion Family

The grand champion Sir Laet comes of a family in which gaining the supreme award has become the regular practice, since it will be recalled that the sire Laet was himself grand champion at Chicago in 1921, while Jerome 160754, the full brother of Sir Lact, was the champion in 1924. The dam of these two winners is Rozelle 123963. Her mating with Laet is a most fortunate one, in that in addition to the two noted sons there now appears a third apparently destined for great things since Rolact 194085 won first in the yearling division this year.

Furthermore, to the credit of Laet stands another grand champion distinction, that taken by his son Hesitation 162152 at the 1923 and 1925 Internationals.

Laet's Magic Queen, the first daughter of Laet to annex the purple award, it is generally agreed, is one of the greatest aged mares seen on the tanbark of Percheron show yards in many a day. Before coming to Chicago this year she had previously taken the grand prize at Springfield, Massachusetts, and at the Toronto, Canada, winter show. Her dam was by Magic.

Laet's Magic Queen had a most formidable opponent for first prize honors in the aged mare group at Chicago, for opposing and challenging her right to the honor was Maple Grove Lelia 156680, that magnificent daughter of Lagos 99093, who had on two previous occasions, 1925 and 1926, gone back to Michigan possessor of the purple ribbon

Further Laurels

Two things interested horsemen; first, as to whether Maple Grove Lelia would be the first to win the championship on three occasions, thus making a record for herself, no other mare having won more than two, and, second, as to whether a further laurel would be added to the record of old Lagos. To date four daughters of Lagos have won the championship at Chicago on five occasions, and for Maple Grove Leila to have bettered her brilliant record would have still further enhanced that of her sire.

As we relate facts regarding these recent Percheron achievements of the Laet regime one must not forget the foundation breeder of the strain. To the late F. B White of Virginia must go the renown of breeding Lcat, Jerome and Hesitation and as founder of this line of champions his name is well established in the breed annals. Then, too, one must not forget W. H. Butler, president of the Percheron Society, who purchased Laet as an Ohio State Fair champion, and who has carried forward the work nobly instituted by Mr. White, the master of Selma Farm.

Laet is yet in his prime and it is pleasant to speculate as to the further honors to be gained by him and his descendants. M. F. Grimes.

Penn'a State College.

Buy Your Bred Sows
at the
State Farm Products Show

The four Pennsylvania State Swine Breeders' Associations, in cooperation with outstanding breeders, are offering 100 bred gilts and sows at the State Farm Products Show in Harrisburg.

These animals have been obtained by the state organizations in cooperation with breeders of national reputation and have been picked, after careful inspection by a selecting committee, for proper type, popular breeding, prolificacy, and easy feeding qualities. All of the animals are descendants of and are bred to prize-winning stock.

All of the sows are immunized against hog cholera and are guaranteed to be bred or satisfactory settlement will be made.

You will find your opportunity in these sales to secure animals of proper breeding and type as a foundation for a pure-bred herd or an efficient sow or two that will produce pork at a profit.

Duroc Jerseys, furnished by Chinchinna Farms, Smith Brothers, proprietors, New Carlisle, O., will sell Tuesday, January 22, at 9:30 a. m. Write S. R. Zug, Secretary, 313 Monroe Ave., Scranton, Pa., for catalog.

Chester Whites, furnished by I. T. Hickman & Son, Marion, O., will sell Tuesday, January 22, at 2:30 p. m. Write C. E. Hershey, Secretary, Hershey, Pa., for catalog.

Berkshires, furnished by members of the Pennsylvania Berkshire Breeders' Association, will sell Wednesday, January 23, at 9:30 a. m. Write J. P. Winslow, Secretary, Brookville, Pa., for catalog.

Poland Chinas, furnished by Greenfield Farms, Washburn, Hershey and Lewis, proprietors, Tiffin, Ohio, will sell Wednesday, January 23, at 2:30 p. m. Write C. L. Rumberger, Secretary, Uniontown, Pa., for catalog.

Geo. W. Baxter, Auctioneer. All sales held in the Inez Building (formerly Duco Bldg). Cameron St., north of Market, Harrisburg, Pa.

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BEST GRADE CHESTER, Berkshire and Poland-China pigs, 6-8 weeks old, $7.00 each. Three months old, $12 each. Express paid. Bred sows and boars. C. E. Bonserman, York Springs, Pa.

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CHESTER WHITES.—Pedigreed big type Champ. blood, all ages, 12 sows farrowed 151 pigs, priced low, must please. C. E. Cassel, Hershey, Pa.

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I offer you this chance to feed your stock with WYMIX, my concentrated, medicated, mineralized salt, on 30 days' trial before you pay me a cent for it. I want you to see and know, from actual use on your farm stock, without risking a single penny, that WYMIX is the best and most satisfactory tonic, appetizer and conditioner for hogs, sheep, goats, horses or cattle, ever offered. I want to PROVE to you also, before you pay, that it costs you only HALF as much as other conditioners, and saves you all the bother of catching and dosing each animal. They doctor themselves with WYMIX (formerly called WORMIX).



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WYMIX is a concentrated, medicated and mineralized salt. Each 15 lbs. of it, added to 85 lbs. of salt, makes 100 lbs. of the best medicine you ever fed. It is a great tonic and conditioner; absorbs foul intestinal gas in which food ferments and which throws animals off feed. WYMIX quickly puts off condition animals in such good, thrifty condition, that they make faster gains. It helps stock to get all of the good out of their feed and saves you the cost of the feed now wasted because not utilized.

WYMIX is economical to feed. You don't pay drug prices for salt; you add your own to WYMIX and save half the cost of ready-mixed medicines.

Don't send me a cent of money for this test package. Just fill out and mail the coupon below and I will send you three (3) pounds of WYMIX, which you add to 17 lbs. of common salt, as directed, to make 20 lbs. of the best tonic and conditioner you ever used. Feed it as directed and at the end of 20 days, if you do not feel thoroughly satisfied with the results, just write, but don't pay for it. On the other hand, if you are convinced that it does improve appetite, digestion and general condition, and that it does all else I claim, then send me only $1, after the 20 days' test. You be the judge. The 20 lbs. will last 40 hogs, sheep or goats, or 10 head of cattle or horses about 30 days.

Before deciding upon the remedy you'll feed, see that it is backed by actual proof, not empty claims. I give such proof; in addition, you are further protected, as

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Farmer's Business Letter

THE sheep market made substantial gains this week, lambs making gains of as much as $1 over last week, and all other kinds being higher. Top lambs (not westerns) brought $10.50 on Friday, and the average price of lambs for the week was figured at $15.40, highest since July. Receipts were moderate, about 62,000 here, comparing with 70,000 the same week a year ago and 95,000 two years ago.

A few Colorado lambs have appeared in market, but large runs of western fed lambs are not expected until early February. Last year Colorado marketing was in full swing by the last of January. The western states have fewer lambs on feed this year than last year, and if Corn Belt feeders can avoid overloading the market there is prospect of a continued high price level. It will be gratifying to feeders if it turns out this way.

Hogs a Little Higher

With a big run of hogs this week the market made a small net gain, prices at the close being a dime above the week before, with an extreme top of $9.25 paid on Wednesday. Later there was a break. Chicago receipts were 230,000, comparing with 233,000 the same week last year, while eleven markets had 710,000, comparing with 721,000 a year ago. Direct marketing is still running heavy, but shipping orders have returned to near normal, accounting for 29 per cent of this week's receipts.

Average price paid for hogs this week was $8.85, comparing with $8.80 last week, $8.50 a year ago and $11.75 two years ago.

Average weight of hogs for the week, at 231 pounds, was the same as the average for the past six years.

Packers pound the market on advances, and it evidently is not their intention to pay above $9 for the droves they put up this winter.

Light Steers Favored

The cattle market has made quite a gain on the lower end during the past two or three weeks, but there is apparently a disinclination to permit the tops to work much higher. Of late light cattle have taken the top away from the heavies. This week 1,160-pound cattle brought $17, while choice steers averaging 1,501 pounds sold at $16.60. Bulk of steer sales are quoted this week at $11.85 to $14.50, against $11 to $14.25 last week and $11.75 to $16.50 the same week last year.

Receipts at 48,000 this week were almost exactly the same as the same week last year but 10,000 less than the same week two years ago. Butcher stock was about a half dollar lower this week, and calves were $1.50 lower.

The beef market is showing some strength without immediate prospect of any material advance in prices. The cattle that sold here at $16.60 this week cost as feeders $10.50 nearly a year ago when they averaged near 900 pounds. Feeders in general are doing better than a few weeks ago, and while not many lots of cattle sold show big margins, usually there is enough spread to prevent loss. It is about a break-even proposition on current marketing.

Wheat in Weak Position

Only slight fluctuations occurred in the grain market this week, in a downward direction at the close. The feeling in regard to wheat leans more to the bear than the bull side at this time, based on the current statistics of the crop. The visible supply of wheat is very large, close to 140 million bushels, against about 85 million bushels last year, marketing for the season to date having been large. Canada also has a large visible supply, in the neighborhood of 112 million bushels at this time, compared with 75 million last year. It is estimated that in this country near 70 per cent of the crop has been marketed, and in Canada some 400 million bushels has been received at terminals since August 1. Europe has a smaller crop than last year, but surpluses in Australia and the Argentine are estimated to be larger. North American wheat will have increased competition from these two exporting countries during the coming six months. About the best that can be said as to prospects at this time is that some traders hold to the belief that wheat prices are more likely to hold about where they are than they are to work lower. Corn continues in a strong position, with good demand. Stocks are below a year ago in spite of heavy marketing for the season to date.

Milk Price Controversy

Milk producers in the Chicago territory are asking for an increase in price, from $2.50 to $2.85 a hundred pounds. So far the dealers have refused to pay the increase. Farmers are making deliveries, and have no intention of going on strike. They have learned what it has taken labor organizations many years to learn, that a strike is bad business even if more or less successful. The test will come, it is believed, on February 10, when the milk companies send out checks to the farmers in payment for January deliveries. If the companies pay at the rate of $2.50, and this is now regarded as a foregone conclusion, it is expected the Pure Milk Association will take the case into court. Under the Illinois cooperative law that makes it illegal for a dealer to attempt to break down a cooperative marketing organization. In the present case, dealers are said to have agents in the country working against the Association.

Redtop Seed

An Illinois seed company exported 150 carloads of redtop seed last year, value $600,000. Redtop grass, which belongs to the same family as the famous Kentucky bluegrass, although it is hardier and will flourish on acid soil, grows naturally in only one section of this country, the territory in and surrounding Richland county, Illinois. Farmers from this territory supply the world with seed, which is used extensively for sowing golf courses, public lawns and parks. WATSON.

Chicago, January 5, 1929.

Produce Markets

THE potato markets in the East were firmer during the week and prices were somewhat higher. In Philadelphia Pennsylvania round whites advanced to $1.50@1.55 per 120-pound sack for the first time in many weeks, but trading was not very brisk. New York City reported a slightly stronger market toward the close of the week and Maine shipping points improved. Pittsburgh, Washington and Baltimore reported a slow demand and steady prices but Boston was slightly stronger. During the month of December 339 cars of potatoes were unloaded in Philadelphia and of this number 296 were from Pennsylvania.

New Jersey potato growers will discuss every phase of the potato situation at their meeting to be held in Freehold on January 12. The growers in Central Jersey are uncertain as to what course they should follow this coming season. Some favor a drastic reduction in the potato acreage, others favor a plan for the elimination of all marginal potato farms. They state that land which will not produce profitable potato crops in average years should be devoted to other crops.

Apples and Celery

The apple market continues steady but with a slow demand. Receipts in Philadelphia were moderate with Pennsylvania 2½-inch up Jonathans bringing $1.50 per bushel on the carlot market and 2¼-inch Yorks $1.35. Truck receipts of Romes, Delicious and Stayman sold slowly at $1@1.75 per bushel. New York reported a fair demand for fancy apples with average grades moving very slowly. Ben Davis are selling at relatively high prices this season. One small lot of Ben Davis from Washington packed in boxes sold at $2@2.25 while Stayman from the same car sold at practically the same price. This was unusual, as very few Bens are shipped to eastern markets from the Northwest. During December 140 cars of apples were unloaded in Philadelphia, not including truck receipts. The same month last year 235 cars were unloaded. Half of these apples were from Washington, and the rest chiefly from Virginia, Pennsylvania, New York, Maryland and Delaware.

The market for Pennsylvania wired celery has improved during the week and the prices were considerably higher. Most sales ranged from 20c to 25c per bunch and fancy stock sold as high as 23½c. The average run of beets, rutabagas and turnips sold slowly but extra fancy washed stock was in fair demand. The best Savoy cabbage brought good prices and good carrots were in demand. New Jersey cranberries were rather dull at the close of the week but prices held steady.

The sweet potato market has been irregular. Early in the week the market was firm, and prices higher but later the demand was lighter, with prices barely steady.

Butter and Eggs

The butter markets were steadier during the week and slight price advances occurred in the Eastern markets. These price advances were mostly on the higher grades, with the exception of New York City where prices advanced on all scores. Trading was not very active but was sufficient to clean up daily arrivals. The receipts were heavier than last week and all indications point to an increase in production.

The egg market was irregular and prices closed lower than a week ago both in Philadelphia and New York. Receipts of nearby eggs were somewhat heavier. In Philadelphia nearby white eggs of best quality sold around 42@43c per dozen with mixed colors bringing 38½@39c. Toward the end of the week the demand was fairly active at these prices. Receipts of fresh from the West sold at 38½c and some dealers believe that receipts from this will decline.

Chain stores are buying fancy white Pacific Coast white eggs for their carton trade on account of their uniform good quality. The movement of eggs was very slow and most is being sold at a loss.

Nearby henney whites, closely extras sold at 46@49c per dozen York with other grades of white ranging from 29c to 45c, depending on Brown eggs of extra quality sold 48c and other grades at 28@45c. colors ranged from 25@46c.

All dressed poultry sold in Tren J., must be weighed at the time or the dealer is liable to prosecutio the New Jersey law, according t cis J. Black, sealer of weights an ures. Under the New Jersey l thing that is weighed previous to and weight placed on a tag and to the article must be reweighed is sold.

The live poultry market in N was steady during the latter par week and the demand was slow. by freight were moderate but ex ceipts were light. Leghorn fowl 30@32c per pound and colored fow 35c. Broilers brought 40@48c and 30@32c.

Receipts of dressed poultry fro sections were light and the marke Fowls ranged from 25c to 33c pe and roasting chickens from 30@32 ers brought 35@43c and fryers 28@24c.

A recent report issued by the ment of Agriculture states that th 31,843,837 pounds of dressed poult ed in Philadelphia during 1928, very close to last year's (1927) 31,821,887 pounds. The chief during the two years was the he ceipts during December of 1928. four states shipped dressed po Philadelphia during the year. Io sas and Minnesota were the chie of supply.

Receipts of eggs in Philadelphi 1928 totaled 1,735,234 cases and of t ber approximately 226,139 were re motor truck. Pennsylvania leads states in the number of cases supp a total of 273,086. One interesting was the fact that 177,539 of th from Pennsylvania arrived by mot

W. W.

BOSTON WOOL MARKE

Boston, Jan. 4.—Trading in w been very draggy and the volume in most transactions was very s says the U. S. Department of Ag Mill representatives have been in ket continually and have made for immediate requirements on grades, but their chief interest future needs was confined to ta ple lots to test, and making a g vey of volume, quality and ask of offerings. The limited volume that was sold moved at steady compared with the previous wee

Business in fine fleeces consist of sample lots. The prices at wh 64s and finer, strictly combing being considered, range from 1 the grease, but no sales of more ple volume were reported. Some of fair volume was done on ti grades.

Ohio 56s, strictly combing, bu in the grease, for the bulk whit lot brought 57c. Choice Michig brought 56c, but the bulk of th are available at 54@55c. Semi-f 50s fleeces realized 92@95c, scour Average 46s fleece wools brough secured basis.

Domestic Wool Quotat
Grease Basis Ohio and Sh

64s, 70s, 80s, (fine) strictly combi	46@
64s, 70s, 80s, (fine) French combi	40@41c
64s, 70s, 80s, (fine) clothing	36@38c
58s, 60s (½-blood) strictly combi	50@52c
58s, 60s, (½-blood) French combi	45c
58s, 60s, (½-blood) clothing	44@46c
56s, (⅜-blood) strictly combing	52@55c
56s, (⅜-blood) clothing	47@50c
48s, 50s, (¼-blood) strictly combin	48@50c
48s, 50s, (¼-blood) clothing	45@47c
46s, (low ¼-blood) strictly combin	43@45c
36s, 40s, 44s (common and braid)	38@42c

HAY AND STRAW

Pittsburgh.—No. 1 timothy, $2 No. 2, 817@19; No. 1 light mixed, heavy mixed, $24@24.50; No. 1 cl @27; No. 2 clover, $20@21; whea No. 1, $12.50@13; oat, $14@14. $11.50@15.50.

New York.—(Large bales) timo light mixed, No. 1, $25@27; No. 25; medium mixed Nos. 1 and 2, Rye straw, $22@23.

C. A. A. B.

Farm Conditions

Ontario Co., Western N. Y.

Dec. 28: We have had no snow to speak of and very little cold weather. Has been a large amount of plowing done. Corn all in and most of it husked. Was a good crop where it was not too wet. Stock doing well. Store sheep have been very high priced. Eggs which were 50c per dozen have dropped to 35c. E. T. Brizzee.

Potter Co., Northern Pa.

Jan. 1: We have our biggest snow of the season. Have had a very nice fall. Lots of plowing done. Had good crops. Potatoes a bumper crop, selling for 35 cents per bushel at car. Milk for November, $3.15 for 3.5 fat. Cows are high.

J. L. Cumm.

Monroe Co., N. E. Pa.

Dec. 27: Weather clear and cold. Zero on the 22-23rd. Farmers getting winter wood. Rural life days are being held. Poultry show will be held in Stroudsburg January 9 at Armory. Epidemic of flu in county, one death. Farmers are butchering. Grain fields green in good condition. Little plowing done. J. E. S.

Cambria Co., Central Pa.

Dec. 31: Lack of snow coverage is telling on the wheat. Many fields show most of the plants half way out of the ground. Dairymen complain of milk shortage. Business very dull in the coal towns. Unusual interest in calf clubs and many are being organized. Potatoes 50c, live chickens 30c retail, butter 50c, dressed beef 10@14c, eggs 50c, hay $12, apples 35c pk., honey 25c section, fresh cows $125@150. S.

Cumberland Co., Southern Pa.

Jan. 1: Quite a lot of cool, dry weather. Rain needed in some places. Wheat fields not looking so well as earlier in the fall. Much sickness, chiefly flu. Quite a lot of plowing done and much manure is being hauled. No snow so far. Many making preparation to attend the Farm Show at Harrisburg. J. Brown Kelley.

Dickenson Co., S. W. Va.

Jan. 1: The season has been rather mild. Only a slight snowfall or two. Cattle looking fairly well. They have been partly subsisting on what they got from the "cornmous" up to this time. Corn crop of poor quality, did not mature. F. M. Beverly.

Juniata Co., Central Pa.

Jan. 1: Prosperous New Year to all. Fine weather, clear and cold at night. Makes skating fine. Eggs more plentiful, 38c@42c a dozen. Farmers busy getting in wood. Some schools closed on account of sickness. M. M.

Blair Co., Central Pa.

Dec. 27: Very little winter yet. Some cold weather early this month but no snow to amount to anything. Most of the butchering is done. A lot of our folks are suffering with the flu. The outlook for wheat is not very good; some fields that looked good in the fall now are nearly bare. The water supply is low in many places and farmers are hauling water for their stock, as most cisterns are dry. We have not had much rain since in the summer. A happy and prosperous New Year to all. H. Edwin Hetrick.

Tioga Co., Southern N. Y.

Dec. 29: Ground bare, and dust flying. Water scarce in some localities. Some had a sorrowful Christmas, among them Mr. and Mrs. Fay J. Clark of Searlestown, whose large barn was found to be on fire at 4:00 o'clock that morning. Was consumed with 12 head of calves and young stock, one horse (valuable) and the Collie dog. Farm and Home Bureau doing good work. Meetings scheduled for the first ten days of January. The Annex built recently to the Endicott-Johnson shoe factory in Owego, was a big affair 100 more employes will be used and this industry is of great benefit to this county and is deemed inestimable. Potatoes are few, many being sold at 45c-50c.

C. A. A. B.

Livestock Markets

PITTSBURGH

Cattle

Thirty-two carloads made up Monday's supply of cattle at the Pittsburgh stockyards. The market was fairly active at generally steady prices. Bulk of the steers sold at $11.50@13.50. Extreme top on steers was $14.50 for a choice individual, while good to choice cattle in carlots sold at $13@13.50 or about steady with last week. Choice handyweight steers went at $13@13.25 with good butcher steers of 1,000 to 1,100 lbs. at $12.25@12.75 and fair kind around $11.50. The in-between grades of yearlings and light steers were strong to slightly higher. Heifers were in light supply and ranged mostly from $8.50 to $11 for common to choice sort, while a few fancy heifers brought $12@12.50. Fat cows were quoted at $7@9.50, according to quality, with a half dollar more paid for a few of the best. Canners and cutters went largely at $4@6. Bulls were not numerous and sold about steady, or on the basis of $10 for best fat bulls, medium kinds generally at $8@9.75, and fair to good bulls $8.50@9.

Choice grain-fed steers, 1,200 lbs. or over	$13 50@14 50
Good to choice	13 00@13 50
Fair to good, do.	12 00@13 00
Plain heavy steers	10 00@12 00
Choice handyweight steers	12 75@13 25
Good butcher steers, 1,000 to 1,150 lbs.	12 25@12 75
Fair to good, do.	11 25@12 25
Ordinary to fair, do	10 25@11 25
Common, do.	9 75@10 25
Good light butcher steers	11 75@12 75
Fair to good light steers	10 75@11 75
Common to medium, do.	9 75@10 75
Inferior light steers	8 00@ 9 00
Feeders	Nominal
Stockers	Nominal
Choice heavy bulls	9 50@ 9 75
Choice handy butcher bulls	9 50@10 00
Good handy bulls	9 00@ 9 50
Fair to good bulls	8 50@ 9 00
Common to fair bulls	8 00@ 8 50
Inferior bulls	7 00@ 8 00
Choice fat heifers	10 75@11 50
Good to choice heifers	10 00@10 75
Fair to good heifers	9 50@10 00
Common to fair heifers	8 50@ 9 50
Thin light heifers	7 00@ 8 00
Choice fat cows	9 00@ 9 50
Good to choice fat cows	8 00@ 9 00
Fair to good cows	6 00@ 7 50
Common to fair cows	4 75@ 6 00
Canners and cutters	50 00@150 00
Fresh cows, calf at side	

Hogs

With liberal receipts, around 40 carloads, demand for hogs was good and the market active at an advance of 10@15c over last week. Good handy-weights and heavy mixed brought $9.75@9.80 with heavies at $9.60@9.75 and lights mostly $9.25@9.50. The bulk of pigs went at $9@9.25 and sows at $7.50@8.

Heavy wts., 250 lbs. or over	$ 9 60@ 9 75
Heavy mixed	9 75@ 9 80
Medium wts., 180-200 lbs.	9 75@ 9 80
Heavy Yorkers, 165-180 lbs.	9 75@ 9 80
Light Yorkers, 125-150 lbs.	9 25@ 9 50
Pigs, 100-110 lbs.	9 00@ 9 25
Roughs	7 50@ 8 00
Stags	5 50@ 6 75

Sheep and Lambs

Ten double-deck carloads made up the supply of sheep and lambs. Lambs were active at steady to stronger prices, choice lambs under 90 lbs. selling up to $16.50. Sheep were steady on the basis of $9 for prime wethers. Fat ewes sold at $8 and down, according to quality.

Good to best wethers	$ 8 50@ 9 00
Fair to good wethers	8 00@ 8 50
Good mixed	8 00@ 8 25
Fair to good, do.	7 00@ 8 00
Common to fair	5 00@ 6 00
Inferior sheep	2 00@ 4 00
Good to best spring lambs	16 00@16 50
Medium lambs	13 00@14 00
Culls and throwouts	10 00@12 25

Calves

With 500 calves on sale the market was firm, good to choice vealers going at $16@18.50, with heavy and thin calves $8@14.

LANCASTER

Cattle

Lancaster, Jan. 7. Beef steers and yearlings were steady to strong. Top $12.25 on medium weights. Bulls and she stock steady. Stockers and feeders nominal.

Good steers	$12 25@13 75
Medium to good	10 75@12 25
Common to medium	9 00@10 75
Good to choice heifers	10 25@11 75
Medium and common	7 50@10 25
Good to choice cows	7 25@ 9 00
Common and medium	6 00@ 7 25
Low cutter and cutter	3 50@ 6 00
Good to choice beef bull	10 00@11 50
Cutter, common and medium	7 50@10 00
Feeder and stocker cattle	Nominal
Good to choice calves	16 00@18 50
Medium	13 75@16 00
Culls and common	7 50@13 75

Hogs

Hogs were a quarter higher with top at $10.75.

Heavyweights, 250-350 lbs.	$10 25@10 75
Medium weights, 200-250 lbs.	10 25@10 75
Light weights, 160-200 lbs.	10 00@10 50
Packing sows (rough and smooth)	7 50@ 9 75

MISCELLANEOUS PRODUCE
Philadelphia

Eggs.—Extra firsts, 42c; firsts, 38½c; seconds, 32@34c; storage, 25@30c; selected and candled fresh eggs, 48@50c; select in cartons, 50@52c.

Butter.—Creamery, tubs, 92 score, 50c; 88@89 score, 45@45½c.

Poultry.—Fowls, 31@35c; Leghorns, 26@31c; springers, 26@35c; broilers, 38@40c; old roosters 21@23c; ducks, 25@33c; turkeys, 26@36c; rabbits, pr., 18@20c; guineas, per pair, $1.25@1.75.

Apples.—U. S. No. 1, per bbl., Delicious, 85@6; Yorks, per bu., $1.35@1.50; Black Twig, 65c@$1 per ¾ bskt.

Cranberries.—Per ¾ bbl., N. J., $3@4.50.

Celery.—N. Y., 2-3 crates, large rough, $2.50@3.25; N. Y. & N. J. bunches, large, 50@65c; small, 25@40c; Pa., & N. J. bunches, wired, 10@20c.

Potatoes.—Pa. round whites, per 120 lbs., $1.40@1.50.

Sweet potatoes.—N. J., ¾ bskts., No. 1 yellow, $1@1.25; Md. and Del., per bu. hamper, No. 1 yellow, $1.25@1.50.

Baltimore

Butter.—Creamery, fancy, 50c; rolls and dairy prints, 34c; packing stock, 33@34c; butterfat 9b., 48c.

Eggs.—Md.-Pa. nearby firsts (loss off), 42c; nearby current receipts, 40c; western firsts, 42c; southern, 40c.

Live poultry.—Hens, old, 4½ lbs. and over, 30@32c; small to medium, 25@30c; Leghorns, 22@27c; spring, large, 34@35c; small, 33@35c; Leghorns, 28@30c; Guineas, young, 1½ lbs. or over, each, 70@80c; roosters, 18@20c; ducks, 25@30c; pigeons, pair, 30c; squabs, 30@50c; turkeys, 35@45c.

Lancaster

Butter.—Country butter, 55@60c; creamery, 58@64c.

Poultry.—Chickens, dressed, $1.25@2.25 each; springers, 75c@$1.25 each; ducks, $1.50@2.75 each; squabs, 25@50c each.

Eggs.—Fresh eggs, 45@50c.

Vegetables.—Beets, 8@10c per bunch; asparagus, 25c bunch; string beans, 45c per ¾ pk.; beans, lima, 45@50c per pt. bx.; cabbage, 5@15c per head; carrots, 8@15c per bunch; cauliflower, 20@40c per head; celery, 10@25c per bunch; cucumbers, 8@15c each; endive, 5@10c per head; lettuce 10@20c per head; mushrooms, 25@30c per pt. box; onions, 20@25c per ¾ pk.; green onions, 10c per bunch; onions, Spanish, 5@10c each; peppers, 5@8c each; potatoes, 60@75c per bu.; sweet potatoes, 20@25c per ¾ pk.; parsley, 10@3c per bunch; peas, 40@50c per ¾ pk.; radishes, 5@10c per bunch; spinach, 15c ¾ pk.;

York

Butter and eggs.—Creamery butter, 55@60c; separator, 60@64c. Eggs, 45@50c.

Poultry.—Hens, live, 26@28c.

Vegetables.—Potatoes, 75c per bu.; cabbage, 4@5c lb.; lettuce, 8@15c hd.; spinach, 13@15c ¾ pk.; horseradish, 50@15c glass; turnips, 13@15c ¾ pk.; celery, 5@15c stalk.

Milling Qualities of Pennsylvania Wheat

(Continued from page 5.)

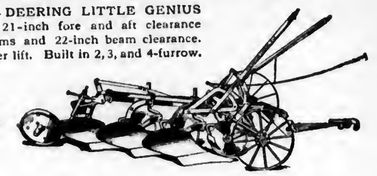
our large State Hospitals with wonderful results.

The problem is solved, millers say. They predict that within the course of a few years the wheat grown in Lycoming county will be made into flour in Lycoming county, or, at least, the majority of it. This means that only 100,000 barrels, instead of 200,000 barrels, will be imported during the year and this preferably in the form of wheat to be blended with our local wheat. It means a direct saving to the county of about a half million dollars. It means much more than that when other things are taken into consideration, such as the saving in bins and middlings to the farmer, freight charges, additional labor involved, machinery manufactured in the county, installed, etc.

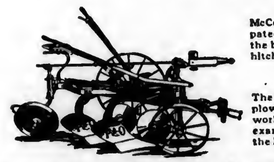
Of course we cannot expect all the small mills in Pennsylvania to install a laboratory and an experienced chemist like Mr. Goodyear, but many of our larger mills scattered over the state could follow this example with profit both to the milling industry and to the farmer as well.

McCORMICK-DEERING
Tractor and Horse Plows

McCORMICK - DEERING LITTLE GENIUS PLOW. Has 21-inch fore and aft clearance between bottoms and 22-inch beam clearance. Improved power lift. Built in 2, 3, and 4-furrow.



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Little Genius Tractor Plow
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Horse Plows

Diamond High-Lift Sulky
Success, Sulky and Gang
Two-Way, Sulky Plow
No. 9, Two-Way Sulky
Disk Plows, Sulky and Gang
Walking Plows, a complete line
Special Plows for Special Plowing

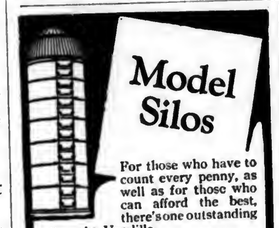
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Streamside Milking Shorthorns (Founded 1880)
FOR SALE.—Stream-Side Red Royal, born June 1st, 1928. Dam Belle Crawford, 11,220 lbs. milk, 477 fat., by Royal Crawford with 16 daughters averaging 10,596.3 lbs. milk. Sire Glenside Royal Duke whose three nearest dams average 10,600 lbs. milk. Price $165. Also a few heifers. Accredited herd. F. N. HUBBARD & SON. Troy, Bradford Co., Pa.

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MILKING SHORTHORNS. Cows, heifers, and bulls. Best breeding, accredited herd. C. M. Kennedy & Sons, Ulster, Bradford Co., Pa.

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You can avoid these dangers by feeding Larro because the quality of Larro ingredients is protected by the most rigid feeding inspections known and every precaution possible to take in making feed is taken in the manufacture of Larro.

Larro costs more than ordinary feeds but if you don't use it you pay its price anyway in the off-feed conditions and loss of production that result from trying to economize with inferior feeds.

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DETROIT · MICHIGAN



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Farm and Dairy

By L. W. LIGHTY

"MANY years ago I was one of the boys you asked questions at the farmers' institute until I was stumped. Now it is my turn, as I am trying to get into profitable dairying and I encounter many difficulties. Propose to buy several pure-bred heifers and a good yearling bull. I find prices vary considerably and I question how much I must pay and still not pay too much for my whistle."

We are guided in buying many commodities by the current market quotations, but this is not one of them. Mixed bred good heifers sell in our local stockyard at $70 to as high as $90, and quite a few buyers will keep them for cows. A man buying those heifers with good judgment may get a good cow one to five, but in buying pure-breds this is reversed and better. In fact you may find only one unworthy one in twenty. But it is good not to forget when we buy an untried bull or heifer we buy a cat in a bag or a pig in a poke.

But with a good line of breeding, that is a line of ancestors that were generally good producers, and then if the individual we select is of a good type and conformation, we take a light risk and rarely pay too much if we buy from a man who has stock to sell and wants to sell. But when it comes to the actual figures the matter must be decided by the owner and the prospective buyer. The better the judgment of that prospective buyer the less likelihood of his paying too much for his whistle. Buying cattle should always be a matter of judgment unless it is a grand champion when it becomes a matter of emotion.

Feed and Butterfat

"Can I influence the butterfat yield by feeding?" Practically, no, but we should qualify. An under-fed cow when given a full good ration may increase the butterfat content of her milk considerably. Also a radical change in the ration may influence the fat test. Even unusual excitement or handling of the cows will surely affect the fat test as I observed too often in my work.

The fat test varies in some cows from milking to milking, but if you take a composite sample of several milkings you will soon learn each cow has a standard that varies very little regardless of the feed, however, the test gradually tends higher as the quantity of milk becomes less toward the end of the lactation period.

Potatoes for Cows

Our young friend like many others has a lot of potatoes for which there is no demand and he thinks of feeding them to the cows. My experience with potato feeding to cows was unfavorable. Most cows would not eat them unless tempted with plenty of meal over them and then it had an undesirable effect on the butter. Theoretically they take the place of corn for energy, five pounds of potatoes equaling one pound of corn, and in protein seventy pounds of potatoes is equal to one pound of corn. But in practice I have found it wise to feed my surplus potatoes to the hogs and the fowls, boiling and mixing the potatoes with ground grain. If you feed potatoes to cattle remember they are liable to choke on them unless sliced.

Economical Grain Feeding

"I have to buy most of my grain feed. I do not want to feed more than is really necessary, yet I want my cows to do the most profitable work. How may I know the correct amount to feed?"

Unfortunately this inquirer does not live in territory covered by cow-testing association work, but just as unfortunately many thousands are similarly handicapped. There is not the slightest doubt in my mind that with a great many members of these associations more than the entire cost of the work is paid in the answer to the above question. One intelligent man can practically answer the question for twenty-five or more dairymen, but where this cooperative effort is lacking each man must do it for himself and considerable time, work and thought is required, as I know from many years' experience. Unless we have a record of the work of each individual cow our feeding is very largely guess work, and while some folks are right good at guessing many of us are mighty poor at it.

The only way the inquirer can feed his cows as he desires to do is to keep a regular record of the milk the cow gives and test it or have it tested in such a way as to know what the average test is. This gives him a practical guide for feeding economically.

A cow giving 60 pounds of 3.4 per cent milk will need about one pound of grain to every four pounds of milk, while a cow giving 30 pounds of 5 per cent milk will require practically one pound of grain for every three pounds of milk. In other words, to produce high-testing milk the cow requires more grain in proportion. It is of course understood that the cows have all the roughage they will clean up and the same is of a fairly good quality. A cow will want 14 to 18 pounds of good hay a day, or if you have silage she will eat about 20 pounds of that and eight or nine pounds of hay. Very naturally if the roughage is of poor quality or limited the cow must be fed more grain. These feeding guides are indispensable, but so is good judgment and both must be constantly utilized if we want the best results.

Pennsylvania Dairy Honor Roll

COW-TESTING association work in Pennsylvania is making good progress. A report recently compiled covering the year ending July 1, 1928, shows an increase in number of associations, an increase in average production per cow and an increase in the number of boys with an average of 300 or more pounds of butterfat per cow.

The National Dairy Association has for several years awarded honor certificates to all cow-testing association members whose herds average more than 300 pounds of butterfat per cow. During the year ending July 1, 1926, 325 certificates were won by Pennsylvania Dairymen. In 1927 the total was raised to 428 and during the year ending July 1, 1928, there were 651 Pennsylvania herds that qualified. This is an increase of 223 herds, or 52.5 per cent, over the previous year. Seventy-three of the above herds had an average production of more than 400 pounds of butterfat. This is an increase of 11 herds or 428 per cent above the 1927 list. The high herd for the year was that of H. A. Snyder, Montoursville (Lycoming county), whose 65 cows produced an average of 526.4 pounds of butterfat.

Among the counties, Mercer county leads in the number of 300 pound herds with a total of 51. Bradford county is second with 41 herds, Tioga county third with 37 herds and Chester county fourth with 35 herds.

For individual associations within a county, Cumberland and Union counties tie for first place with 23 herds each. Butler county association and Grove City association (Mercer county) have 20 herds each. Canton association (Bradford county) and Jefferson county association No. 1 have 18 herds each.

A partial list, by counties, of those attaining the honor roll during the year July 1, 1927, to July 1, 1928, follows, with the average number of pounds of butterfat produced per cow in their herds. The remainder of the honor roll will be published in an early issue of this paper.

Adams County

R. M. Spangler, 387.1; Elmer A. Bubb, 349.5; Millard Baschoar, 347.8; Hiram H. Miller, 322.8; Edgar H. Leer, 322.3; T. N. Cushrom, 322; Harry E. Brown, 312.4.

Allegheny County

Bell Farm, 430.8; Bolt, Bamford & Son, 410.7; Farmhill Dairy, 402.5; Adarra Herd, Inc., 389.4; Fairacres Farm, 388.1; J. F. Byers, 367.3; H. O. Boel, 359.3; Blackburn Farm, 353.5; Vance H. Boll, 343.7; Allegheny County Home, 308.1; Bell Brothers, 296.7.

Bedford County

Allen Eshelman, 442.9; Geo. Morgart, 366.4; Harry Clark, 365.6; C. E. Koontz & Son, 357.8; Stanley Koontz, 351.2; A. T. Replogle, 332.5; Paul Koontz, 328.6; John Hershberger, 325.9; S. E. Lee, 315.5; Wm. Barrett, 314.5; Samuel Cessna, 314.5; Harvey England, 305.1.

Canton (Bradford County)

Adelbert Seeley, 457.2; R. G. Williams & Son, 426.6; R. H. Fleming, 400.4; Dean & Taylor, 367.6; Fred Bohlayer, 366; John Preston, 365.7; Carlyle Wooster, 362.5; H. S. Wilcox, 362.1; Wm. Bohlayer, 356.3; Elven Babbin, 334.4; Glen Hickok, 315.6; Ralph Packard, 315; Geo. McMurray, 312.5; John McKee, 310.5; Tracey Stone, 308.2; Earl Wilcox, 305; D. D. Holliday, 300.8; George Shepard, 300.3.

Laurel Hill (Bradford County)

John Deane, 469.7; Clarence Grenell, 391.6; A. E. Madigen, 403.7; F. W. Gorham, 376.9; D. E. Tracy, 376.6; L. P. Chaffee, 363.1; Hugh Ockerman, 343.7; J. E. Meredith, 341.5; R. B. Arnold, 329.8; Irvin Moaffee, 320.5; G. S. Chaffee, 315.7; Emerson Gates, 300.4; G. L. Kerrick, 300.7.

Troy (Bradford County)

D. W. Sargeant, 356.3; I. A. Rockwell, 402; H. C. Larcom & Son, 342.8; Horace Anderson & Son, 337.3; Nichols Bros., 316.3; L. A. Greer, 314.9; E. V. Rockwell, 313.5; M. A. Hayes, 305.7; W. L. Pierce, 302; Perry Campbell, 300.2.

Middle Bucks (Bucks County)

A. M. Geddes, 390.8; E. J. Ivins, 382; L. P. Satterthwaite, 379.7; W. N. Hunsberger, 375.9; P. W. Smith, 359.9; C. L. Wilkinson, 343.4; J. H. Cliffe, 321.7; L. C. Benner, 316; Jos. Canby & Son, 311.3; George S. Havens, 308.5; E. B. Morris, 307.9; H. M. Walton, 306; J. S. Parry, 300.7.

Butler County

Geo. W. Campbell, 469.1; H. P. Starr,



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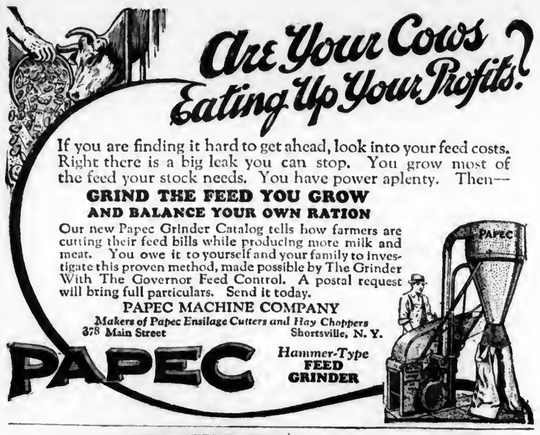
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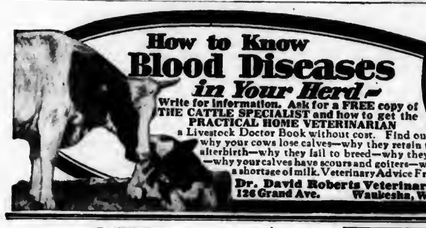
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Clarion County

L. O. Hetrick, 460.1; Fred L. Stallman, 445.1; H. B. Hetrick, 377.9; J. P. King, 373.9; Wm. & C. A. McCauley, 356.5; Byron Hanby, 348; C. L. Risher, 346; C. F. Willison, 341.8; Ray Shook, 334.4; B. W. & J. C. Thompson, 324.1; W. B. George, 318.3; M. B. Bish, 315.4; W. G. Riner, 313.3; J. W. M. Gruber & Son, 308.6; Ross Barrett, 307.6; J. W. Hartman & Son, 304.9.

Clearfield County

C. E. Hoyt, 474; J. E. Hayes, 350.5; G. B. Wachob, 305.1; J. H. Van Tassel, 302.3.

Western Crawford (Crawford County)

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Dauphin County

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IN THE SAN JOAQUIN VALLEY of California general farming is a paying business. Feeding millions of people in towns and cities. Alfalfa combined with dairying, hogs and poultry, yields a good income. A small one-family farm, with little hired labor, insures success. You can work outdoors all the year. Newcomers welcome. The Santa Fe Railway has no land to sell, but offers a free service in helping you get right location. Write for illustrated San Joaquin Valley folder. Write for illustrated farm paper—"The Earth" free for the asking. Special excursions, feeding and get-our farm paper—"The Earth" free for six months. C. L. Seagraves, General Colonization Agent, Santa Fe Railway, 848 Railway Exchange, Chicago.

LIVE GOOD WHILE MAKING A GOOD LIVING on the Del-Mar-Va Peninsula. Low-priced, productive land, town and waterfront homes. Three to ten hours to largest Eastern markets by motor or Pennsylvania Railroad. Very little snow for or freezing. Finest concrete highways. Good schools, low taxes. Handsome descriptive booklet free. Address 103 Del-Mar-Va Building, Salisbury, Md.

125 ACRES.—Deep, dark loam soil, rolling upland, fine for tractor. In highest state of fertility. Two sets of buildings, electric, water, furnace. Bordering improved highway, near railroad, 6 miles county seat. Price $10,500. Eastern Ohio. E. E. Wallace, Carrollton, Ohio.

FERTILE FARM LANDS in Mississippi. Terms twenty years with one fourth cash. Price $10.00 per acre and up. J. A. Hodge, P. O. Box 1253, West Jackson, Miss.

FOR THE HOME

100 ASSORTED dishes packed as first quality consisting of cups, saucers, plates, bowls, oatmeals, platters, etc. All useful. Slightly imperfect, $5.50, prepaid. Send money to us for perfect, $5.50, prepaid. Send money to us for immediate shipment. Home China Co., Mills, Mass.

YARN.—Virgin wool; for sale by manufacturer at bargain. Samples Free. H. A. Bartelt, dept. F1, Harmony, Maine.

JUMBO PEANUTS.—Hand picked, 5 lbs., $1.00; 10 lbs., $1.50. R. R. Lankford, Franklin, Va.

RAW FURS

WANTED.—Raw Furs, Ginseng, Minks, Muskrats, Raccoons. Especially bread stripe Skunk. $1.40. Sterns Fur Co., New Brunswick, New Jersey.

FURS—HIDES will bring the best prices when shipped here. No quantity is too small or large. Write for prices, market information, tags. S. H. Livingston, Successor to Keystone Hide Co., Lancaster, Pa.

INFORMATION WANTED

WANTED.—Cultor Tractor. John Swope, Route 4, Lebanon, Pa.

ALFALFA

ALFALFA.—First and second cuttings, and mixed hay. Deal direct with a farmer and save money. Write for prices. The Cross Farm, R. D., Fayetteville, N. Y.

HAY.—All kinds, alfalfa, clover, timothy and mixed. Delivered prices. Harry D. Gates Company, Jackson, Michigan.

ALFALFA HAY.—Car lots for sale. Chas. B. Wing, Box 22, Mechanicsburg, Ohio.

PET STOCK

PEAFOWL, Pheasants, Bantams, Pigeons, Birds, Rabbits. Free Circular. John Hass, Bellefonte, Iowa.

Veterinary



DR. J. F. SHIGLEY

DR. J. F. SHIGLEY, well known to many readers as veterinary editor of Pennsylvania Farmer, will continue in that capacity and answer questions relative to health of farm animals by mail direct, as well as through the columns of this paper.

A brief glance at Dr. Shigley's training shows that he is well qualified to serve our readers. A graduate in the Veterinary Department, Cornell University, he was instructor in veterinary surgery at Cornell one year, practiced veterinary medicine two years, was chief veterinarian of the Beebe Laboratories, Inc., for five years, has acted as consultant veterinarian for a number of the largest breeding establishments in Minnesota, Kentucky, Delaware, New Jersey and New York, and is now associate professor, Department of Animal Husbandry, Pennsylvania State College, where his work is divided between teaching and the actual care of approximately 1,000 animals, which keeps him in touch with all phases of veterinary practice.

Teat Injured

What would you suggest in the way of treatment for a cow that has the right front teat torn by barb-wire? This cow (Guernsey) was fresh about four weeks ago. The calf is now sold. She is a fairly heavy milker. M. F. R.

Highly desirable first of all is to use an antiseptic wash twice a day and for the first few days paint with mercurochrome (iodine preparation). To hasten healing use also zinc oxide ointment. Would keep the quarter milked out. As to whether you are successful in saving the quarter will depend on scrupulous attention and decree of injury. Trust that it will come along in good shape.

Mineral Needed

I have three shoats that have lumps on their legs at the joints. They are stiff and can hardly walk. One has a large lump on the side of its jaw. Their feed has been ground oats in slop and skimmilk and grass. J. M. M.

You need to get mineral into the ration and I would suggest a mixture of tankage two parts, linseed oilmeal one part and alfalfa meal one part. Use this to supplement your feeds as ten per cent of grain ration.

POULTRY

PARDEE'S PERFECT PEKIN DUCKLINGS $35. Eggs $14-100. "World's Best." Service. Satisfaction. "Duck News" Free. Roy E. Pardee, Ash St., Islip, L. I., New York.

WHITE ROCK COCKERELS.—Size, bone, quality, vigorous. April hatched, $3.50 each, two or $5.00 each. P. E. Mourer, Mercersburg, Pa.

SINGLE COMB BROWN and WHITE LEGhorns. 337-egg Pedigreed, trapnested, contest winners. Stock, eggs, etc. Catalog. Vern Fulton, R-8, Gallipolis, Ohio.

COCKERELS.—White Wyandottes, Martin's Duragas Regal strain. $2.00 and $5.00. Mrs. Birdie Chump, Route 5, Lancaster, Ohio

BARRED ROCK PULLETS.—Heavy-laying, Thompson strain. Also extra good cockerels. H. E. Akers, R. 2, Clearville, Pa.

COLORED MUSCOVY, MAMMOTH PEKIN, Buff and Runner ducks. Extra large stock. Special prices. B. F. Kahler & Son, Hughesville, Penna.

SINGLE COMB BLACK MINORCA EGGS. Cockerels. Ray Van Sickle, Sunbury, Ohio.

ROSE COMB RHODE ISLAND RED and White Rock cockerels. J. C. Orr, Warsaw, Ohio.

SINGLE COMB WHITE MINORCA hatching eggs. Write Fred Gublen, Penn Run, Pa.

TURKEYS

TURKEY HENS, $6.00; gobblers, $10.00; Geese $5.00; Ducks, $3.00; Guineas, $2.00; Baby chicks cheap. Free circular. Edwin A. Souder, R. 1, Sellersville, Pa.

TURKEYS.—All breeds. Strictly pure-bred. Pairs and trios, not akin. Reasonable prices. Booklet Free. Low Prices. Pure Eastern Ohio Poultry Farm, Bealsville Ohio.

GIANT MAMMOTH BRONZE TOMS. Disease free. Big Buff Rock cockerels. J. C. Clupp & Son, 109, Canadensburg, Ind.

M. B. TURKEYS; bred for size, vigor and color. Prize-winners. Extremely healthy. P. G. Jordan, R. 3, Box 106, Charleston, W. Va.

FOR SALE.—Bourbon turkeys, Toulouse geese and Pekin ducks. Beech Creek Pa.

MAMMOTH BRONZE TURKEYS.—Best breeding, size and color, Sunnyside, Jonesville, Va.

SALESMEN

EVERY HOME A PROSPECT.—Make big money; supply crew; sell dependable trees, shrubbery; all or part time; landscape service; experience not essential; full equipment; commission paid weekly. We deliver, collect. Write Willems Sons' Nurseries, Desk F, Rochester, N. Y.

SELL OUR FULL LINE OF STORE OUTFIT and earn big profits. All sizes and kinds. Cover regular route and make $5 to $15 on single call. Big sales easy. Line is flashy and prices well under competition. Write The Brunn Works, 482 4th St., Fairfield, Iowa.

RELIABLE MEN WANTED to sell guaranteed trees, shrubs and roses. Steady work. Pay weekly. Start now for Spring business. Wholesale and retail. Webb Nursery Co., Rochester, New York.

WANTED.—Farmer or farmer's son or man to travel in country. Steady work. Good profits. Write for particulars. Cutting Products, Dept. PA-2701, Wilmona, Minn.

MEN TO SELL our high grade garden and field seed direct to planters. A good position with big income. Experience unnecessary. Cuba Co., Franklin, Mass.

AUCTION SCHOOLS

300 AUCTION SAYINGS $1. American Auction College, Kansas City, Missouri.

GOATS

VITALITY STRAIN Saanans, Toggenburgs, Nubians. Bucklets, Healthiest milkers for babies, invalids. Goldsborough's Gentery, Mohnton, Pa.

HAY AND GRAIN WANTED

WANTED.—Hay, Straw, Grain, Potatoes, Apples, Cabbage, etc. Carloads. Pay highest market prices. The Hamilton Co., New Castle, Pa.

MALE HELP

WANTED.—Single man for work on dairy and poultry farm. State wages expected. R. J. McCoy, Emlenton, Pa.

WANTED.—Married man for general farm work. Must be sober and understand caring for stock. Must be one man with boy old enough to help when not in school. J. J. Edgerton, Langhorne, Pa.

BABY CHICKS

BUCHER SUPER-QUALITY CHICKS from inspected, free range, money-making stock. Reds, White Wyandottes, White, Barred Rocks, Giants, Black Minorcas, Anconas, White and Brown Leghorns. Booklet Free. Low Prices. Pure Breeds. Bucher Bros. Hatchery, Dept. H, Berea, Ohio.

BABY CHICKS.—Leading strains of Barred Rocks and Reds. Kulp's famous Brown and White Leghorns. Catalog free. W. W. Kulp, 1254, Pottstown, Pa.

BABY CHICKS

POTENCY that rare quality, is bred into our Tancred chix, carrying blood of Tancred's best bird. Every chick produced on our own farm. Positively no birds farmed out. Host S. C. White Leghorn Pen, 1928 Penna. State Standard Production Show, State College. No pullets used as breeders. All breeders trapnested. Males pedigreed. Illustrated booklet. Paden's White Leghorn Farm, Dept. B, Millerstown, Pa.

WHITE LEGHORN EGGS AND CHICKS.—Big discount if ordered now for spring shipment. Sired by 200 to 300 egg males. Egg bred 29 years. Winners at 20 egg contests. Shipped c.o.d. Catalog, special price bulletin free. Thousands of pullets, hens, cockerels at low prices. George B. Ferris, 980 Union, Grand Rapids, Michigan

KVALITEED BLOOD TESTED ROCKS, REDS, Leghorns. Bred for color, egg production, and Leghorns. Bred for color, egg production, and vigor. Blood-tested four years for Bacillary White Diarrhoea by the Virginia State Department of Agriculture. All Chicks shipped under State Label. Catalog and price list free. Order early. Late, we can supply your wants. Harrisonburg Hatchery, Inc., Box 222, Harrisonburg, Va.

MT. AIRY CHICKS—Strong and Sturdy. Rocks, Reds, Leghorns, Wyandottes. Healthy and of exceptional quality. Carefully selected, rigidly inspected and culled for color and high egg production. Reasonably priced. Prompt, 100% delivieries guaranteed. Write for catalog and early order discount. Mt. Airy Poultry Farm, Dept. K, Mt. Airy, Md. Phone 37.

ALL CHICKS from breeders R. W. D. tested as New England Accredited. Leghorns, Reds, Barred Rocks, White Wyandottes, for spring delivery. Special prices now on Reds and Rocks for winter broilers. Free circular. Hall Bros., Box G1, Wallingford, Conn.

EARLY SPRING BROILER CHICKS.—Butcher, market men pay extra prices for your pure-bred Rocks, Reds, Wyandottes, Orpingtons. Descriptive picture folder free, showing best varieties money making market chickens. Farm service. Route 81, Tyrone, Pa.

HUSKI-HATCHED BARRED ROCKS, Reds and White Leghorn breeders are State Certified and Pullorum Passed. Strong, Large, healthy, Huskie Blood Tested. Strong, Large, healthy, Huskie Blood Tested. Catalog free. Huskie Hatchery, 234 Furman Boyle Bldg., Roanoke, Va. Also Plant at Timberville, Va.

PETERSIME Electrically hatched pure-bred Barred Rocks, Reds, Whites. "Business Tancred" White Leghorns. Brooders rigidly culled and specially bred for highest vitality. Discount free. Get catalog for attractive early order discount. Garber Hatchery, Harrisonburg, Va.

FAMOUS TANCRED STRAIN S. C. White Leghorns Baby Chicks and Hatching Eggs. Pennsylvania State Certified, officially Blood Tested. Chicks made from trapnested 250 to 311-egg dams. Build your pullets from Tancred blood. Tancred Farms, Mt. Middle ville, Pa.

TANCRED WHITE LEGHORN CHICKS.—Individual trapnest records back of every hen on our farm. Every male is pedigreed, every egg set produced on our farm. Prices you can afford. Greenbaum Poultry Farm, Arthurs, Pa.

BABY CHICKS from heavy laying strains of Rocks and Reds, $14.00 per 100. Broiler Rocks, $18.00 per 100; Special Mated, $16.00 per 100 prepaid. Member h

.....Write your own *milk check* this winter

Your milk buyer doesn't really decide the amount of your monthly check—YOU do. All he does is MEASURE the milk. The more cans you send and the better the quality—the bigger your check.

This winter take your milk-income into your own hands. Go after the real profits that come from gearing up your cows to produce MORE MILK. It CAN be done—countless dairymen are doing it winter after winter.

Barn-feeding conditions throw a severe strain on your cows. To be content with providing good feed and housing is to invite losses. Cows get off feed or break down because they cannot convert their rich, dry feeds into a profitable milk flow month after month when so many of the odds are against them. Every pound of feed that fails to register in the milk pail is money lost.

Kow-Kare Steps Up Digestion and Assimilation

This time-tested product is not a food. It is scientifically designed to aid the cow in converting her regular diet into the fullest milk-yield—without food waste. It absorbs the heavy strain of forced production—keeps your cows vigorous and healthy. A balanced blend of Iron, the great builder and blood purifier, combined with potent medicinal herbs and roots enables winter-fed cows to convert the heavy, dry foods—produce more milk—*and do it safely.*

Regular Kow-Kare conditioning costs but a few cents per month per cow—and this slight cost is returned many times over. It is a fact you can test in your own herd with convincing results.



To Condition Cows Before Calving

—use Kow-Kare with feed a few weeks before and after the freshening period. Its vitalizing action on the reproductive organs has been acknowledged for over thirty years. No cow should freshen without this aid. It assists Nature in functioning properly and avoiding expensive troubles.

Feed dealers, drug, hardware and general stores have Kow-Kare—$1.25 and 65c sizes. Sent postpaid if your dealer is not supplied.

Home-mix your own Complete Mineral

A mineral mixture of recognized conditioning value is made by mixing 30 lbs. salt, 30 lbs. fine-ground limestone, 30 lbs. steamed bone meal and four cans (large) Kow-Kare. For well under $6 per hundred you will have an unbeatable mineral. Use 80 lbs. of this mixture to a ton of grain.

KOW-KARE

Builder of Milk-giving Vigor

Use BAG BALM for the Udder and Teats

—a wonderful healing ointment, soothing and penetrating. Clean and pleasant to use—cannot taint the milk. No equal for Caked Bag, scratches, cuts, chaps, etc. Big 10-ounce package, 60c. Be sure to insist on BAG BALM; beware of cheap imitations in similar-style packages.



FREE Book on Dairying

Our new book, "More Milk From the Cows You Have," is now ready. Profusely illustrated, and valuable to every cow owner because of its general dairy information. Send for copy today to

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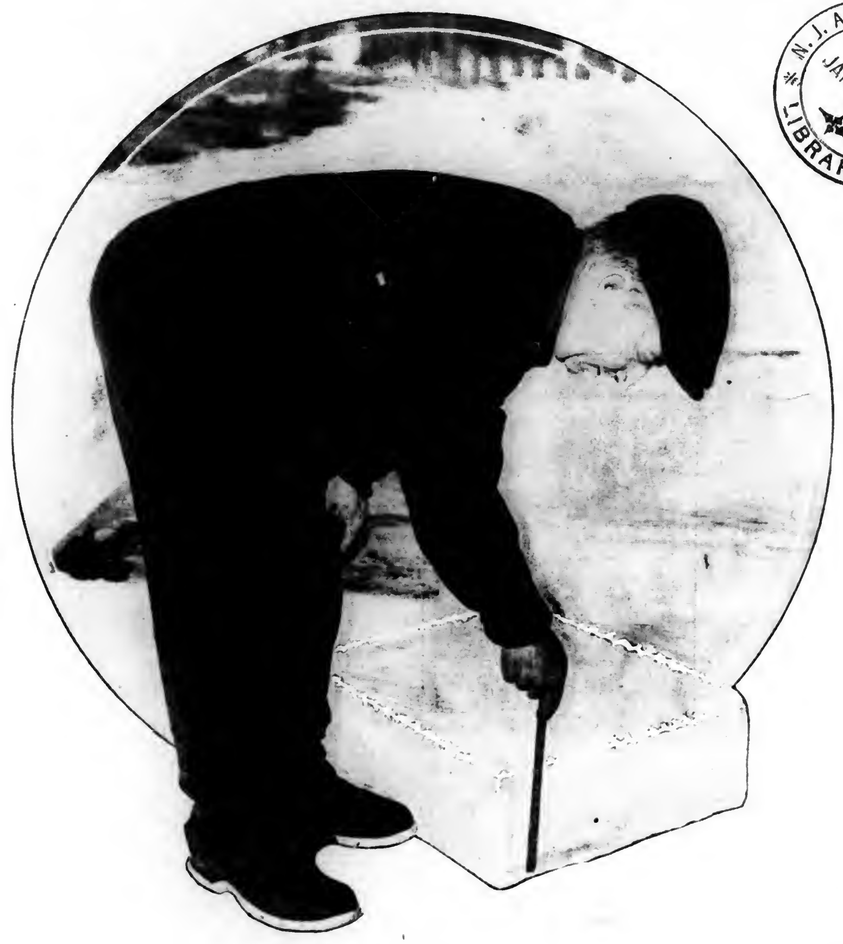
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January 19, 1929

Established 1877

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Pittsburgh *Harrisburg* *Philadelphia*



This 20-year-old apple tree in Mr. Blakslee's orchard, Medina, Ohio, has borne a 50-bushel crop.

FEED YOUR APPLE TREES
—and they will feed you

MR. ELIHU BLAKSLEE, Medina, Ohio, firmly believes that a generous application of available nitrogen annually enables apple trees to produce a good crop every year—instead of every other year when prices are low.

And records prove that Mr. Blakslee is right. Every year since 1921 when his orchard came into bearing, he has had a good crop. On two consecutive years Mr. Blakslee's 40-acre orchard has yielded about 20,000 bushels a year. One of his 20-year old York Imperial trees has borne a 50-bushel crop.

Mr. Blakslee is a consistent user of Arcadian Sulphate of Ammonia and his apple trees, like any other growing plant, respond to liberal applications of available nitrogen plant food.

✓

513 BUSHELS
14-year record for one tree —

IN the orchard of J. E. Thornburg & Son, Ashland, O., is a 33-year-old Grimes tree fertilized with Arcadian Sulphate of Ammonia which has borne 513 bushels of apples in 14 years—*an average of over 36 bushels per year.*

Reports like this coming from all parts of the apple growing sections, prove conclusively that it pays to fertilize apple orchards with Arcadian Sulphate of Ammonia. Try Arcadian on your own trees. Our free booklet, "Arcadian Sulphate of Ammonia in the Apple Orchard," tells you how. Mail the coupon for your copy.

ARCADIAN
Reg. U.S. Pat. Off.
Sulphate of Ammonia
The Barrett Company

Agricultural Bureau
New York, N. Y. Atlanta, Ga. Cleveland, O. Norfolk, Va.
Memphis, Tenn. San Francisco, Cal. Toronto, Ont.

The Barrett Company (address nearest office) N-3-29 N.C.
Please send me free copy of "Arcadian Sulphate of Ammonia in the Apple Orchard." I am especially interested in.....
(If you name, of crops on line above)
Also send me sample package of Arcadian Sulphate of Ammonia.
Name.....
Address.....
KINDLY PRINT NAME AND ADDRESS

Time to Plant
and the best varieties of Vegetables—
Free Flower Seed Collections
And how to get them—are told in the Golden Anniversary Catalog of
WOOD'S SEEDS
Write for your copy today.
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Seedsmen Since 1879,
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Record Garden Yields
Make Big and Sure Profits
The demand for health-giving vegetables is growing; wayside markets open new opportunities for quick, profitable sales. Use
Isbell's Golden Jubilee Seed Annual
for your guide. It is brimful of useful information—tells how and when to plant for best results—over 400 true-to-nature illustrations—28 pages in natural colors.
Raise vegetables, rich in vitamines for health and profit. Raise flowers for beauty and pleasure. Isbell's northern-grown seeds are dependable, hardy and mature early.
Write Today!
A post card will bring your copy of Isbell's Seed Annual, quoting direct-from-grower prices on farm, vegetable and flower seeds. It's Free.
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Trucks—Wagons
ELECTRIC Steel or Wood Wheels are built to fit *any* skein or axle. ELECTRIC Low Wheel Handy Farm Trucks save high lifts. Free catalog describes Wheels, Farm Trucks, Wagons and Trailers for all purposes.
Write for it today.
ELECTRIC WHEEL CO.
68 Elm St. Quincy, Ill.

LITTLE WONDER DITCHER
L. W. SALES CO.
BOX 101 BELLEVUE, OHIO

Farm Facts and Fancies

By ALVA AGEE

ONE may give his mind a bit of exercise in recalling the big part played by individual and group self-interest in the advance steps taken by the world. If he mentioned certain instances, he would only stir up criticism. He could not wisely recall the difficulties of New England industry in using paid labor to compete with the South's slave labor—a substantial economic trouble that aided the great abolitionists in their service to humanity. All along the line to the bread-winning laborer an intelligent personal self-interest is the chief factor in the climb we are making.

We can claim as a fact that selfishness is not a dominant power in the lives of some. I have been reading a life of Horace Greeley, whom I greatly admire, and the author rightly keeps before us the willingness of the man to say and to do what he regarded as best for his country in the face of evident personal loss for the time being. But the rule is that progress is tied up with some individual or group interest.

The Need of Advertising

I read advertisements for their educational value. In every-day farming we should be far behind where we are if our manufacturers of farm equipment, of commercial fertilizers, of good livestock, of farm-home betterment, had not been hammering away at us for a long time. The front line of our progress does not stay even because there cannot well be as much self-interest in pushing some things as others.

Take drainage and lime for example, or take manure and clover. If any one of these four were in the hands of a great corporation, there would be full pages of advertising before our eyes all the time to make us sit up and take notice. Each one would rightly have big headlines and, well as we know them, their value would bulk a lot larger in our minds. A small royalty, payable to a corporation for the right to use legumes, or manure, or drain tile, or lime, would give the corporation such incentive to advertise its value that we should be stirred to far greater appreciation.

An Example of a Winning

Our older readers remember the persistent advertising done by the German Kali people, calling attention to the need of applications of potash. They made heavy annual appropriations for the education of the farming public, going at the matter in their thorough German way. I was a disbeliever in those days, having a notion that the most of our soils were well supplied with potash, and I reckoned that much money was being wasted in demonstrations outside of some sandy districts.

Some good station authorities went slow in advising much investment in potash where the manner of farming was good. And yet today nearly every standard formula, recommended by stations and fertilizer companies, contains potash as surely as nitrogen. Publicity—constant publicity—put the truth into our consciousness far more quickly than could have been the case if no one had had anything to sell.

A Wide-Spread Need

All of us have been right in saying that the first need of almost any poor soil is phosphorus. We can take that for granted. We know that the need of lime is becoming well nigh universal in the Mississippi Valley, and in greater degree in the state east of that valley. We know that phosphorus and lime help to grow legumes that furnish nitrogen.

All that teaching is sound enough, but the greater part of all this territory does not grow plants with sufficient's broad and dark-green leaves and that means a short supply of available nitrogen. This is within the experience and observation of nearly every reader. Nitrogen is hard to get and hard to hold, and it is the rule that plants do not have a fair chance.

Synthetic Nitrogen

I am reading with interest all the manufacturers of synthetic nitrogen are saying. Facilities for manufacturing are increasing. Fertilizer companies are using their goods, and more nitrogen is getting into the ground. It is a reasonable presumption that our needed supplies along this line will grow cheaper in price as manufacturing facilities expand, and that helps to make the subject interesting.

The day is on the way, I reckon, when there will be less reason for pale and stunted plants. Anyway, I read what they tell us, not that I need to be convinced that synthetic nitrogen is good but that I foresee in the rapid development of this new industry a natural lowering of prices to follow that will let all farmers feel that they are justified in buying all the nitrogen that manure and legumes do not furnish. It is a reasonable expectation, judging by the history of other industries. Plants dwarfed by hunger do not hearten a farmer.

A Bit of Good Publicity

The only good advertisement is the convincing one. When we wanted to spend two or three weeks in Pasadena, California, we chose the time in which the annual rose tournament is held. During the last forty years Southern California has been demonstrating the attractiveness of her climate by staging a display of flowers on New Years Day. This year the eighty floats carrying fresh-cut flowers in artistic designs of wonderful beauty were seen by several hundreds of thousands of visitors to the city, massed on the sides of the streets. So it is every year. One float carried flowers worth two thousand dollars, and many others were about as attractive.

This annual spectacle pays in the pleasure it gives the public, and it gives a good sort of education. I would not detract by placing emphasis on financial gain, but I wanted to mention it as an example of a successful form of publicity. Climate is the greatest asset of this semi-tropical region. A procession, miles long, of artistic designs worked out in fresh flowers on New Years Day is something no eastern visitor can question. It is convincing publicity.

When Doctors Disagree

I FIRST read your paper as it came to the home of Campbell Bros., Linden, Pa. For the past eleven years I have been a subscriber myself.

I do general farming, but my greatest interest is in cows, potatoes and soil improvement. I am raising some sweet clover and find that it will not grow on my land unless lime or hardwood ashes is put on. My land is red shale hill land.

I also have some pure-bred Milking Shorthorns. Brother Lighty does not seem to care for dual-purpose cattle and sweet clover, but I will forgive him for that, as he seems to know lots of other things.

I think one of the best features of your paper is where you print letters from men traveling in foreign countries who can and do describe people and customs that are strange but interesting to us who may never be able to travel in those lands.

I think this is the first letter I have written, except to send in my subscription, but if Zinn and Lighty don agree on the merits of sweet clover better I will have to write again.

Frank W. Campbell.

Lycoming county, Pa.

$1125.00
F. O. B. Peoria Illinois

The price of the new Model Ten "Caterpillar" Tractor

Little brother to the big "Caterpillar," a sturdy new track-type tractor in a smaller size! Balanced power and traction...a 14 h.p. engine delivering 10 h.p. at the drawbar...destined to bring "Caterpillar" fame to thousands of smaller farms and to new users in industry!

With a track that bridges soft going (and without packing)...with all "Caterpillar" qualities of ruggedness and dependability.

CATERPILLAR TRACTOR CO.
Executive Offices: San Leandro, California, U. S. A.
New York Office: 50 Church Street
Sales Offices and Factories:
Peoria, Illinois San Leandro, California

CATERPILLAR
REG. U.S. PAT. OFF.
TRACTOR

THE NEW MODEL TEN





THE little additional cost of Mapes Manures is returned to you many times over in crops of better quality which bring better prices.

Since 1847, it has been a guiding principle in the making of Mapes Manures that the crop can tell the value of fertilizing materials better than the chemical laboratory. We go to the crop; we ask it what materials it likes best; we put these materials into Mapes Manures.

Two fertilizers of the same analysis may give widely different results because of the difference in materials from which they are compounded. Mapes results are so remarkable, so outstanding, so evident, that you have only to see them to be convinced. Mapes Manures "cost little more—worth much more." They are first made right, then priced as low as possible.

Try Mapes this year. Compare the results—yield, quality, profits—with the results from any other fertilizer you can buy. Write today for list of crop brands and prices—also for Special Trial Offer.

Test If Yourself for YIELD·QUALITY PROFITS

The Mapes Formula and Peruvian Guano Co., Dept. P-3
270 Madison Ave., New York, N. Y.

Without obligating me in any way, please send me your list of crop brands and prices, and Special Trial Offer.

I use.....tons of fertilizer on the following crops:.....

.....

My Name is .....

P.O.....State.....

MAPES Manures

cost little more ~ worth much more

LIVERMORE'S PEDIGREED SEEDS

Potatoes - Oats - Barley - Peas
Corn - Cabbage - etc.

From HIGH YIELDING TESTED STRAINS. Inspected for disease-freedom and purity.
Write for catalog and prices
K. C. LIVERMORE, Box P HONEOYE FALLS, N. Y.

Quaker Hill Farm

Agricultural Lime

Hydrated
Ground Burned
Burned Lump

Our lime, burned from Western Pennsylvania high-calcium grey limestone and sold in these three forms for the past 18 years, represents the standard, unfailing and economical method of sweetening the soil. The wonderful results enjoyed by our many customers over this period of time prove these facts. Can anyone afford to waste both time and money by using substitutes? If your dealer cannot furnish our Agricultural Lime write to us for prices.
Rose Point Stone & Lime Co., New Castle, Pa.

BOLENS GARDEN TRACTOR



Does Garden Plowing, Harrowing, Seeding, Cultivating, Spraying and Lawn Mowing—Also mows hay, weeds and other tall growth. Attachments instantly interchangeable. New improved Tools, Arched Axle, Tool Control, Power Turn, Snappy Powerful Motor, Pulley for Belt Work, and many other features that solved the problem of thousands of gardeners, florists, poultrymen, nurserymen and suburban farmers. Time Payment Plan. Write GILSON MFG. CO., 832 Park St., Port Washington, Wis.

SCOTTS SWEET CLOVER

The Universal Plant—Grows Anywhere

Builds up worn-out pastures and meadows. Adapted to any climate; resistant to weeds; will furnish five times more pasture than the ordinary mixed grasses; thrives well during the hot, dry summer months. Now one-third the price of Red Clover. Write for free copy of our new Seed Guide, the best book we have ever offered. Tells how to avoid weeds.

O. M. SCOTT & SONS CO.
Dept. 307 *We Pay the Freight* Marysville, Ohio

Dempwolf's Fertilizers for A Better Yield in Every Field



No investment you can make is so sure to pay profit. Its as money spent on fertilizers of known quality.

Dempwolf Fertilizers save labor because they furnish correctly balanced plant food which is easily applied. Fewer acres, properly fertilized, yield bigger profits than greater acreage with skimped fertilization.

York Chemical Works
York, Pa.

TODAY WRITE US

BE SURE TO SAY "I saw your advertisement in Pennsylvania Farmer" when writing advertisers.

NESHAMINY GARDENS

By R. P. KESTER

BECAUSE of my complaints about sweet corn not producing well last year, the manufacturers of a seed treating dust sent me a package of their product recently with the recommendation to try it next year and note results. I shall be more than glad to experiment with this treatment. Many of the diseases which affect and often destroy plants are carried over on seed, and in some cases the treatment of seed for their control has become an established practice. Seed potatoes can now be freed of the scab spores before planting, so why may we not hope for other equally valuable findings?

* * *

Of course some of the worst troubles live over in the soil and in left-over vegetation. At present there is no practical way of destroying spores or germs on so vast a scale as soil treatment that is economically possible in field practice. The best we can do is to combat them by spraying the growing plants. A scientist said recently that mankind's real battle in the future would be in the warfare on insect life. Possibly he included in his mind the ever increasing number of microscopical lives known as bacteria and germs. If this be true, and the evidence is that all these things are rapidly increasing, it is evident that future farmers must be fully equipped with scientific knowledge and practical training.

* * *

If the greatest concern of future generations will be how they may overcome natural enemies and secure a living from the earth, should we not be giving more attention to such things in our educational system? Shall we continue to emphasize and teach the things now popular and disregard the more vital subjects? An intelligent farmer father said in my hearing recently: "My son has just graduated from a costly high school with honors. He is fitted to go into a bank, a commuting house, or a big business office and succeed; but he knows no more than he did ten years ago about the garden, the dairy, or the peach orchard."

* * *

Our strawberry bed goes into winter in better condition than usual. It was fairly free from weeds at the end of the growing season, the rows are practically full of vigorous plants, and they are well mulched with strawy manure. The strawy manure cost more than pure straw would have done, but we figured that the benefits to the soil would offset the difference. This is the first time we have applied a mulch to our strawberries in winter and we shall note the difference, if any. We have always had good yields without mulching, but our soil does not heave plants by alternate freezing and thawing, as is done in more clayey ground. But mulching serves a good purpose in keeping the berries free from sand and grit.

* * *

I am trying to work out an economical plan for mulching tomato vines before the tomatoes begin to ripen. We have found that wiping tomatoes to free them from mud or sand is a tedious process. A mulch would have to be applied before the vines lie down, but after cultivation ceases. Clean straw would be ideal material, but it would be difficult to apply to tomatoes. A sown crop, such as oats, sown under and around the plants would serve, but a growing crop would take moisture needed by the tomatoes. Another plan would be the use of mulching paper cut in sizes to fit the space covered by the plant. Suggestions from others would be appreciated.

* * *

The advertising of mulching paper, and the published results of experiments made by the Department of Agriculture, is creating considerable interest among vegetable growers. Revolutionary as such a proposition seems to be, it is worthy of serious consideration by those who raise crops on which an experiment could be made. The successful farmer, and especially the fruit and vegetable grower, has two vital and ever-present problems:—the conservation of moisture and the prevention of weed growth. Success depends on the successful solution of both these questions. Will the use of mulch paper be the answer?

* * *

Seed, fruit and plant catalogues are coming in and they furnish the interested farmer with much profitable information,—and some amusement. But if one compares present-day catalogues with those of twenty years ago he will see a wonderful change for the better in the character of the descriptions and claims made. In the catalogues of the better firms there is an honest effort made to tell the exact truth about varieties. Of course, it is understood that the reader must use judgment in interpreting and selecting, since differences in soil, climate and location have an important bearing on performance.

* * *

One hears a great deal about rural electrification and just rates to farmers. In the beginning of electrical extension there was a lack of data and definite knowledge as to what was a proper basis for rates. But much progress has been made in the last three years. The development of the industry has greatly increased knowledge on both sides and rural electrification is being extended as fast as possible. We have had our contract revised three times in two years at Neshaminy Gardens, and each time we have been the gainers.

Friendly Talks

By Edgar L. Vincent

ALAN I know never is quite happy unless he is working for a prize of one kind or another. He watches the papers and magazines for offers of this kind and never fails to tackle them, whether he knows anything about the particular subject involved or not. I never knew of his winning a prize of any sort, but he has the joy of working out the stipulated problem, which seems to afford him a great deal of satisfaction.

But there is another field in which this farmer is a good deal more successful than he has been thus far in working out magazine prize problems. Every year he sets himself a big job of some kind. It may be to improve his dock of hens, or possibly to grow a bigger or better crop of some kind. Whatever it is, he puts the very best there is in him into the accomplishment of his desired object. He never is happier than when he succeeds in beating himself along some of these lines.

And this makes our friend a first-rate farmer. It places him in the front rank in his particular line of industry. It does for him what none of the prize puzzles has done; it puts some money into his pocket for the better crops he grows, and it brings him a joy he could not otherwise know.

It does more than that. It makes him a benefactor of mankind; for it is a fact that no man can grow a better crop and not inspire his fellows to finer service. The better furrow he plows, the better will be the furrows of his neighbors.

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Modern Farm Problems in the Ancient World

By K. E. EVANS

IN the mediaeval miracle plays Noah and his Ark and Mrs. Noah, who didn't care to go sailing in it, were perennial sources of mirth. But a real flood is no laughing matter as many a peasant knew then and many an American farmer has learned since.

When the off-shore wind piled up the sea against the Friesland dikes and the tide lent its power till at last the earthen ramparts yielded—vividly Kipling's lines bring out the peril:

"At the bridge of the lower saltings the cattle gather and blare,
Roused by the feet of running men, dazed by the lantern's glare.
Unbar and let them away for their lives—the levels drown as they stand
Where the flood-wash forces the sluices back, and the ditches deliver inland.

"Ninefold deep to the top of the dikes the galloping breakers stride,
And their overcarried spray is a sea, a sea on the landward side.
Coming, like stallions they paw with their hoofs, going they snatch with their teeth,
Till the bents and the furze and the sand are dragged out, and the old-time hurdles beneath."

While what followed further inland across the polders (or meadows)—we see it in Jean Ingelow's quaintly sad verse:

"So farre, so faste the eygre drave
The heart had scarcely time to beat
Before a shallow, seething wave
Sobbed in the grasses at our feet.
The feet had hardly time to flee
Before it brake against the knee,
And all the world was in the sea."

Thus when the ocean breaks its bounds. Yet the revolt of a great river like the Mississippi, if less dramatic in its suddenness, is scarcely less destructive. Men watch it day by day as it sullenly rises from its bed. The snow and rain of half a continent behind them, slowly but steadily its swollen waters creep up the levees, inch by inch, foot by foot; lap the sand-bags with which feverish hands have crowned them. At length, seeping through underneath, crawling over the top, the river wins. The barriers sag, crumble here—and there. With increasing volume a yellow tide pours in over the fields, spreads out further and further, submerges fences and highways, creeps around the barns, climbs the doorsteps of the houses, the stairways, sweeps the out-buildings away, perhaps the dwellings too if not well moored, blots out the familiar landmarks—till where yesterday were prosperous farms and genial villages now the birds look down on wandering roof-tops and desolation.

No wonder that with the memories of 1927 still fresh, the problem of "flood control" has become one of nation-wide interest and importance. Yet the problem is not new here (in 1913 the flood damage was some $160,000,000) and is more than old in the world. 'Tis, indeed, one of the oldest problems, woven into the very beginnings of organized agriculture, entwined with its development. Long before the time of Noah, perhaps, men faced it very seriously. At least we turn back to the old Chaldean stories and read how Uta-Napishtim built a ship. That account is probably the highly poetic description of a great flood which some 5,000 odd years ago swept the Tigris-Euphrates valley, and perhaps left parts of it half desolate, if not submerged, for a century or more.



(Photos by H. R. Smalley)



Wind and Water Are Made to Serve Agriculture in Holland. The Dutch Farmer Shown in the Lower Picture Is Hauling a Boatload of Black Soil—Probably for Use in a Greenhouse. Above Is Shown a Dutch Windmill.

Back in the highlands of Armenia two great rivers found their sources, the Euphrates, and east of it the Tigris. Emerging from the mountains, they flowed in a general southeasterly direction for some thousand miles to enter (by separate mouths then) the Persian Gulf. In the upper reaches of the rivers their currents were fairly swift, and their rather narrow valleys not especially favorable for farming.

Lower down, however, the last four or five hundred miles, it was different. Though there were mountains to the northeast, adding their tributaries to the Tigris, the immediate country flattened out. Now thirty-five, now a hundred miles apart, the two streams wound more calmly back and forth through a great plain. And the soil between them, a light calcareous loam (about 12 per cent lime carbonate according to recent tests) was very fertile, or could be made so if properly irrigated, for the rainfall averaged only, say, from three to ten inches annually. The temperature, judging from today, rose to 50, 60 or 65 degrees Fahrenheit in January, and sometimes to 118 in August.

Into this genial plain perhaps 7,000 years ago descended some settlers from the hill country of Elam. Were they farmers? Possibly already in a very small way. They had passed or were passing out of the hunting stage, that is; had learned, though rather recently, as history measures time, that seeds covered over in the earth would develop into fresh plants. At least that great, "revolutionary" discovery seems to have been first made, or perhaps first "pushed", about this time somewhere in southwestern Asia (made by a woman possibly), and was tried out in the "valley of the two rivers", if not by those first settlers, then by the Arcadians and Sumerians who soon followed them.

To what race did these peoples belong? Probably the Accadians at the North were Semites, akin to the Arabs. Possibly the Sumerians, close to what was then the head of the Persian Gulf, were of Mongoloid stock. While those first immigrants—? Their pottery, with its simple, brown patterns, is of a type found in scattered sites from Thessaly to Turkestan.

More important here to note that, while they worked in metals, they had few domestic animals, save probably the omnipresent dog. At the outset any plowing would be by hand. However, they came down from their hills, and the others moved in a little later; and, since isolated farms were "unhealthy" in those days, on such mounds as they could find or rear they built the mud-walled villages, which were to grow into brick-walled cities. Then "the furniture in place," so to speak, they shouldered their few, rude tools, took their sacks of millet and barley, and perhaps of wheat, and trudged out into the fields.

And there they were confronted by the river or rivers. Late in the spring, though not quite at the same time, both came flooding down with their burden of silt, gnawing or submerging their banks as they passed, or sometimes paused. (The Euphrates indeed, did not finally drop till September). What should the new farmers do? Raise levees and speed the river on? Pray them not to drop their load till they had reached the Gulf (today a hundred miles further away)? Ah, but the rainfall was usually light, and the summer sun was very hot, might turn their fields into a desert. Without caring to do their planting from boats, they needed some of that water themselves.

'Twas a double problem, that is, one of drainage and of irrigation. And though they may have failed at first, exceptionally heavy rains have forced Uta-Napishtim to turn sailor, still the way they finally solved it is the glory of Chaldea for two thousand years. Heads were used as well as hands. Engineers made surveys. A net-work of waterways large and small united the two rivers and drained and [illegible] the land.

Smile at their buckets and primitive [illegible]-wheels, would we? But look at their ditches [illegible] harvests. It was the pride of the city rulers [illegible] new canals and reservoirs. Ur-Engur, king [illegible] cutting one "made its basin equal to the water[illegible]he sea." Sinidinnam of Larsa "cut the Tigris, [illegible]d river and procured good water unfailing fe[illegible]ity and his land." Thus run the (Continued [illegible]ge 24.)

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FARES TO FARM PRODUCTS SHOW

REDUCED fares to the State Farm Products Show, to be held at Harrisburg next week, have been granted by railroads. County agents can furnish the required certificates and information about their use. These lower fares are another inducement to attend the Show, which comes at a time when farm work is in best condition to get along without the boss for a few days.

PAPER MILK BOTTLES

A COMPETITOR to the time-honored milk bottle has made its appearance in New York City. It is a sealed paper container which one of the distributing companies is trying out as a possible means of saving some of the $2,500,000 bill for lost, stolen or broken milk bottles in that city annually. The price of milk to the consumer is the same in paper as in glass bottles, and the hoped-for economy will depend on whether the new container becomes popular enough with the public to warrant mass production. This popularity might be enhanced by an opening arrangement whereby the buyer could get at the contents without inviting a milk bath.

TENACITY OF WEED SEEDS

THE perversity of weeds has become proverbial, and it is interesting but hardly astonishing to learn that a seed analyst found pigweed seeds buried 40 years able to germinate 68 per cent. Seeds of the evening primrose germinated 40 per cent, but some grasses and cockle did not grow after five years. However, these long interred sources of weed trouble are not the ones which worry the farmer. It is the supply in the surface soil from recent crops which makes the perennial problem, and about the only way to deal with it is to destroy the plants before they produce seeds.

CORN TYPE AND YIELD

MANY close and sometimes financially interested observers will agree that one cannot tell how fast a horse can trot by looking at it, and we all know how unreliable the eye is in picking the highest-producing cow in a herd. Now comes a professor to say that corn is equally deceptive, in that appearance of ear is not an infallible proof of yield. In a three-year test the shapely ears with well-filled tips and butts did not live up to expectations. In fact the group of ears selected by a dozen prominent corn judges and seed corn men as the highest probable yielders showed an average yield of only six bushels above the lowest group. The conclusion is that with corn, as with animals, breeding for production is the surest way of getting it.

BACK TO WORK

MANY union coal miners in the strike area around Pittsburgh have returned to work. Company houses, boarded up since the strike began on April 1, 1927, are being occupied by the families of skilled workmen who, while remaining loyal to union ideals, have found it expedient to return to work. Again we have an illustration of the futility of demanding more than market conditions can pay for a commodity, and if this principle could be kept in mind when evolving schemes to establish artificial prices for farmers, miners or any other class, it would save a lot of time, money and in some cases suffering.

NO INCOME

FORTY-FOUR per cent of the corporations sending in returns for 1927 reported no income, according to figures for that year recently made public by the Bureau of Internal Revenue. This does not mean that business is going to the dogs, for the income of money-making concerns was three and one-half times the deficits of the money-losers. Other years tell a similar story, no-income companies being 41 and 43 per cent of the total in 1925 and 1926, and 52 per cent in 1921. Any one can go into business and the competition is keen, with the result that many fail. There is no consolation in this for anybody, but it shows that the popular conception of corporations being sure winners while farming is an especially risky business is a delusion.

CORN BORER PROGRAM

COMPULSORY clean-up measures as a means of corn-borer control will probably be discarded this year. The break in the clean-up program last year, the impracticability of enforcing clean-up under existing state laws and the slight chance of getting the money anyway led the third annual corn-borer conference at Washington, D. C., the fore part of this month to favor the continuance of appropriation for research, education and quarantine, but no large federal appropriation for compulsory clean-up. A research program was outlined by the U. S. Department of Agriculture, and seven states will carry on research work. In other words, the work will continue as it has been during the past year, and farmers who practice clean culture methods for themselves, as they have in Pennsylvania, will be farther ahead than those who look to the government to keep the borer away from them.

REPORT ON DEER

DURING the past season 25,097 legal and 1,593 illegal deer were taken in Pennsylvania. This proportion of illegal deer is less than in the regular buck season, according to Ross L. Leffler, President of the Board of Game Commissioners, who gives the figures in his report to the Governor. It refutes a leading argument of those opposing the open doe season. They might also note a few other facts which Mr. Leffler mentions, among them that no immense slaughter of deer occurred, in fact not enough animals were removed to remedy conditions; that hunting accidents were few, only three men killed; that under present conditions young bucks are not producing good antlers; that due to the unbalanced sexes fawns are produced too late in the season to compete with their elders in securing food, and that the Game Commission is trying to manage the state's wild-life in a scientific and business-like manner.

The deer problem in this state is not solved. It will be with us for some time. The experiment last fall may or may not be the beginning of the solution, but among all remedies and non-remedies proposed it was the most promising, and farmers will appreciate the courage of the Game Commission in carrying it out in the face of serious obstacles and much criticism.

WHEAT CONSUMPTION

IN 1913 the per-capita consumption of wheat was 5.6 bushels and in 1926 it was 4.3 bushels. Senator Nye of North Dakota has introduced a resolution in Congress calling on the Secretary of Agriculture and the Secretary of Commerce to investigate the situation, with special attention as to whether bleaching flour is responsible for the decline. The decrease, which amounts to around 80 one-pound loaves of bread per person in a year, is no inconsiderable quantity. If the causes of decreases in certain food consumption could be definitely detected they might give us some interesting information. It would be interesting to know how effective "eat-more" campaigns are, and if they exert influence in increasing the consumption of some things at the expense of others. It would be interesting also to know what causes the fads and changes of fashion in eating, whether price, health, taste or convenience is the most important.

A BELLIGERENT BULL

FOR several weeks no accidents due to bulls have come to our attention, but last week a particularly vicious animal placed James Depew, a farmer living near Newton, N. J., in the hospital with a fractured skull and ribs, a punctured right arm and other injuries. The press account of this attack gives no indication of the cause, but states that two pitchforks were broken on the bull with no effect other than to draw its attention so that the victim could be rescued. When the physician drove up to attend Mr. Depew the bull, which was making short rushes at three men armed with pitchforks, abandoned them and charged his car. The doctor fled into the house, and the bull, unable to get a response out of the automobile, charged a last year's haystack. "The bull kept going," says the report. "Posses of farmers, armed with shotguns and pitchforks found it in the depths of a swamp after a long organized search."

Winter is a good time to keep a close watch on the bull. Other seasons when the same applies are spring, summer and fall.

CONTROLLED PRODUCTION

MANY elaborate plans to promote the prosperity of agriculture are based on the assumption that the individual farmer is too indolent, ignorant or stubborn to shift production according to consumer demand or market conditions. Yet every year we see examples of such shifts made by farmers on their own volition, and effective in checking trends which are or promise to be costly. We may criticise those farmers for increasing number of cows when cows are profitable, or decreasing flocks when sheep don't pay, specializing in spuds when potatoes are high and neglecting orchards when apples fail to show a profit. But the net result of all these changes is a balance, not always ideal, but eventually serviceable. How much better could some official board maintain this balance, and what complications would it encounter if it tried? If it had the wisdom to read the future and the authority to regulate planting it would still have the weather and human nature to contend with, both notoriously contrary. The influence of prices is likely to be more effective than the advice of anybody, and perhaps it is just as well, for those who are anxious to shoulder the responsibility of telling farmers how much to produce might easily find themselves shorn of glory by a hail storm or a big strike.

Eastern Farm Comments

By MILES HORST

THE Pennsylvania Department of Highways, at the suggestion of a number of civic organizations, is considering a general plan of tree and shrub planting along state-owned roads. There are undoubtedly places along our highways that could be made to appear more attractive by proper plantings, but a general scheme of tree planting along these roads has very undesirable features.

We must recognize that today our highways are not only the arteries over which to transport people and products but messages and power as well. Nothing offers bigger obstacles to the extension of telephone and electric lines into a community than two rows of trees on the sides of the road leading into that community. To take these lines off the highways means costly rights-of-way and rural people must pay for them.

Trees are very desirable in their place, but we do not believe that their place is in rows along our highways as we already have in some sections.

* * *

CERTAIN groups of sportsmen want the powers of the Pennsylvania Game Commission more limited than they now are. They are sponsoring legislation to this effect. The basis of their stand is their objection to the open doe season declared by the Commission during 1928. In this move they are showing a short-sighted and selfish spirit.

For twenty-five years the state has vested in the Commission discretionary power to open or close seasons for various kinds of game, to adjust hunting privileges by townships, counties or state-wide, and to increase or decrease game as conditions warranted. Pennsylvania sportsmen enjoy better hunting facilities than do those in any other state. To have carried out a program such as they have would have been impossible by legislation. We need to continue to give them this discretionary power. The experiences of the past year suggest, however, that decision of the Commission should be made early enough so as to give all those concerned time to be heard, so that the wisest course may be followed.

* * *

FOR distinguished service in their homes, in their communities, and in the nation, five rural women of West Virginia will be honored as Master Farm Homemakers at Morgantown, February 7.

West Virginia women receiving this honor last year were: Mrs. E. B. Robinson, Harrison county; Mrs. Iva C. Gould, Upshur county; Mrs. Lenore Brown, Preston county; Mrs. E. F. Bratton, Mercer county; and Mrs. Fenton Gall, Berkeley county.

* * *

MORE than 200 grain and 60 potato exhibits have already been received at Morgantown to be entered in the Corn and Grain Show and the Apple and Potato Show to be held during Farmers' Week, February 4 to 8, according to show officials. There were 174 grain and about 30 potato entries last year.

* * *

SHIPMENTS of the 1928 crop of late potatoes up to January 1st amounted to 26,400 cars less than were shipped to the same date last year. When we couple this fact with that of a larger crop of late potatoes produced in 1928 than in 1927 we must be convinced that a larger supply is still awaiting sale than was the case a year ago. Growers should consider these total stocks in storage seriously when planning the time of selling the stocks still in their hands.

* * *

EVERY so often we experience a barn-burning scare in some community of this state. The latest is now on in Juniata county where eight barns have burned down within the last few months. The loss from the latest fire is estimated at $10,000. Various causes are attributed by authorities to these community disasters, but in this last case no definite cause has been found. These experiences should call the attention of all of us owning barns to the importance of having adequate fire protection.

* * *

THE number of cattle on feed in the Lancaster feeding area comprising 16 counties in southeastern Pennsylvania and two in Maryland is estimated to be 132,000 head. This is 2,000 head more than were fed in the district last year but 6,000 head more than the average of the last five years. The number on feed in the Corn Belt is estimated as three per cent more than last year, while in the western states the estimate is ten per cent under 1928.

* * *

AN unusual class of pure-bred Guernsey bulls will be shown at the Harrisburg show next week. The committee representing the three Guernsey associations covering the state has inspected approximately 100 head in leading Guernsey herds and from them selected 22 head for the show. These breeding animals are accredited to both tuberculosis and abortion and come from cows with advanced registry records ranging from 400 to 800 pounds of butterfat. They can be bought at the show at prices ranging from $150 to $350.

* * *

THE baby beeves fed by thirty-four boys and girls in Mercer county, Pa., were shown and sold last Wednesday at Mercer. The average price for the lot was $14 per cwt. The champion and reserve champion steers were bought by McCann & Company of Pittsburgh at $16.50.

* * *

PENNSYLVANIA as a state fell short this year in the accustomed number of ton litters produced. The summary shows 65 such litters in 1928, compared to 127 last year. The heaviest litter this year was produced by E. N. Wilson of Mercer county; 14 pigs in this litter weighed 3,356 lbs. at six months of age.

Four men produced two-ton litters during the year. They were John S. Redfoot of Stoneboro; C. D. Henry of Newport; G. C. Birdsall of Susquehanna; and Miles Horst of Lebanon.

Connor Bros. of Clarion, and D. H. Strickler of Mifflinburg again produced a ton litter each, making the fifth consecutive year in which these two farmers came through in the state-wide contest.

* * *

APPARENTLY the low prices prevailing in the present potato markets are not worrying Butler county growers. Their annual meeting held at Butler, January 11, was well attended. Their chief interest centered in methods of putting a better potato on the market and in devising schemes of attracting the buyers in nearby centers to their communities. A committee of the association is working on an advertising program and has the promise of the association to support the scheme evolved financially. The association last year bought seed potatoes, spray materials and potato machinery for its members to the amount of $12,000. The significance of this business lay in the savings to the grower and the low overhead involved.

* * *

TWO changes have recently been made in the State College extension force. C. P. Lang, an Ohio State graduate and a teacher of vocational agriculture in Ohio for the past eight years, has taken the place of John Ruef as assistant club leader. D. H. Bailey of Minnesota succeeds G. A. Taylor as dairy manufacturing specialist.

* * *

BLOOD will tell in a good livestock breeding program. Here is more evidence of it. Records on 48 bull association sires now being used in Pennsylvania dairy herds show an increase of 28 per cent in milk production and 13½ per cent in butterfat production of their daughters over the dams of these daughters. These association bulls are selected for their inherited ability to transmit milk and butterfat producing qualities to their offspring.

* * *

THE Lebanon County Cow-Testing Association has been in operation but a few months. But the time has been long enough to spot some very high-producing cows. A Guernsey cow in the Whittier herd produced 64.7 lbs. of fat during December. The best milk producer in the association during the month was a registered Holstein owned by H. D. Spitler. Other high producers were found in the herds of the Fairview Farms, Hubert Miller, M. H. Bermetch, Frank Fernsler, Frank Heilman & Son and Jacob Arnold.

* * *

THREE boys from Wayne county will represent Pennsylvania in the junior judging contest to be held in connection with the Madison Square Garden Poultry Show to be held at New York City next week. They are George Schroeder, William Schippers and Robert Fox, all living near Honesdale.

* * *

THE farmers' short course offered at Pennsylvania State College for thirteen weeks each winter has the best attendance this year it has had for many years. Many of the 99 young men enrolled are farmers' sons who have found it impossible to take a two or a four-year course and so are availing themselves of this splendid opportunity to gain technical training of immediate help to them as farmers.

* * *

THE executive committee of the Bradford county Extension Association at its January meeting gave considerable attention to a problem pressing not only in their county but in many others of Pennsylvania. This deals wi the increasing number farms being abandoned. T committee had no defini suggestions but felt rath keenly that here was a pro lem on which the State C lege and the Department Agriculture could well affor to work with the hope evolving some system of far management which would prove practical enough for capital and farmers together to operate them successfully.

* * *

THE Pomona Grange of Elk county has offered $20 as prize money to be given to the winner of an essay contest conducted in that county in the interest of improving farm woodlots.

New Jersey Notes

By G. W. HARRIS

S. P. STABLER, a club boy of Spencerville, Montgomery county, Maryland, was awarded the big-litter silver trophy at the annual banquet of the Maryland Swine Growers' Association held at the Claremont Hotel, Union Stockyards, Baltimore, on January 9th. This cup is given by the Swine Growers' Association to the person growing the best litter in the state during the year.

The prize winner was a litter of ten farrowed by a pure-bred Duroc-Jersey sow. The entire litter was raised and on the 150th day weighed 1,783 pounds. Another litter of nine was entered in the contest by Mr. Stabler and at the end of 150 days weighed 1,111 pounds. These litters were fed for 175 days at a cost of $368.12 and brought a profit of $210.01, including $49 in premiums won at the Rockville Fair. At the Rockville Fair they took first and second litter and first and second fat pen.

* * *

JOHN S. WARD of Leesburg, Va., won a silver pitcher for the best ten ears of corn shown during the annual meetings of the Maryland Farm Bureau Federation and affiliated associations at Baltimore on January 9, 10 and 11. Mrs. E. S. Kaufman of Westover, Maryland, showed the prize exhibit of soy beans.

* * *

THE annual banquet of the Maryland Farm Bureau Federation, held at the Rennert Hotel on January 10, was the high light of the three-day convention at Baltimore. Three hundred and twenty-five Farm Bureau members and wives carried home the message on the art of living, given by Stanley L. Krebs of New York, the speaker of the evening.

Out-of-state speakers at the meetings were: Murray D. Lincoln, Executive Secretary of the Ohio Farm Bureau Federation; John C. Watson, director of the Department of Taxation, Illinois Agricultural Association; Hon. Charles Adkins, of Illinois, who is a member of the House Committee on Agriculture, and M. S. Winder, Executive Secretary of the American Farm Bureau Federation.

Mr. Lincoln urged that cooperative and farm organizations merge their differences if they hope to get legislative recognition and bargaining power. The present farm tax problems were discussed by Mr. Watson, while Mr. Adkins reviewed the farm relief movement up to the present session of Congress.

The Maryland Farm Bureau Federation endorsed a resolution urging the establishment of a trained State Police force throughout the state. At present Maryland has no such organization as is found in many of the nearby states and it is felt that a State Police force would do much in checking farm thieving.

The following officers were reelected for the coming year: James W. Davis, Rocks, Md., president; E. Thomas Massey, Massey, Md., vice-president; M. Melvin Stewart, secretary-treasurer.

* * *

FARM Inventory Week, which began January 7th, is being held in New Jersey for the first time. The extension service of the College of Agriculture is distributing account books to farmers of the state, and bankers in many sections of New Jersey are cooperating in the project. The account book is large enough to keep a complete record of all business transactions for a year, and instructions for its use are included.

* * *

THE spread of the Mexican bean beetle from a few isolated spots in Maryland in 1927 to widespread damage to the canning crop in 1928 brought forth much discussion of control measures at the annual meeting of the Maryland Vegetable Growers' Association held at Baltimore on January 9th and 10th. That the beetle can be successfully controlled if a thorough dusting with calcium arsenate and lime is started as soon as the beetle appears in the fields was pointed out by Dr. E. M. Cory, the state entomologist.

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The Egg Exhibit at Last Year's State Farm Products Show. A Similar Display Will Feature the Big Show at Harrisburg, January 22-25, 1929.

Pennsylvania's Winter Show

By MILES HORST

THERE is every indication that the Farm Products Show to be held at Harrisburg, January 22 to 25, will bring together the largest and most comprehensive display of farm products, farm machinery and agricultural supplies ever assembled in this state at one time. Twenty-five state-wide farm organizations will hold their annual meetings at Harrisburg during the same week.

The show will cover 145,000 square feet or three and one-half acres. This exceeds last year's show by 15,000 square feet. Although it is still scattered in various buildings, the Commission in charge has succeeded in bringing the units of the coming Show closer together, making it easier for the thousands of visitors to find and to see the various exhibits.

The completion of the Schaeffer Garage on Cameron Street has made available 49,000 square feet in one building. The first floor of this building, where the potato show was held last year, will be devoted to a complete dairy show this year.

Here the Guernsey breeders will show some thirty outstanding young bulls, selected from the best Guernsey herds in Pennsylvania and adjoining states. These bulls can be bought at private sale. The Ayrshire breeders will exhibit twelve heifers of outstanding quality and merit. Both the Holstein and the Jersey breeders will display educational exhibits of their top animals, one in each of the generally accepted classes.

Besides the animal exhibits in this show, will appear a full line of commercial dairy feed and equipment displays.

Fruit and Vegetables

On the second floor of the Schaeffer Garage—a space of 39,000 square feet all in one open room—will appear the complete potato, fruit and vegetable shows. The center of attraction in the potato show is the exhibit of the 696 bushels of potatoes grown on a single acre by H. J. Walton & Sons of Chester county. This is the largest yield ever made in this state on a single acre. There will appear "40 foot of row" exhibits by the "400 bushel" potato growers in the state. The usual peck exhibits in competitive classes will round out the growers' display.

The fruit show, with six county displays as a feature, promises to be up to par and better. The vegetable show has been reinstated after a lapse of four years. Both of these shows are extremely interesting to visitors.

We want, however, to call attention to the commercial displays in connection with the above three named shows. There is no doubt that the Harrisburg Show has come into a unique position among shows held in the East, for it is here that new lines in potato and fruit machinery for the coming year

(Continued on page 10.)

Meetings of Pennsylvania Farm Organizations During Week of State Farm Products Show, Harrisburg, January 22-25

Organization	*Time of Meeting	*Place of Meeting
Joint Meeting, All Associations	Tues., 8:00 p. m.	Chestnut Street Auditorium
Meeting of Young Farmers	Wed., 7:30 p. m.	Chestnut Street Auditorium
Livestock Judging and Sales	Tues., Wed., & Thurs.	Inez Bldg., Republic Truck Bldg.
Berkshire Breeders' Ass'n	Wed., 7:00 p. m.	Odd Fellows Hall
Chester White B'd'rs' Ass'n	Wed., 7:00 p. m.	Odd Fellows Hall
Duroc-Jersey Breeders' Ass'n	Wed., 7:00 p. m.	Odd Fellows Hall
Poland-China Breeders' Ass'n	Wed., 7:00 p. m.	Odd Fellows Hall
Sheep Br'd'rs & Wool Growers	Wed., 12:30 p. m.	Plaza Hotel
Pennsylvania Dairymen's Ass'n	Wed., 9:15, 1:30, 6:30	Masonic Temple
Ayrshire Breeders' Ass'n	Thurs., 12:30 p. m.	University Club
Pa. Guernsey Breeders	Thurs., 12:15 p. m.	Assembly Room, Penn-Harris
Federation of Holstein Clubs	Thurs., 10:00 a. m.	Masonic Temple
Penn'a Jersey Cattle Club	Thurs., 12:30 p. m.	Domestic Science Kitchen
Ass'n of Dairy & Milk Insp'tors	Wed. and Thurs.	Claster Bldg., Public Serv. Com.
State Beekeepers' Ass'n	Wed. and Thurs.	Elk's Home
Entomological Society of Penn'a	Tues., 2:00 p. m.	Room 113, South Office Bldg.
Penn'a Farm Bureau Fed.	Tues., 10 a. m., 2 p. m.	Parlor A, Penn-Harris Hotel
Former State Board of Agr.	Tues., 3 & 5:30 p. m.	Elk's Home
State Horticultural Ass'n	Tues., Wed., & Thurs.	Auditorium, South Office Bldg.
Pa. Vegetable Growers Ass'n	Wed. and Thurs.	State Chamber of Commerce
Pa. Potato Growers' Ass'n	Thurs., 1:30, 6:30, 9:30	Chestnut Street Hall
Joint Com. on Rural Electrif'n	Wed. and Thurs.	Fahnestock Hall
Vocational Program	Wed., 1:00 p. m.	See program, page 24
Boys' and Girls' Club Program	Tues., Wed., & Thurs.	See program, page 25
State Pigeon Ass'n	Wed., 7:30 p. m.	Domestic Science Kitchen
Pa. State Poultry Ass'n	Wed., 9:00, 1:30, 6:30	Ley Studio, Vance Building
Pa. State Baby Chick Ass'n	Wed. and Thurs.	Ley Studio, Vance Building
Soc. of Farm Women of Pa.	Tues. and Wed.	Assembly Room, Penn-Harris
State Ass'n of Markets	Tues., 1:00 p. m.	Chestnut Street Hall
Threshermen & Farmer's Ass'n	Thurs. and Friday	Chestnut Street Hall

(*) At least fifteen of the associations have banquets scheduled for either Tuesday or Wednesday evening. The time and place will be announced in the meeting or can be found in the printed program. Where a meeting is scheduled for noon, it is in all cases a luncheon.



Alfalfa on Woodside Stock Farms, Landisville, Grown from Hoffman's Seed





The Great Factor in Farming

BETTER SEED!

MANY things must the farmer think about when he undertakes to grow a crop. Many factors will take a hand, some within his control and some beyond, and it behooves him to look well to those which he can control.

But in that great factor of successful farming—seed selection—what should he do? Like begets like, and he cannot hope to have a better crop than the seed he plants.

Clover seed, for instance. There's a world of difference in clover seed, and he cannot see it ALL. By careful study he can calculate the proportion of weed-seed and hulls that may be in it. But how can he determine its germination, its adaptability to his soil and climate?

There is but one sure way. Obtain your seed from Master Seedsmen, from men who are seedsmen by profession.

Such problems you may safely leave to the House of Hoffman. On them we spend the entire year—and have done so for 30 years. Thousands upon thousands of farmers have come to know that Hoffman's quality and Hoffman's prices are ALWAYS right.

The Red Clover and Alfalfa which we have secured for our customers this Winter is of known origin, hardiest strains, positively adapted to Pennsylvania and adjoining states. It is bright and plump, cleaned and re-cleaned, top-notch in germination and free of noxious weeds. You will be delighted with it—and more delighted with the crop it brings you.

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Something New!

Hoffman's Bulletins on Better Seeding Methods.

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HOFFMAN'S SEEDS PAY

He Heard a Chicken Squawk

A Bell System Advertisement

One evening between 9 and 10 o'clock a farmer was returning to his home from Sinclairville, New York. He noticed a car parked beside his road and a short time later heard a chicken squawk in the direction of a neighbor's farm. Immediately suspicious, he telephoned the deputy sheriff at Sinclairville who got an assistant and came at once. They caught three men who had chickens in their car. The chickens were identified and the three thieves sent to jail.

The telephone is a timely aid in any emergency. It brings help in time of fire, accident or sickness. Runs useful errands to town and market. Communicates with friends and neighbors. Often pays for itself many times over by finding when and where to buy or sell. A farmer living near Stephenson, Miss., was offered 5c a pound for his calves, but he telephoned another buyer and got 6½c. Saved by telephone, $150.

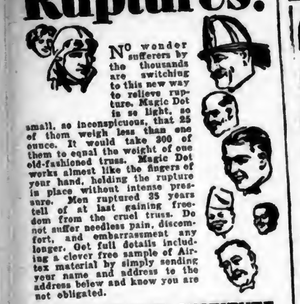
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"FRIEND" MFG. CO., 133 E. Ave., Gasport, N.Y.

Read the advertisements for devices which will help you with the household chores that you dislike most.

Pennsylvania's Farm Show

(Continued from page 5.)

are brought and for the first time. Many dealers hold off in their orders until the whole offering can be seen at this show. As a result manufacturers put forth an exceptional effort to display their complete lines here. This makes it possible for farmers to see the best and all of it at the Harrisburg Show.

Educational Exhibits

In the Schaeffer Garage will also appear the educational exhibits of the Pennsylvania State College, the Department of Agriculture, the Forestry Department, the Game Commission and the Departments of Health and Public Instruction. These are always interesting and instructive.

Let us now go a block west on Cameron Street to the Duco Building where the dairy cattle were shown last year. On the first floor will be shown the hogs, taking in the four leading breeds. The several breeders' associations have again assembled from twenty-five to thirty bred sows and gilts in each breed. These will be judged and later sold at public auction. On this floor a larger judging and sales ring will be available than was the case in former years.

The second floor of this building, 9,000 square feet, will be given over entirely to the corn show. A fifty per cent increase in corn exhibits is promised largely because this year corn can be brought in from the corn-borer infested areas now comprising nearly half of the state. Competition in this show will be extremely keen this year, judging by what we have seen in many of our county corn shows.

Steers, Lambs and Poultry

Right next to the Duco Building is the Felton Building. Here 97 baby beeves fed by as many boys and girls in the counties of Lebanon, Cumberland and Dauphin will occupy the first floor. They will be shown and later sold in the sales ring located in the building next door.

On the second floor of this building will appear the sheep and wool shows brought together for the first time at Harrisburg shows. The sheep exhibits will consist of nineteen pens of fat lambs fed by Center and Washington county boys and girls. They too will be sold

The poultry show has been moved into the Vance Building, the place where the corn was shown last year. This consists of 1,000 coops of chickens and 1,000 coops of pigeons. The poultry display will feature the Rhode Island Red, the Ancona and the Cornish breeds of poultry. Further description of this show appears elsewhere. The better facilities offered by this building have attracted more commercial exhibits of poultry feeds and equipment than have yet appeared at a Harrisburg show.

Farm Machinery

We now come to the Emerson Building where two floors will be crowded with displays. The first will include the extra heavy lines of farm machinery and the second lighter lines of general farm machinery and such horticultural machinery as could not be accommodated in the Schaeffer Garage.

In the Emerson Building will also appear the home economics display. This is a new feature and one of real interest. It will include displays of home canned goods, also of garments made in farm homes.

The egg show will be as large as usual. So will the tobacco and apiary displays. All of them can be found on the second floor of the Emerson Building. On this same floor will appear an exhibit of household appliances adapted to electricity as well as an electric refrigerating plant adapted to the average dairy farm. Nobody interested in using electricity on the farm will want to miss this if he can get to the show at all.

Meetings

So much for the Show. But this is only a part of the activities of the week, for as stated before, twenty-five farm organizations hold their annual meetings during the week. Their programs include necessary business, but most of the time in these meetings is given over to discussions of current problems in Pennsylvania agriculture. For example, 155 speakers are listed on the various programs and they will discuss every problem from A to Z in agriculture, at least they are assigned as wide a range of subjects. Details of the programs of the different groups are in printed form and can be obtained at your local county agent's office or direct from the Pennsylvania Department of Agriculture at Harrisburg.

The eating part of so big an occasion has not been overlooked, for fifteen banquets are scheduled for the week. The time and place also appear on the programs.

We want to call special attention to two outstanding meetings. The one is the Convocation meeting held in the Chestnut Street Hall Tuesday evening. This hall, the largest in Harrisburg, is always filled to overflowing on these occasions. The program this year will again be presided over by the Secretary of Agriculture, Dr. C. G. Jordan. The champion potato grower, the champion egg producer and the champion dairyman in the state will be honored guests. The speakers include President R. D. Hetzel of State College, E. S. Bayard, editor-in-chief of the Pennsylvania Farmer, L. N. Dennis, Director of Vocational Education and E. B. Dorsett, Master of the Pennsylvania State Grange. Music and special stunts will round out the program.

Boys and Girls

On Wednesday evening the boys and girls will, in this same hall, have their big rally. Last year some 1,'00 were present. Their program adapted to young people will be interesting and inspiring.

Just a word about the activities of the boys and girls during the week. The vocational school boys and girls will center their interest in the many demonstration contests arranged for them. Six $100 scholarships will go to the winners. In these demonstrations, various proper practices in the home and on the farm will be shown. They will be found on the second floor of the Schaeffer Garage.

The 4-H Club boys and girls will have charge of the baby beeves and the fat lamb exhibits. The nineteen boys and girls who grew more than 400 bushels of potatoes on their measured acres will be here. Many who can't come will send in potato and corn exhibits for the Junior Department of the show.

The folks in Harrisburg are going out of their way to make the visit of farmers to the Show agreeable. Homes will be thrown open for night lodging. Visitors wanting such accommodations should write to the Secretary of the Harrisburg Chamber of Commerce, Harrisburg, Pa., asking for same and at the same time state what price they wish to pay and how many are in the party.

INWOOD in Berkeley county has been selected for the 36th annual meeting of the West Virginia Horticultural Society, which is to be held January 31, February 1 and 2. The meeting immediately follows the three-day horticultural school at the Inwood Packing House, January 28, 29 and 30.

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SCIENCE has mapped the heavens, charted the seas, explored the mysteries of the human blood. Its discoveries have been applied to everything about you. The clothes you wear, the paint on your house, the watch in your pocket—all have been bettered in some way by science.

There are two kinds of science. One is creative science. It invents ways to do a given thing better. The other kind is the science of efficiency. It takes the invention of the creative scientist and makes it available to everybody—puts theory into practice.

Both kinds have been applied to the production of feeds. As a result, feeding has become the science of animal nutrition. Feed is no longer "fodder"; it has taken on the language of science.

Proteins, fats, carbohydrates, vitamins and minerals—a few years ago these words would have been so much Greek to the average feeder. Now everybody knows them and uses them when discussing feeds. For they are powerful in profit potentialities.

To keep pace with advanced thought in feeding, experimental farms and laboratories must be maintained by manufacturers who wish to assure customers the maximum in profits.

Out of these laboratories have come many of the most revolutionary practices in present day feeding. For instance, it was The Park & Pollard Company who pioneered dry mash feeding—years ago. The use of Iodol Fish Meal as a dairy feed ingredient is also one of the achievements of this company's experimental staff.

And the value of the colleges and experimental stations in placing feeding on a scientific basis cannot be overestimated. The progressive feed manufacturer realizes their value and cooperates with them to the greatest possible extent. He also maintains a bureau where all the information they supply is collated, sifted and assimilated. This meeting of minds safeguards the consumer.

The manufacturer's laboratory also acts as a protection as well as a creative force. For example: A new formula that looks good on paper may not work out when put to the test. A new ingredient that is resultful in certain formulas may actually do harm when added to others. The only sure way to know is to try. And it is far better for the feed manufacturer to do the testing on his experimental farm and in his own laboratories than for the user to be forced to experiment with the feeds in actual practice.

Men with vision and enthusiasm, authorities on animal nutrition, conduct the experimental work of The Park & Pollard Company. Their work is all part of an organized program that means the ultimate in profits to the consumer. The Park & Pollard idea is to aid the user to plumb the profit possibilities of feeding to the utmost. Park & Pollard feeds, with all the service and science behind them, are an expression of that belief. They help to make dairymen and poultrymen prosperous. By doing so, they make the firm of Park & Pollard prosperous.

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Feed those hungry ACRES

They'll pay you back!

PORK CHOPS, crisp, and brown. Plenty of potatoes and other vegetables. A steaming cup of coffee. Then some good old apple pie. Oh Boy!

How fine a fellow feels after a good square meal. How much more work he can do.

Do you know your crops need food to do good work, just as you do?

Chilean Nitrate of Soda is the food your crops need. One good square meal of Chilean Nitrate, and they will do better than they've ever done before. Bigger yield. Better quality. Earlier harvest. Bigger profit. The small cost of this natural nitrogen fertilizer will be returned, many times over.

On corn, truck crops, fruit, small grains, sugar beets· pasture lands, Chilean Nitrate shows amazing increase in yield and quality. Its nitrogen is available at once. You see the good it does quickly, almost from the very start.

More and more farmers are using Chilean Nitrate to increase income from their crops. County agents, experiment stations, agricultural colleges endorse it. It is Nature's own fertilizer—not synthetic, not artificial. Use it this year and make some real money.

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Our new 44 page book "How to Use Chilean Nitrate of Soda", is free. Gives information about fertilizing all crops. Ask for Book No. 1, or tear out this part of this ad and send it to our nearest office with your name and address written on the margin.

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Satisfy yourself as to the dollars I will save you by sending for my big 100-page Out Price Book. Do it NOW—you'll be glad you did.—Jim Brown.

THE BROWN FENCE & WIRE CO.
Cleveland, Ohio
Dept. 2916



Recent Tractor Developments

By R. U. BLASINGAME

I HAD the pleasure of talking before the annual meeting of the Clarion County (Pa.) Agricultural Association, December 20th. I pointed out the developments in the general purpose tractor.

The gas tractor has for the past 12 or 15 years been accepted as an efficient farm tool. However, it had its limitations, especially for planting and cultivating row crops. But the past few years have seen the advent of three different tractors which are very successful at these two jobs, as well as the rest of the field work. And these machines are built by three of the well-known manufacturers. Possibly within the next six months or year another will be on the market. I have seen this tractor and last summer saw two large fields of corn which had been plowed, harrowed, disked, planted and cultivated entirely with the tractor.

Most of these tractors have some means of widening the tread so as to accommodate variation in row width. They are capable of pulling two 14-inch plows, in fact, do the work of the usual run of 9-18 to 10-20 machines. Another unique feature is the way in which the cultivators and planters are being designed, adapted and attached to them. The corn planter consists of two pieces of angle iron for the frame, furrow openers, small press wheels running in each row, the seed and fertilizer boxes, and the necessary chains, sprockets and rods to drive the mechanism.

The planter is attached direct to the tractor and under easy control by the operator from the driver's seat. It consists of far fewer parts than the usual run of two-row horse-drawn planters. On one of these tractors is a three-row outfit. Two of the others may be two-row or four-row, depending on the choice of the purchaser and the character of his land.

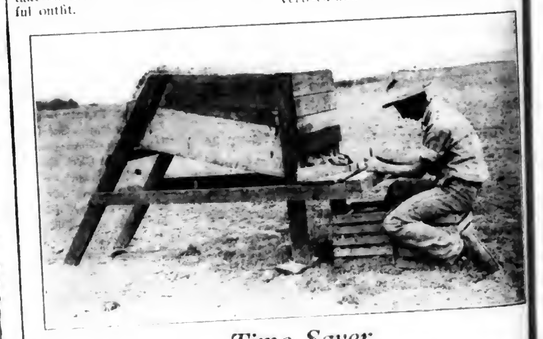
The cultivation arrangement is mounted on the tractor in much the same way as the corn planter. For the eastern country, where stones are prevalent, spring tooth cultivators are being used on at least one of these tractors. This type of cultivator seems to stand the punishment of striking stones somewhat better than the spring trip equipment.

Mower

It is striking the way in which mowers are arranged to go with these general-purpose tractors. The machine consists of a cutter bar, the necessary support to attach it to the tractor, control levers for the operator and a power take-off drive. This is a very successful outfit.

It is difficult to predict the future of the general-purpose tractors. Already they are being used by hundreds of farmers to the entire exclusion of teams. I saw a list of five hundred farmers in the various sections of the United States who have for one or more years employed this type of power entirely on their operations. One manufacturer is now planning on mounting a sprayer on the tractor. The sprayer will consist of only a tank, pump and a spray boom.

At any rate, most of the tools are going to be attached directly on the tractor, making a unit outfit the efficiency of which is going beyond anything known to agriculture to date.



Time Saver

This illustration shows a handy potato cutting outfit. In using a device of this kind one can cut about three times as many seed potatoes in a day as by the old method. It consists merely of a box having an inclined bottom so that the seed potatoes will roll down to a place convenient to the operator. An ordinary butcher knife is sharpened on both edges, and the handle fitted into a hole in a two-by-four across the front of the box. In using this double-edged knife one can cut potatoes very accurately and very rapidly. I have seen a great many of these all about over the state for the past year.

Extravagant Claims

OWNERS of farm lighting plants and other users of storage batteries are regularly exposed to advertisements of preparations which are alleged to put an end to all battery ills. All sorts of extravagant claims are made for these compounds. They are said to lengthen the life of a battery, charge it in a very short time, prevent sulphation, over-heating and over-charging. In short, these mixtures are supposed to make the battery foolproof.

Promoters of products of this type have offered the public both the wet mixture and the dry compound. At present the tendency among them is to advertise the wet mixture or solution. A preparation of this nature is usually placed on the market with the claim that it represents a new, startling and mysterious development in battery engineering.

Much Alike

Investigation of many such compounds and solutions has indicated a similarity of composition in all of them. Much of the mystery in their make-up has been removed through bulletins, reports and printed matter which have been sent to publishers, battery manufacturers and service stations. Glauber salts, Epsom salts, even corn starch have been found by investigators to constitute the principal ingredients in battery charging solutions. The use of Glauber and Epsom salts in battery solutions as charging compounds is as old as the hills and is quite ineffective.

The United States Bureau of Standards has also issued reports on the tests which were made on a number of the preparations which have been advertised and sold in this country. Here is what they have to say about them:

"Comparison was made between batteries containing these solutions and similar batteries containing an electrolyte (solution) of sulphuric acid of equivalent strength. No essential differences were shown in the charging, voltage, efficiency, or temperature. The usual electrolyte of pure sulphuric acid and water, adjusted to the proper specific gravity at the completion of a full charge, is believed to be the best."

No Short Cuts

The National Better Business Bureau has investigated some of these preparations. A printed bulletin on two of these products contains the following comments:

"The tendency of the present age is to look for short cuts but there is no short cut to battery health and battery efficiency any more than there are short cuts to human health and long life. Just as many chronic invalids are exploited by vendors of worthless medical cure-alls, so battery owners are periodically exploited by vendors of alleged remedies for battery ills. And just as the medical panaceas fail to provide an effective substitute for rational habits of life, so 'secret' compounds and electrolytes fail to perform such an office for storage batteries."

ElectrificationExhibit

With over 105,000 rural customers on electric lines of which over 25,000 are farmers and with many more rural people desiring service, the problems pertaining to rural electrification are now of major interest among the country people of Pennsylvania.

In order to make it easy for the thousands of farm show visitors interested in this question to get the answer to their particular problem, the Pennsylvania Joint Committee on Rural Electrification in cooperation with the Farm Products Show Commission is arranging for meetings and demonstrations as follows:

Emerson-Brantingham Building

Rural Electrification Exhibit.—A submerged can type of milk cooling unit of the latest design will be installed with men in charge to explain the construction and operation. An electric milking machine, electric incubators and brooders and electric driven farm work shop tools, will be shown. An adequate wiring system for the farm buildings will be featured. The more important household appliances such as the electric refrigerator, range, washer, mangle iron, suction cleaner, etc., will be in operation.

Rural service men representing the larger electric companies will be present to answer questions as to how to get service, how to wire the buildings for best results and what different equipment will do. Home economics demonstrators will be present to explain the operation and work of the household appliances.

The Pennsylvania State College, under the direction of Prof. R. U. Blasingame, is carrying on some research work with the utility motor. Arrangements have been made to show the progress being made in the use of the utility motor, in feed grinding, wood sawing and silo filling.

Fahnestock Hall, Y. M. C. A. Building

A program will be offered at five different times during which all the operations and details of cooking a farm dinner on an electric range will be demonstrated. While the dinner is cooking, the operations of other household electric appliances will be explained. The sessions will be as follows:

Wednesday, January 23rd, 9:30 to 11:30 a. m., and from 7:30 to 9:30 p. m.

Thursday, January 24th, 9:30 to 11:30 a. m., 1:30 to 3:30 p. m. and 7:30 to 9:30 p. m.

This will be a fine opportunity for the farm women to get the latest details on electrifying the home; there will be opportunity for questions and discussions.

Winter Oil facts for farmers

(No. 10)

If you could listen to the bearings in your automobile engine on zero days



—you would hear how a too-thin oil allows finely adjusted bearing surfaces to grind together.

This costly wear generally comes when you use one of the so-called "winter oils" featured at this time of the year. Such oils do only half the winter lubricating job—they give you quick starting on cold mornings. But when the engine warms up to the usual driving heat, your too-thin oil gets still thinner. Result: before long the wear on bearings and cylinder walls increases rapidly.

Rich oil saves costly wear

Gargoyle Mobiloil Arctic is a winter grade of Mobiloil that does both ends of the winter lubricating job. Mobiloil Arctic has the extreme fluidity that insures a responding spurt of oil to the remotest bearing as soon as you touch your starter. But Mobiloil Arctic also has that rich "oiliness" which enables it to cling to all friction surfaces and pad them against metal-to-metal contact with each other.

Buy Mobiloil this way

For a small supply: 10-gallon steel drums with faucet, 5-gallon cans in easy-tipping racks, and 1-gallon and 1-quart cans.

55-gallon or 30-gallon drums with handy faucet for a large supply. You get a substantial discount with this purchase from the Mobiloil dealer.

Is your car named in the Mobiloil Chart shown on this page? If not, see the complete list of Mobiloil Winter Recommendations for your car, tractor or truck at any Mobiloil dealer's. You are always sure with

Make this chart your guide

The winter recommendations specified on this chart should be followed from freezing (32° F.) to 0° F. Below 0° F. use Gargoyle Mobiloil Arctic (except Ford Model T use "E").

If your car is not listed here, see at your dealer's, the complete Mobiloil Chart, which recommends the correct grades for all cars, trucks, tractors, etc.

NAMES OF PASSENGER CARS	1929 Engine Summer	1929 Engine Winter	1928 Engine Summer	1928 Engine Winter	1927 Engine Summer	1927 Engine Winter	1926 Engine Summer	1926 Engine Winter
Auburn, 6-66	BB	Arc.	BB	Arc.	BB	Arc.	A	Arc.
" 8-cyl.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
" other models	BB	Arc.	BB	Arc.	BB	Arc.	A	Arc.
Buick	BB	Arc.	BB	Arc.	BB	Arc.	BB	Arc.
Cadillac	BB	Arc.	BB	Arc.	BB	Arc.	BB	Arc.
Chandler Special Six	A	Arc.	A	Arc.	A	Arc.	A	Arc.
" other models	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Chevrolet	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Chrysler, 4-cyl.		A		Arc.	A	Arc.	A	Arc.
" Imperial	UB	Arc.	BB	Arc.	A	A	A	A
" other models	A	Arc.	A	Arc.	A	A	A	A
De Soto	A	Arc.						
Dodge Brothers	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Durant	A	Arc.	A	Arc.			A	Arc.
Erskine	A	Arc.	A	Arc.	A	Arc.		
Essex	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Ford, Model A	A	Arc.	A	Arc.				
" Model T					E	E	E	E
Franklin	BB	Arc.	BB	Arc.	BB	BB	BB	BB
Gardner, 8-cyl.	BB	Arc.	BB	Arc.	BB	Arc.	A	Arc.
" other models							A	A
Graham-Paige	BB	Arc.	BB	Arc.				
Hudson	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Hupmobile	BB	Arc.	BB	Arc.	A	Arc.	A	Arc.
La Salle	BB	Arc.	BB	Arc.	BB	Arc.		
Marmon, 8-cyl.	A	Arc.	A	Arc.	A	Arc.		
" other models			BB	A	A	A	A	A
Moon	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Nash, Adv. & Sp. 6	BB	Arc.	BB	Arc.	BB	Arc.	A	Arc.
" other models	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Oakland	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Packard	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Peerless, 72, 90, 91	BB	A	BB	A	BB	A	BB	A
" other models	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Plymouth	A	Arc.						
Pontiac	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Reo	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Stearns Knight, 6-80	BB	Arc.	HB	Arc.				
" other models	BB	A	BB	A	BB	A	BB	A
Studebaker	A	Arc.	A	Arc.	A	Arc.		
Velie, 8-cyl.	BB	Arc.	BB	Arc.				
" 6-cyl.	A	Arc.	A	Arc.	A	Arc.	A	Arc.

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Mobiloil
Look for the red Gargoyle trade-mark on the Mobiloil container

The World's Quality Oil
Mobiloil
VACUUM OIL COMPANY



SYNTHETIC NITROGEN

Nearly two-thirds of the world's annual supply of nitrogen now comes from the air. Converted into mixed fertilizer of average nitrogen content, 4,000,000 five-ton motor trucks, making a train 25,000 miles long, would be required to transport the product.

FROM the inexhaustible air, science now gives you synthetic nitrogen—the greatest practical triumph of modern chemistry. And this air nitrogen is combined directly with other plant-foods to make this modern concentrated fertilizer.

NITROPHOSKA
15-30-15

—the new, air-nitrogen, complete fertilizer—contains three to five times as much plant-food as fertilizers of the usual analysis. It has 60% actual, available plant-food—15% nitrogen (18.2% ammonia), 30% phosphoric acid and 15% potash. One bag goes as far as several bags of regular fertilizer. There is less weight to haul; fewer bags to lift; less bulk to apply—economical and safe.

ONE Bag instead of FOUR

You get 60 pounds of plant-food in every hundred pounds of Nitrophoska—not merely 12 to 20 pounds as in most fertilizers. You save 60 to 80 per cent of the hauling, lifting and applying. Furthermore, the plant-food is in balanced ratio, suitable for corn, potatoes, vegetables and most other crops—available for quick starting, continuous feeding and vigorous growth.

Ask your County Agent, Experiment Station, Auricultural College, or your favorite farm paper about Nitrophoska. Write to us today for free, illustrated booklet. Just use the coupon below. *Your dealer will obtain Nitrophoska for you.*

SYNTHETIC NITROGEN PRODUCTS CORPORATION, 285 Madison Ave., New York, Room 1705

Please send me your illustrated booklet with complete information about Nitrophoska.

My dealer's name is _____

His post-office is _____ State _____

My name is _____

My post-office is _____ State _____

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Use MORE NITROGEN for MORE PROFIT

GIGANTIC-DELICIOUS

New Tomato ~



Giant of them all, yet perfect in form and quality. Single fruit makes platterful of enormous slices—thick, firm, tender and almost without seeds. Temptingly colored and with that refreshing tomato flavor you like so well.

"HEAVIEST CROPPER OF ALL NUMBERS WEIGHED 2 to 2 1-2 LBS."

—writes E. H. McClenahan, Ho adds, "Clusters run from 7 to 12- all boat and no core- most wonderful flavor- smooth as an apple." Oxheart is the result of years of effort to develop the perfect tomato. Supply limited. Packet 25c, ¼ oz. 40c.



FREE New complete garden catalog for 1929, shows new varieties of vegetables, flowers and everything needed for the garden. Write for it today.

THE LIVINGSTON SEED CO.
66 E. Chestnut St., Columbus, Ohio

Beat Your Neighbor with OXHEART ~

THE BAKER STEEL GRAIN THRESHER

BUILT IN STANDARD SIZES



Heavy Roller Bearing equipped, 15 big 5 tooth Rack cylinder. Three distinct feedings in straw. Double eccentric driven 7-inch shoe fans. Double belted. Reasonably priced and economic to run. The purchase price of a Baker is not an indebtedness only an investment. Visit our factory. You are welcome. Complete tractor and thresher catalogs free.

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Swanton, Ohio

READ THE ADVERTISEMENTS TO KNOW WHAT IS BEST AND WHERE TO BUY

Annual Meeting of the State Horticultural Association

THE program of the seventieth annual meeting of the State Horticultural Association of Pennsylvania, to be held at Harrisburg, Tuesday, Wednesday and Thursday, January 22-24, promises to be of unusual interest. On Tuesday afternoon the subjects for discussion are: Orchard Sites, Standard Containers for Fruit, Peach Growing and Mice Control. Professor A. J. Farley, of the University of New Jersey, leads the peach discussion, and James Silver, of the U. S. Biological Survey, Washington, D. C., brings to us the latest information on mice control in orchards.

On Wednesday forenoon recognition is given to the growing interest in the subject of small fruits in Pennsylvania, by placing Professor A. S. Colby, of the University of Illinois, on the program to discuss problems in strawberry and raspberry culture. At the same hours there is an alternative program for orchardists, in the examination and grading of commercial packs of apples taken from storage. This is conducted by John U. Rnef. Possibly this demonstration will produce evidence of the need for further efforts to standardize the pack of Pennsylvania fruit. Following this demonstration, Thomas H. Byrd, of Winchester, Va., will report on the operation of the mandatory apple grading law in Virginia, and raise the question as to whether a similar law is desirable in Pennsylvania. The construction and operation of a small refrigeration unit on the farm, a subject that has aroused considerable interest among our fruit growers in recent years, will be presented by Howard Ingerson of Chardon, Ohio, and R. U. Blasingame of State College.

Insect Control

Wednesday afternoon will be devoted to control measures for orchard pests, beginning with a description, by Professor Farley, of the stationary spray plants installed in New Jersey the past season. The red mite, which raised havoc in many orchards last summer, and the present status of dusting apples, will be presented by two State College specialists, H. N. Worthley and H. W. Thurston. A question box on insect pests and diseases, and other growers' problems, closes the afternoon.

On Wednesday evening occurs the annual banquet of "wit, wisdom and witamins, judicially combined with good fellowship." The entertainment features are a secret known only to the chairman, R. D. Anthony. Our venerable and honored member, Cyrus Fox, of Reading, will give us some reminiscences of the early years of the Association, and D. M. Wertz, of Waynesboro, who has recently returned from a trip around the world, will give some of his horticultural observations on this trip, and tell why he would rather live in Franklin county after all. As a fitting climax to the evening, Samuel Fraser, of Rochester, N. Y., will serve some highly spiced "Apple Sauce."

Market Problems

On Thursday morning, following the business meeting, Frank Farnsworth, of Waterville, Ohio, one of the most successful fruit growers in our neighboring state, will relate his experience in the line of marketing of fruit, and Samuel Fraser, of Rochester, N. Y., will discuss "Economics of the Apple Industry." In the afternoon, Mr. Farnsworth will again appear on the program in "The Business Side of Fruit Growing—What Our Orchard Cost Accounting Records Show;" and G. C. Carpenter, of Hancock, Md., one of the best posted fruit growers in the East, will discuss "Pruning Apple Trees of Bearing Age." The meeting adjourns at three o'clock.

Membership dues for 1929 remain $2 a year; the payment of thirty cents additional gives membership in the American Pomological Society also, and a year's subscription to "Fruits and Gardens," the official publication of that organization.

S. W. Fletcher, Secretary.

Brown Rot on Plums

I have some plum trees and the plums looked good and had a nice crop, but all at once they started to rot about the time they began to change color. This fall they began when quite small. D. P. H.

YOUR plums were attacked by a fungus disease, the brown rot. The treatment is to keep the fruit covered with a protective spray. Lime-sulphur solution, diluted to test 1.008 on the specific gravity spindle (or diluted approximately 1 to 40) can be used, although self-boiled lime-sulphur is preferred by commercial growers, being less liable to burn the foliage and fruit. It can be bought, in small quantity, at most hardware stores.

It is customary to add arsenate of lead powder, at the rate of two pounds to one hundred gallons of the spray; this controls the curculio, which stings the fruit, and makes it wormy.

The brown rot disease, also, is spread by means of the insect punctures. If you have only a few trees it may be more convenient to use a ready-mixed patented preparation of Bordeaux and arsenate of lead. The trees should be sprayed two or three times, at intervals of two or three weeks, beginning when the fruit is half grown.

The brown rot is most serious in a wet season. Open pruning, which allows the fruit to dry off quickly, helps to check the disease. It also pays to gather and bury all "mummies"—the shriveled fruits that rotted the past season. These are the source of infection the following year. Consult your county agent for details on spraying.

S. W. F.

Currant Cuttings

Please print in your paper when it is best to cut and plant currant buddings. L. H. B.

CURRANT cuttings may be taken any time after the leaves fall and before the buds start in the spring. It is somewhat better, however, to take them before the first of March. The cuttings may be from six to ten inches long and should be made only of last year's wood, shoots that grew during the past season. They may be tied in bundles of 25 to 50 and either buried out of doors or plunged in moist sand in a cool cellar.

They should be set in the field as soon as the ground is ready in early spring, and about eight inches apart in the row, with not more than one or two buds projecting above the surface of the ground. The strongest of the plants that develop from these cuttings will be ready for setting in the fruiting plantation at the end of one season.

S. W. F.

To Get Rid of Moles

I saw a request in the Pennsylvania Farmer for a method of getting rid of ground moles. Plant castor-oil beans around the garden. I tried it for three years and have not been bothered with moles since. J. B. Tucker.

* * *

In reply to J. C. W., who asks about moles, my remedy is moth balls. I have trouble in my garden after a rain. The moles seem to work around the hills of everything. I take a ball and push it in the new run and push the dirt back. Put one every two feet or each hill they have worked in. I do not have any more trouble at that place. Watch and if I see a new run I put more balls. Mrs. H. O. Hall.

Burpee's Seeds Grow



The Vegetable and Flowers you would like to see growing in your garden or on your farm—read all about them in Burpee's Annual Garden Book.

This is the catalog that tells the plain truth about the *Best Seeds That Grow*. It describes the Burpee Quality Seeds, Bulbs, and Plants.

Write for a free copy of Burpee's Annual.

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Send me a free copy of Burpee's Annual.

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Offers for Spring Planting, 1929, the finest line of True-to-Name Apple, Peach, Pear, Plum and Cherry Trees obtainable. A complete line of Grapes, Raspberry, Blackberry and Strawberry Plants including the Famous Mastodon, the World's greatest Everbearing Strawberry. Full line of Shade Trees, Evergreens, Rhododendrons, Shrubbery and Roses. Growers and distributors of the Richard Jefferies, the apple supreme. Our 53-page Catalog is ready now. Your copy is free, write for it.

BOUNTIFUL RIDGE NURSERIES, Box 8, Princess Anne, Md. See our Exhibit of Nursery stock and Richard Delicious Apples at Farm Product Show, Harrisburg, Pa. Sec. 54

GROW YOUR OWN STRAWBERRIES



Big Hudson berries. Ready after planting. Plenty berries all summer and fall. Another big cropper next year. New lower prices.

MASTODON is the big one for home or market. Special Get Acquainted Offer:

25 MASTODON	$ 1.00
50 MASTODON	1.75
100 MASTODON	3.25
200 MASTODON	6.00
500 MASTODON	13.50

OUR BIG 20TH CENTURY CATALOG MAILED ON REQUEST—Fully describes not big stock of Strawberry, Raspberry, Blackberry, Grape Vines, Asparagus, Rhubarb, Horseradish Plants, etc. Everything sold at wholesale prices, direct to grower. You will be delighted, a postal will bring it.

E. W. TOWNSEND & SONS Old RELIABLE NURSERIES 78 Vine St., Salisbury, Md.

Hagerstown Spray Material Co.
That's the place to Buy
Your Spray Materials
For your Fruits and Vegetables.
Write us for prices and information.
HAGERSTOWN SPRAY MATERIAL CO.,
439 S. Potomac St.,
Hagerstown, Maryland

EARLIEST TOMATO



Is June's Waryhead. Big red fruit ripe as early as July 4th. Nothing earlier to be had anywhere. Regular price 15c per pkt, but to introduce June's seeds will send a pkt. of this Tomato and Cabbage, Carrot, Cucumber, Lettuce, Onion, Radish, Parsnip, superb Asters and glorious garden pinks if you will enclose 10c coin to pay postage and packing.

A coupon entitling you to 10c worth of seeds free with each collection. Our catalog offers the best seeds, plants and shrubs at bargain prices. Sent free.

J. W. Jung Seed Co., Farm 16 Randolph, Wis.

SPRAY FRUIT TREES



Destroy fungi and worms; insure larger yields of perfect fruit. 36th successful year.

STAHL'S EXCELSIOR SPRAYING OUTFIT
PREPARED MIXTURES

20 models. Catalog containing full treatise on spraying FREE. Reduced prices.

Wm. Stahl Sprayer Co.,
Box 827 QUINCY, ILL.

MIX YOUR OWN DUSTS
At Half Cost with
HEIM'S DUST MIXER
Spray and Dust Chemicals at Wholesale Prices.
Agricultural Insecticide Laboratories, Sunbury, Penna.

It will PAY YOU TO INOCULATE your Legumes with SCOTT'S BACTERIA. It's guaranteed. Ask about our introductory offer. Our New Seed Guide is FREE for the asking.
O. M. SCOTT & SONS CO.
Desk 7 We Pay the Freight Marysville, Ohio

Garden and Truck Crops

By GILBERT S. WATTS

TUESDAY afternoon, January 22, and Wednesday, January 23, both morning and afternoon the Pennsylvania Vegetable Growers' Association will convene in Harrisburg. All meetings will be open to the public. Any one who is interested will be welcome.

In the first session Dr. E. L. Nixon of State College will discuss spraying vegetables, Prof. J. W. White will consider nitrogen and organic matter problems in vegetable production and Dean R. L. Watts will give an illustrated talk on gardens which he saw on his trip around the world. The banquet following this will be an occasion of fellowship, songs and entertainment.

Wednesday morning from 9 until 10:30 there will he a joint session with the State Horticultural Association. In this period Prof. A. S. Colby of the Illinois Agricultural Experiment Station will take up strawberry and raspberry growing. Then the vegetable growers will hear a discussion of market trends, both state-wide and local. Mr. H. A. Hanneman of the State Bureau of Markets will lead and growers themselves will continue the subject. This session will close with a discussion of some real selling points by Prof. R. Adams Dutcher of State College.

Wednesday afternoon at 1:30 Prof. F. W. Geise of the University of Maryland will tell of gardening below the Mason and Dixon line; Mr. Harry G. Brackbill of Malvern, Pa., will relate his experiences in developing a successful roadside market; Dr. J. E. Knott of State College will report on vegetable varieties tested in 1928; Mr. Howard N. Dudley of Bustleton, Pa., will review his experiences in cold storage of celery and Dr. C. E. Myers of State College will tell of the vegetable growing he saw on an extensive motor trip through the South and West.

Do not forget there is to be an exhibit of vegetables. These must be in place by noon January 22. If you cannot bring your exhibit in person ship by express to arrive not later than early January 22, addressing to Walter B. Nissley, Secretary, Pennsylvania Vegetable Growers' Association, Harrisburg, Pa.

Manure for Hotbed

"KINDLY inform me if chicken manure, well littered, will heat sufficiently for a satisfactory hotbed for growing tomato plants," a reader inquires.

Chicken manure is rarely used for hotbeds not because it ordinarily fails to heat but for the reason that it is likely to heat very violently over a short period. If very wet and soggy it might not heat.

Horse manure always has been the standard for making hotbeds because it is practically sure to heat and when properly prepared continues to produce satisfactory heat for a considerable period. If it can be managed at all I would secure horse manure made with a reasonable amount of straw bedding.

In case chicken manure must be used you may be able to secure satisfactory results by mixing in a liberal amount of straw or hay litter, several times as much of this as of droppings. I would prefer to give this one handling before putting in the hotbed pits. That is, place in a pile several feet deep, sprinkling each layer with enough water to give an even degree of moisture, just enough to give a springy but not soggy feeling under foot. As soon as this heats throughout, likely within 36 to 72 hours, place in the hotbed pit in several even layers to make the desired depth. Even with horse manure more uniformly heating hotbeds result when the manure is placed in several layers rather than in one thick layer.

Orchardists *throughout this area have used* SUNOCO Successfully *for several years*



for the control of
Aphis, Red Mite, Scale *and* Apple Red Bug
Control effected by only one late spraying

In all this section, indicated on the map in gray, orchardists have found complete satisfaction with SUNOCO spray.

And no wonder! Read these important points about SUNOCO:—

1. It is better and safer than lime sulphur, oil emulsions and most petroleum sprays. 2. One spraying at the open bud stage will kill mere Aphis, Red Mite, Scale and Apple Red Bug than any other spray combination. 3. SUNOCO is cheaper than lime sulphur and nicotine combination, and covers 30% more tree surface and covers it thoroughly. Hence the economy of SUNOCO. 4. Easy to handle. Once mixed it stays mixed—hard water or ice-cold water makes no difference. The emulsion never separates or deteriorates. 5 Behind SUNOCO stands this company with its Entomological Department headed by Prof. J. G. Sanders, the eminent Entomologist, formerly State Entomologist of Wisconsin and Pennsylvania and expert in United States Department of Agriculture. His advice is free to SUNOCO users and orchardists in general.

If you are not using SUNOCO, clip the coupon and mail it today. Costs you nothing, no obligation—but will save you money and lead to a full, beautiful crop. Mail it now.

There will be a SUNOCO exhibit at the Penna. State Farm Products Show, Harrisburg, January 22-25. Booth 64, Schaffer Building.

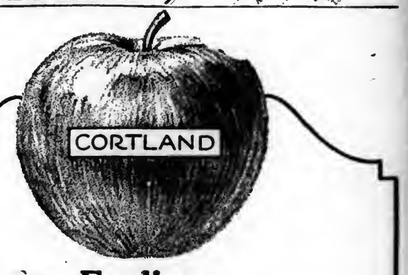
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A Permanent Brooder House with Capacity for Forty Thousand Chicks

Brooder Houses for 1929

By. R. L. SCHARRING-HAUSEN

NOW that we are writing 1929 instead of 1928 it is time to think about our brooding equipment for the coming season, which in most cases will start in a couple of months. Of primary importance, of course, is the brooder house itself, and January, February and early March will give us time to plan and construct new buildings or remodel old ones which may be on the farm already.

In artificial brooding there are two types of houses in use; the permanent type, which may be only a few pens capacity or which may be several hundred feet long on large plants and equipped with a central plant or heated by electricity, and the movable type, generally a 10x12 colony house on skids equipped with a coal-burning brooder stove.

Each of these two types has its good points and its weak ones. I want to discuss both, and also to point out the advantages of a combination of permanent brooder house and range house method which I used on my own place last year to very good advantage.

The long permanent building made up of a number of pens each heated by a brooder stove or supplied with heat from a central plant is an old system but one with many advantages. It is cheaper to construct per chick, warmer, easier and cheaper to heat, especially if a central heater is installed, and it is much easier to feed and water the chicks in it, as they are all under one roof, and it is possible to install a permanent or automatic water system.

Sanitation Has Become Important

Among its drawbacks are the danger of fire wiping out all the chicks, which is not the case where the brooder houses are separated, and the necessity for having all the chicks of one age, as in most cases it is necessary to run the whole house at the same temperature due to central heat control.

In recent years the question of sanitation has become very important, due to the widespread trouble from worms and coccidiosis, and as these pests have been controlled largely by rearing chicks on new ground, which is of course impossible with a permanently located building, the long type of brooder house lost in favor of the movable colony house on skids, which could be hauled to a new location at frequent intervals.

Such a colony house, usually a shed roof building about 10x12 feet in size, equipped with a coal-burning brooder stove, is probably the best type for use on farms where poultry keeping is a side-line, and on small poultry plants. It is inexpensive, can be moved about the range occasionally in the interests of sanitation, and certainly is far easier to manage in raising chicks than the old sitting hen method.

However, on large plants where several thousand chicks are brooded annually it is a great waste of labor where the attendant has to wade through mud and snow in all sorts of weather to take care of ten or twenty such individual buildings, each with its fire to keep up and without feed and water handy. I have had more than one person write in to state that if he had to wade through March mud another season he would give up keeping chickens.

The Confinement System

Another drawback is that it takes a stout team or a tractor to move a colony house, and where the ground is rolling or where there are many of them to move it gets to be a pretty big job, which is liable to be neglected, with the result that the sanitation problem is the same as if the building were permanently located.

Within a year or two a new phase of sanitation has come up—the method of rearing chicks in partial or total confinement. In this system the chicks are let outdoors on a concrete, wooden or wire floor, and may either never get out on the ground where the disease problem is serious, or be put out on range after they are eight weeks old, when they are less susceptible to ailments than they are as baby chicks. Under these conditions it is possible to enjoy the advantages of the long permanent brooder house, and it is again coming back into favor.

Under most conditions the method of partial confinement will be found the best by the average poultryman, as it avoids the greatest risks from parasites and disease without running into the complications which total confinement imposes. Last season I used this method myself, brooding chicks in two permanent brooder houses heated by coal brooders in each of the pens, and allowing the chicks to go outside on screened-in sun porches, which had a floor of cellar mesh wire.

Will Use Lighter House

When the chicks were about eight weeks old I transferred the pullets to range houses on ground where I had never had chickens before, and up to the time I write this my pullets in the laying houses have never done better nor avoided roup and chicken pox so well, which I attribute to the limited confinement and clean range methods employed in rearing them. Aside from this, I made no change over previous years in feeding or management.

The range houses which I used were 10x12 feet colony houses on skids, and in moving them I found it to be quite a job, as it was necessary to cross a small brook and pull them up a considerable rise with the team. On account of the weight of these houses, I am going to move them to a permanent location and use them as colony houses for small flocks of pedigreed breeding birds which it is necessary to keep separate.

To take their place I expect to use a much lighter range house, known as the Connecticut Summer Roosting Shelter, which while it will care for 150 mature pullets, weighs only a few hundred pounds, is easily moved about the range, and is very cheap to construct. Several farms in New Jersey are using these shelters, and I saw them in common and very successful use in New England last season.

This little building is 9x12 and 4 feet high, with an A-shaped roof, wire sides and no floor. The roof itself is made of two large fiber sheets which I have recommended in this column for poultry house siding. The total cost, for materials, is in the neighborhood of $20.

Ideal in Warm Weather

In using these shelters the chicks are brooded in the heated permanent brooder houses for the first eight weeks, until they have become feathered out and taught to roost and can do without heat. Early chicks may have to be kept in longer, and much depends on the season.

As the range shelter has no solid sides, merely inch mesh wire, it may be advisable to fasten burlap around the sides and back if the weather is chilly when the pullets are first put out, in order to provide a little protection, but during warm weather this little shelter is ideal as plenty of ventilation is afforded on hot nights.

A bulletin describing the construction and use of this shelter, with plans and list of materials needed has been put out by one of the experiment stations, and I shall be glad to furnish any one who will write in with the proper address.



Disease-Free Pullets on Concrete Yards

Poultry Meeting at Harrisburg

By H. C. KNANDEL

EVERY farmer should avail himself of the opportunity of attending the State Farm Products Show to be held in Harrisburg, January 22 to 25 inclusive. In connection with the largest winter farm show in the United States, the various state associations hold educational meetings.

The Pennsylvania State Poultry Association and the Pennsylvania State Baby Chick Association will hold their annual meetings on January 23 and 24 to which every one is invited. These meetings will be held in the Vance Building, located at Fourth and Chestnut Streets.

A very splendid program has been arranged. Two national poultry authorities from outside the state of Pennsylvania have been asked to appear on the program. Dr. H. D. Goodale, geneticist, formerly of the Massachusetts Agricultural College and now employed on a large commercial poultry farm in the same state, will discuss two important phases in poultry breeding.

High Production

Dr. Goodale is recognized as an authority in his field and his work over the past fifteen years, in which he has been able to produce strains of fowls which will lay 200 eggs per year, should be of inestimable value to all farmers and poultrymen. Why not take advantage of Dr. Goodale's life work and get first hand his methods of breeding for increased egg production?

Professor W. C. Thompson, head of the Department of Poultry Husbandry at Rutgers University, will discuss "Feeding and Brooding Chicks" as well as "Experience Gained through Conducting the Vineland International Egg Laying Contest." Professor Thompson recently spent two years abroad, during which time he became intimately acquainted with European poultry conditions. His experiences in connection with two international egg laying competitions should be of value to poultry breeders in Pennsylvania.

In addition to the serious problems which are to be discussed throughout the day, don't forget that on Wednesday at 6:30 p. m. in the Vance Building, the annual banquet will be held. There will be plenty to eat, some speeches and a lot of fun. Plan now to attend the two full days meetings—January 23 and 24.

The detailed program follows:

Wednesday

9:00 A. M.—Annual Meeting of the Pennsylvania State Poultry Association.
11:00 A. M.—Vaccination and Inoculation —Drs. Biltz and Leibbenhausen, Bureau of Animal Industry, Harrisburg, Pa.
12:00 —Lunch.
1:30 P. M.—Summary of 1928 Grow Healthy Chick Campaign—J. Vandervort, Poultry Extension Department, State College, Pa.
2:00 P. M.—Methods Followed in Raising 1,000 Turkeys Robt. W. Lohr, Roswell, Pa.
2:30 P. M. Ventilation, Insulation and Artificial Heating of Poultry Houses —P. S. Martin, Harrisonburg, Va.
3:15 P. M.—Results of Second Year's Work in Brooding under Fly-Screens at the Pennsylvania State College—H. C. Knandel, Poultry Department, State College, Pa.
4:15 P. M.—Feeding and Brooding Chicks —Williard C. Thompson, Poultry Department, New Jersey Experiment Station, New Brunswick, N. J.
6:30 P. M.—Annual Banquet of the Pennsylvania State Poultry Association and the Pennsylvania State Baby Chick Association. Speakers, W. H. Allen, New York City, and H. D. Munroe, Harrisburg, Pa.

Thursday

9:00 A. M.—Semi-Annual Meeting of the Pennsylvania State Baby Chick Association.
10:30 A. M.—The New Knowledge of Breeding—H. D. Goodale, Williamstown, Mass.
12:00 —Lunch.
1:30 P. M.—Inbreeding H. D. Goodale, Williamstown, Mass.
2:30 P. M.—Experience Gained Through Conducting the Vineland International Egg Laying Contest—Williard C. Thompson, Poultry Department, New Jersey Experiment Station, New Brunswick, N. J.
3:30 P. M. The Value of an Egg Laying Contest for Pennsylvania W. H. Allen, New York City.
4:15 P. M.—Discussion.

Following the meeting a special meeting will be held only for those interested in blood testing, certification and R. O. P. work.

Goose Culture

I have a Toulouse hen, that I crossed last year with a Chinese gander. I raised nine hens and nine ganders. They are beautiful birds, but I'm sort of lost what to do for the coming year. If I should sell the geese and stock a good strain of Toulouse, mate the hens I have with Toulouse ganders, or let them inbreed this coming year and the following year mate all the hens with Toulouse ganders, will I get as large geese by crossing? Do you think goose raising a profitable business? I have the idea that I'd like to try and raise a few hundred this coming season. I have given this business a lot of thought and it looks encouraging. I have a big range and lots of pasture.

S. S. C.

YOU will make greater progress, I believe, if you maintain one pure breed of geese.

The standard weights of the Toulouse geese are as follows: Adult gander, 26 pounds; adult goose, 20 pounds; young gander, 20 pounds; young goose, 16 pounds. For the Chinese goose, the standard weights are: Adult gander, 12 pounds; young gander, 10 pounds; adult goose, 10 pounds; young goose, eight pounds.

From a comparison of these weights, you can readily observe that the Toulouse goose is to be desired if weight is of prime importance. By crossing the Toulouse with the Chinese, you will, of course, produce a smaller goose than the Toulouse and a larger one than the Chinese.

H. C. K.



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S. C. or R. C. Reds, White Rocks, Parks Rocks	8.25	16.00	77.00	150.00
White Wyandottes, Buff Orpingtons, Black Minorcas	9.25	18.00	87.00	170.00
Rainbows, Columbian Rocks, Blue Andalusians	11.25	22.00	105.00	200.00
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White Wyandottes & Buff Orpingtons	4.75	9.00	17	82	160
White Minorcas & Blue Andalusians	5.50	10.25	20	95	190
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Poultry Problems

Fences for Turkeys

I believe it was in the issue of November 24th of the Pennsylvania Farmer that I saw an article about raising turkeys in close range. Can you give me some information about how the fence should be for an enclosure for turkeys, also some general information about raising turkeys?
C. A. M.

FROM what I have observed of turkey fences, they are generally of farm fencing, not the common poultry netting, about six feet high. The turkeys in the lots are given plenty of feed and as they don't have to wander about chasing grasshoppers for a living, they remain quietly behind the fence near the mash hoppers. Of course a turkey can fly over such a fence, but as one breeder expressed it, as soon as a turkey gets away from his friends he becomes lonely and wants to get back. However, unless the birds have plenty of feed always before them they will get out and it will be a difficult matter to keep them in at all.

If your soil is not stony I think you will like the steel posts which can be driven into the ground better than the wooden ones, as it is very little trouble to set them, and they can be taken up easily if desired.

I have just returned from visiting a turkey farm in Jersey where the birds were raised exactly as we raise chickens under modern methods. I hope to have a writeup of this visit in the poultry department soon, and am sure that you will be interested in it. R. L. S.

To Hatch Turkey Eggs

Can you please give me a little instruction on what temperature it takes to hatch turkey eggs in an incubator?
W. P. E.

IT requires on the average of 28 days for turkey eggs to hatch. The temperature in the incubator should be about one-half to one degree lower than is required when hatching hens' eggs. In other words, if the temperature at which you operate your incubator for hatching hens' eggs is 103 degrees, then the temperature for the turkey eggs should be about 102 degrees for the first two weeks. For the third and fourth week, the temperature should be at least 103 degrees and may go slightly higher. The temperature at hatching time may run as high as 104 to 105 degrees with no ill effects.

Fall or Winter Neck Molt

I have 150 White Leghorn pullets, hatched April 10th. They began laying September 1st and have been doing very well, laying for the past two and one-half months from 50 to 70 eggs per day. They are now laying from 45 to 60 eggs per day. About three weeks ago some of them began to molt and now I think there must be 20 or more molting. Some of them seem to have the feathers off just around their necks.

Can you tell me what would cause it and could I give them anything to help them along? How long is a molt this time of the year apt to last? When can I expect eggs from them again?

I am feeding scratch grain in litter in the morning, with mash before them at all times. I use the Cornell formula, 100 lbs. bran, 100 lbs. middlings, 100 lbs. ground oats, 100 lbs. ground corn and about 75 lbs. beef scrap with a little salt to season it and cracked corn at night. A. C. H.

THE so-called fall or winter neck molt which is going through your flock is nothing uncommon, and while it cuts down production for the time being the birds usually come back in a month or so and do very well all spring and summer. Early hatched birds are especially liable to it, especially if they have been laying heavily and have got a little thin, or if some change has been made in their feed or if they have been upset in any way.

The use of lights is a great help in keeping Leghorns up to the mark and warding off the molt, putting them on early in the fall.

In considering having the chicks a little later, you must decide whether it is more profitable to get high-priced fall eggs and risk a molt or have the birds come into production when egg prices are lower and expect them to lay right on. I always have part of my flock out in March, and sometimes they molt and sometimes not, but at any rate they lay a lot of eggs when prices are highest, and I consider early birds profitable whatever they do.

In handling this molting flock, feed scratch rather liberally for a time, until the birds have passed through the molt and show signs of coming back into production, when the scratch can be reduced a little in order to make them eat more mash and start laying heavily. Building up the body weight now will pay good dividends later. R. L. S.

Year's Feed Consumption

Will you please find out for me how much feed of all kinds it takes for a bunch of laying hens a year, say one hundred? A. P.

ACCORDING to certain records which were made available by the Connecticut Agricultural College for the year just closed, the following amounts of grain and mash were consumed per hundred birds daily:

Month	Amount of Grain: Lbs. grain per 100 birds	Amount of Grain: Lbs. per bird per day	Amount of Mash: Lbs. mash per 100 birds	Amount of Mash: Lbs. per bird per mo.
Nov.	12.46	3.74	8.93	2.68
Dec.	14.16	4.39	9.81	3.04
Jan.	14.45	4.48	10.16	3.15
Feb.	13.43	3.76	11.86	3.32
Mar.	12.58	3.90	12.03	3.73
April	11.77	3.53	14.27	4.28
May	11.23	3.48	14.22	4.41
June	11.27	3.38	14.47	4.34
July	11.29	3.50	14.77	4.58
August	11.45	3.55	16.87	5.23
Sept.	11.70	3.51	16.36	4.91
Oct.	11.90	3.69	12.71	3.94

Total for year, 44.91 Total for year, 47.61

In addition to this amount of feed, the hens were fed green food, grit, shell and water. H. C. K.

Eggs

We are trying to sell the best grade of infertile eggs, but have had a complaint of spoiled eggs. How can this happen in eggs less than one week old? How would you put roosters in a flock of laying pullets with the least bother to the birds? We put them in suddenly last year and egg production dropped to 25 per cent. E. J. Rhinehart.

IT infrequently happens that through some derangement of the reproductive organs a hen may lay an egg which is had, and if you are certain that the spoiled egg was from your farm and was fresh, that is the only explanation of the trouble that I can offer. If you intend to put out a high-class line of eggs, you should candle them in order to detect blood spots or other abnormalities. I once discovered an egg from my flock which I knew to be perfectly fresh to be apparently full of blood, although it looked normal from the outside.

I have never had the trouble you mention from adding males to the flock. Perhaps you put in too many, so that the pullets were given no rest. Use one male to fifteen or twenty females with Leghorns, and if possible keep the males by themselves for some time before they are put in the laying flock, in order that they may get used to each other and stop fighting. R. L. S.

Nicotine Sulphate

I saw a letter in your magazine giving the value of nicotine sulphate for lice on hens, but did not see anything in regard to how you use it. P. S.

IN using nicotine sulphate for lice, paint the material on the top of the perches just as it comes from the can, late in the afternoon before the chickens go to roost. The stuff vaporizes during the night, penetrates the feathers and kills the lice. R. H. S.

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For March and April Delivery. 100% live arrival guaranteed.

	25	50	100	500	1000
White Leghorns	$3.50	$6.50	$12.00	$57.50	$110
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Rhode Island Reds	4.00	7.50	14.00	67.50	130
Silver Laced Wyandottes	4.50	8.50	16.00	75.00	140
Light Mixed	3.00	5.00	9.00	42.50	80
Heavy Mixed	3.50	6.50	12.00	57.50	110

These chicks are hatched from healthy free range stock. Write for Catalogue.
THE RICHFIELD HATCHERY, Box 166, Richfield, Pa.

Nest Box Notes



RECENTLY one of our readers brought up the question of improving the egg laying qualities of turkeys. I don't think that much has been done along that line. Breeders have been interested in size, as the turkey is primarily a meat bird, and others have done some work along the line of breeding a disease-resistant strain. Undoubtedly a male from a strain of turkeys which laid well would improve the egg laying qualities of the progeny of a flock which did not. Perhaps some of the turkey raisers who have been in the business a long time might have definite information to offer.

* * *

WITH the turn of the year the time for thinking about hatching and rearing the coming season's chicks is at hand. Many farmers who have been dissatisfied with the old style sitting hen will decide to buy baby chicks and brood them under a brooder stove, which in most cases is much the better way.

* * *

WHERE there is a mixed flock on the farm, and it has been decided to change to pure-breds, a very good way to change is to order chicks of the kind wanted, rear them by themselves, and sell off the old birds as they stop laying, making a final clean-up in the fall when the laying house can be filled up with pure-bred pullets.

* * *

THE practice of breeding from all the birds in a general flock is not a good one, as many of the chicks will have undesirable parents. It is much better to select the best hens and mate them to good cockerels, as the resulting chicks will be much more satisfactory next fall than if indiscriminate matings had been permitted.

* * *

OLD hens which have been kept over for layers or breeders will soon be coming into production. As soon as they have completed the molt and appear ready to lay, a moist mash at noon in addition to the regular dry mash will start them off. With the lighter breeds a little artificial light in the morning will soon start them to work. It is poor policy to hurry matters, however, if the hens do not appear to be in laying condition.

* * *

PULLETS which have gone through a winter molt make good breeders. However, pullets which have been laying continuously are liable to produce eggs which will not hatch well, especially if they have been under lights.

* * *

BARLEY is a very good ingredient in the concentrate ration and compares well with oats in nutrients. Buckwheat compares well with corn except for the heavy indigestible bran that covers the buckwheat kernel.

Buckwheat by itself is not a palatable feed but if you use barley, buckwheat and some corn and then add the high protein feeds a very good and palatable ration can be made. But the price paid for barley in some markets makes an expensive feed because some quotations of barley are double that of oats.

* * *

EVERY New Jersey plant grower should secure Extension Bulletin 51 "Plant-Growing and Plant-Growing Structures." Mail your request to the New Jersey State College of Agriculture, New Brunswick, N. J. Possibly this publication will be mailed to interested growers outside the state. It contains dozens of photographs of plant growing facilities and methods and is rich in suggestions. R. L. S.

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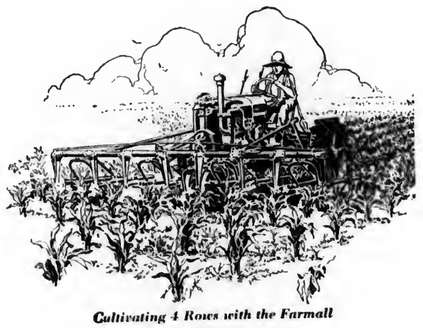
So now we are honoring these first 500 men—trail-makers and leaders in the new age of power farming—by publishing their names in the farm press of the land.

Run your eyes over the long list on the opposite page. Picture the year-around operation and the routine on these half-thousand farms, bearing in mind that *animal power plays no part in it.* These men are successfully handling all their farm work by mechanical means alone. *They are using McCormick-Deering tractor power.*

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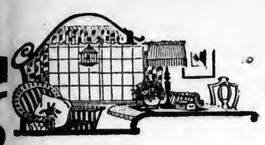
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Henry Absor	El Campo, Tex.	100	Cotton, Row Crops
E. J. Adams	Crescent, Okla.	80	Wheat, Hay, Corn
Adams Realty Co.	Fort Lupton, Mont.	640	Wheat
Allen & Calahan	Hannaker, Ind.	300	Corn, Onions, etc.
C. F. Anson	Hazell, Tex.	240	General
Arthur Anderson	Donnessa, Tex.	80	Cotton, Corn
Hans T. Anderson	Fort Lupton, Tex.	115	Cotton
A. J. Anderson	Lyford, Tex.	305	Cotton
Troy Anderson	Hutchinson, Kans.	450	Wheat
F. M. Anderson	El Campo, Tex.	75	Cotton
Hugo Anderson	El Campo, Tex.	115	Cotton
Valbeck Anderson	Donnessa, Tex.	100	Row
M. D. Anderson	Metropolis, Ill.	160	Wheat
Fred Arndt	Roscoe, S. D.	160	Wh't, Barley, Corn
B. C. Arnold	Broadview, Mont.	1440	Wheat
Henry Askey	Decatur, Tex.	600	Grain, Corn
Richard Asella	Metropolis, Ill.	240	General Orchard
E. R. Avery	Three Forks, Mont.	1830	Wheat
Geo. Aarvg	Marvy, Mont.	1920	Wheat
B			
G. M. Bacon Co.	Putney, Ga.	700	Pecans
Roy Bain	Hewkirk, Okla.	160	Corn, Wheat
J. A. Banfield	El Campo, Tex.	280	Cotton, Rice
John Bard	El Campo, Tex.	125	Corn, Cotton, Cane
Luther Bard	El Campo, Tex.	100	Cotton
Rees Barnard	Otis, Colo.	580	Dry, Wheat, Corn
Elmer Barnes	Craigmont, Idaho	320	Wheat
J. Barnes	Waterville, Wash.	6800	Wheat
Elmer Baroch	Three Rivers, Tex.	120	Cotton, Corn
Valerian Bartin	Ross Fork, Mont.	1000	Wheat
Geo. Bauer	El Campo, Tex.	200	Cotton, Corn
Becker Bros.	Hackettstown, N.J.	450	Grain, Corn
Austin Belcher	Moore, Mont.	1500	Small Grain
Ben Bell	Forman, N. D.	800	Wheat, Flax, etc.
Howard Benton	Norcatur, Kans.	320	Wheat, Corn
John Berg	Alaska, S. D.	300	Wheat, Flax, etc.
Reginald Benson	Hebbronville, Tex.	750	Rice
A. O. Berglund	Power, Mont.	640	Wheat
John Bergman	Power, Mont.	640	Wheat
Henry Bergerson	El Campo, Tex.	223	Cotton
L. Bergstrom	El Campo, Tex.	100	Cotton
W. L. Bergstrom	Lyford, Tex.	160	Cotton
Leland T. Berry	Bronson, Kans.	60	Row Crop
Bissell & Robinson	Bonneauville, Mont.	3100	Wheat, Oats
C. J. Bjorklund	Bowman, N. D.	1200	Wheat, etc.
Leo Blanchard	Ismay, Mont.	175	Rice
E. T. Boone	Madasco, Calif.	40	Peaches
Heath Boone	Coffeyville, Kans.	520	Row
Heath Boone	Coffeyville, Kans.	520	Row
Samuel Boranko	Lisbon, N. D.	300	Small Grain
Ben Borgerson	Power, Mont.	640	Wheat, Barley, etc.
S. H. Bracken	Nephi, Utah	200	Dry
Brady Bros.	Bloomfield, N.M.	45	Potatoes, Wheat
Wm. Brown	Medicine, S. D.	480	Wheat, Cherry
W. S. Brumbelow	Wolfe, Mont.	320	Corn, Wheat, Oats
Frank Broadbent	Lusk, S. D.	300	Wheat, Barley
Joel Brown	Turnbull, N. D.	1000	Grain
W. E. Bryan	Waverly, Kans.	160	Wheat
Ray Bryant	Moore, Mont.	800	Wheat, Barley
Col. Dudley Buckstead	Broadview, Mont.	1160	Wheat, Alfalfa
Jim Burdett	Richmond, Tex.	410	Rice
H. Burchard	Pomeroy, Wash.	1000	Wheat
John Burstrom	El Campo, Tex.	160	Rice
J. A. Butler	Hunn, Colo.	240	Row Crop
C			
Wm. Campbell	Denton, Mont.	320	Wheat, Barley
Oscar Carpenter	Stephen, Minn.	320	Wheat, Barley, etc.
D. J. Carrison	Bolingbroke, Ga.	300	Wheat, Soy Beans
L. M. Carter	Port Lavaca, Tex.	300	Cotton
Louis Carter	Port Lavaca, Tex.	120	Cotton
A. L. Casner	Eden, Tex.	128	Corn
Cassell Bros.	Coffeyville, Kans.	650	Wheat
R. M. Chamberlain	Coffee Creek, Mont.	650	Wheat
Ralph Chamberlain	Milesbridge, S. D.	1300	Wheat
W. E. Chappell	Plentywood, Mont.	1120	Wheat
R. O. Chappell	Mountainview, Kans.	640	Wheat
D. U. Cheney	Power, Mont.	640	Wheat
C. H. Christensen	Lewan, Utah	240	Wheat
Marcus Christensen	Richmond, Tex.	100	Rice
Charles Brot.	Richmond, Tex.	500	Rice
A. T. Clark	Milton, Tex.	150	Cotton
O. K. Cobb	Richmond, Tex.	300	Rice
B. E. Coker	Port Lavaca, Tex.	215	Rice
Clarence Cole	Spearville, Kans.	1100	Wheat
F. S. Cole	Omro, Wis.	80	Corn, Grain, Hay
Theo. Cole	Jetmore, Kans.	640	Wheat, Cattle
Grover Coleman	Lewistown, Mont.	1040	Wheat
Percy Combs	Ridgeview, S. D.	800	Wheat
Frank Conley	Harlowton, Mont.	800	Wheat
Wm. Conrad	Fowler, Kans.	640	Wheat, etc.
Fred Cook	Seneca, S. D.	400	Wheat, Rye, Flax
Glenn Cook	Mahaska, Tex.	147	Row Crop
Fred Coonan	Jetmore, Kans.	2000	Wheat, Forage
Dock Cooper	Eden, Tex.	95	Cotton, Corn
Claud D. Cotton	Milda, Tex.	200	Cotton, Maize, etc
Warren Courtney	Guelph, N. D.	800	General Grain
C. M. Cox	Wade, Tex.	700	Oats, Barley, Cot'n
B. B. Cox	Jefferson, Iowa	240	Corn, Oats
Cox Carpet Co.	Greensburg, Wis.	3000	Hay
Harvey Crow	Oakdale, Calif.	1600	Wheat, Barley
Willard Cureton	La Grange, Tex.	160	General
C. B. Crutchfield	Mer Rouge, La.	120	Row Crop
D			
Rickey Dane	Burdette, Kans.	950	Wheat
J. L. Dasford	Burdette, Kans.	640	Wheat
Lee Davad	Miles, Tex.	150	Maize, Cotton, etc.
J. P. Dawes	Burlington, Iowa	200	General
T. Ed. DeFreese	Dogeland, Kans.	640	Wheat
Olive De Rosier	Dresden, N. D.	640	Wheat
Harry Dickey	Elk River, Minn.	400	Potatoes, etc.
Chester Dirks	Copeland, Kans.	640	Wheat
Henry Dornath	El Campo, Tex.	150	Cotton, Corn
B. Dreyfoos Hough	Burdette, Kans.	640	Wheat
Sam Dove	Titusville, Penna.	246	Jowarl
Clifford Downs	Hixton, Ark.	160	Rice
Russell Downs	Hixton, Ark.	160	Rice
W. T. Downs	Oregon City, Ore.	60	Mixed
W. W. Duch	Stillwater, Okla.	160	Row Crop
John Duffin	Linco, Nebr.	200	Corn, Grain
T. T. Duncan	Hahn, Tex.	675	Rice
Dunning & Glass	Hahn, Tex.	675	Rice
C. H. Dunn	Broadview, Mont.	640	Wheat
Grant Dunn	Copeland, Kans.	640	Wheat
Henry Dunnbaugh	Broadview, Mont.	640	Wheat
E			
H. A. Echerman	Port Lavaca, Tex.	240	Cotton, Corn
Maxwell Edwards	Rotan, Tex.	150	Row Crops
S. E. Eggert	Valley City, N. D.	480	Wheat, Flax
C. Eichhorn	Nunn, Colo.	640	Wheat, Beans
Elwell and Glenn	Richmond, Tex.	600	Rice
J. L. Ellis	Cameron, W. Va.	162	Oats, Hay
Earl Ellis	Stafford, Tex.	270	Cotton, Potatoes
H. B. Everett	Dawes, S. D.	256	Wheat, Cat'n, etc.
	Dundee, Tex.	250	Cotton, Wheat, etc.
F			
Champ Farris	Port Lavaca, Tex.	200	Cotton
A. B. Fain	Ord, Nebr.	150	Crops, Live Stock
Dewey Fitch	Carlisle, Ark.	120	Rice
J. A. Fitch	Page, N. D.	1240	Wheat, Oats, etc.
Mervin Fleming	Westport, S. D.	360	General
J. A. Fletcher	Stratford, Tex.	1000	Wheat, Maize, etc.
Ella Flick	Bradshaw, Tex.	165	Cotton, Corn, etc
C. H. Fonda	Port Lavaca, Tex.	1200	Wheat, Corn
Rabi B Fonville	Pawnee Rock, Kans.	350	Corn, Corn, Hay
J. P. Fowler	Aberdeen, S. D.	640	Wheat, Row Crop
Taylor Fox	Bakersfield, Calif.	450	Cotton
Earl French	Nazareth, Pa.	625	General
Forrest Frick	**G**		
J. H. Fulmer	Reggie Garrett	Amherst, S. D.	640
	Oscar Gartner	Hooker, Okla.	480
Frank Gibson	Oakdale, Calif.	40	Dairying, etc.
J. T. Gibson	Kimball, Nebr.	1400	Maize, Wheat
J. J. Gibson	Wilmot, Ark.	265	Orchard
T. G. Gideon	Farmers City, Tex.	600	Cotton, Corn, Hay
W. J. Giese	Power, Mont.	640	Grain
D. E. Gilbert	Elkhart, Okla.	480	Wheat, Oats
Wm. Goettling	Bowdle, S. D.	700	Wheat, Flax
Arthur Goff	Port Lavaca, Tex.	250	Cotton
H. L. Grace	Nephi, Utah	200	Wheat, Corn
T. T. Greathouse	Arcole, Miss.	80	Cotton, Corn
Ralph Greenhill	Kenrado, Kans.	450	Wheat, Corn, etc.
E. E. Greenhill	Abbott, Tex.	225	Oats, Corn, Cotton
Chas. Griffin	Arriba, Colo.	800	Wheat, Barley
A. W. Gumm	Long Mott, Tex.	450	Corn
Gumm Bros.	Long Mott, Tex.	450	Wheat
Ole Gunderson	Power, Mont.	800	Wheat
Gwinn-McMullen	Roscoe, S. D.	220	General
H			
Sig Hagen	Lowton, N. D.	400	Wh't, Barley, Oats
Earl Hall	Power, Mont.	640	Wheat
Thomas Halsey, Jr.	Bowdle, S. D.	1000	Wheat, etc.
Andrew Ham	Hamilton, Colo.	1000	Rice
J. C. Halsell	Port Lavaca, Tex.	1000	Cotton, Corn, etc.
J. B. Hampton	El Campo, Tex.	120	Cotton
Hampton Bros.	Hahn, Tex.	400	Rice
A. W. Hanna	Idalia, Colo.	800	Wheat
Harold Hansen	Hungry, Tex.	80	Cotton
Henry Hansen	Bowen, Tex.	160	Cotton
John Hansen	Bowen, Tex.	160	Cotton
Alfred Hansen	Bushnell, S. D.	640	Flax
Hansen Bros.	Pendroy, Mont.	1280	Wheat
J. C. Hansen	Bowdle, S. D.	480	Wheat, etc.
John W. Harkins	Pendroy, Mont.	1280	Wheat
Chas. Harland	Pendroy, Kans.	800	Wheat
Harry Harris	Riverside, Calif.	70	Oranges, Lemons
W. F. Hart	Riverside, Calif.	70	Oranges, Lemons
Owen Hasbrook	Ulysses, Kans.	640	Wheat
Chas. Hatfield	Wilmot, Ark.	320	Cotton, Corn
H. T. Hayman	Dresden, N. D.	640	Wheat, Corn, etc.
Fred Hearth	Power, Mont.	640	Wheat
Fred Hedrick	Norris, S. D.	640	Wheat
Fred Heibel	Greenwood, Miss.	1000	Cotton, Corn
Charles Heiberg	Greenwood, Miss.	1280	Cotton, Corn
Earl Henderson	Bakersfield, Calif.	450	Cotton
Rud Henderson	Bakersfield, Calif.	450	Cotton
Geo. W. Henning	Bonneauville, Mont.	2000	Wheat
Maynard Henry	Westhope, N. D.	1300	Wheat
J. C. Hess	Shawnee Mission, Ks.	30	Truck
Harold Heusser	Larned, Kans.	1000	Wheat
Julius Heyer	Bloomfield, Wash.	1280	Wheat
Grady Hicks	El Campo, Tex.	180	Wheat
J. W. Hicks	Sterling, S. D.	720	Wheat
Claude Hill	Pringle, S. D.	800	Wheat
Ted Hillerer	Pendroy, Mont.	1280	Wheat
Geo. Hinton	Pendroy, Wash.	1280	Wheat
A. Hochgesang	Lasara, Tex.	160	Cotton
H. H. Hoffman	Lasara, Tex.	160	Cotton
M. Hollingsworth	Lisbon, Colo.	1000	Wheat
W. H. Holloway	Lincoln, Ala.	160	Cotton, Corn, Hay
A. Hoshpauer	Bellevue, Tex.	200	Cotton, Cane, etc.
Rudolph Holtz	Dresden, N. D.	640	Wh't, Oats, Barley
Z. L. Hindsman	George West, Tex.	240	Cotton, Corn, etc.
E. A. Houte	Hargill, Tex.	160	Row Crop
J. C. Howard	Bernard, S. D.	160	Diversified
J. Hubbard	Berwick, Conn.	300	Orchard
E. & W. Huber	Hosmer, S. D.	300	Wheat, Flax, etc.
Chas. Hudson	Marion, Tex.	80	Fruit
Glenn Hunt	Kimball, Nebr.	3000	General
J			
Jackson Brothers	Richmond, Tex.	700	Rice
Bob Jackman	Carrollton, Mo.	100	Wheat
Charley Jenks	Warden, Wash.	1000	Wheat
Ed Jenks	Warden, Wash.	1000	Wheat
Edwin Jobe	Corbin, Calif.	150	Oranges
Albin Johnson	Christine, N. D.	160	Wheat, Rye, Corn
Bert Johnson	Burdette, Kans.	720	Wheat
O. S. Johnson	Lyford, Tex.	150	Cotton, Corn, Cane
Oscar T. Johnson	Lyford, Tex.	90	Cotton
J. H. Jones, Jr.	Dillon, Ariz.	160	Cotton
Orton E. Jones	Acton, Mont.	1105	Wheat, Corn, Hay
R. S. Jones	Cropwell, Ala.		Cotton, Corn, Hay
A. Jydstrup	Summit, S. D.	380	General
K			
Elmer Kaiser	El Campo, Tex.	100	Cotton
Raymond Kaiser	El Campo, Tex.	140	Cotton
H. H. Keith	Harrison, Ark.	100	Wheat, Oats
Wm. Keefer	Malt, Mont.	800	Wheat
Will Keiser	Hargill, Tex.	150	Cotton
Ervin Keller	Timber Lake, S.D.	600	Corn, Flax, etc.
Con Kelly	Crete, N. D.	180	Wheat, Corn, etc.
Walter Kelly	Britton, S. D.	1120	Wheat
Kohn Kent	Boise, Idaho	168	Grain, Hay
Kent & Colvin	Kennedy, Tex.	300	Cotton
Erwin King	Lewistown, Mont.	400	Wheat
Bob Kirkland	Armel, Colo.	240	Mixed
Kjos & Brunstads	Portland, N. D.	480	Small Grain
M. E. Kruse	Bisbee, Tex.	160	Row Crops
J. C. Kubricht	Templeton, Wis.	60	Grain, Corn, Hay
L			
Emil Landin	Canado, Tex.	700	Rice
A. Landon	Richmond, Tex.	340	Rice
Henry Large	Denning, Tex.	75	Row Crops
J. Larsen	St. Andrews, Wash.	2000	Wheat
Larson Bros.	Richmond, Tex.	600	Rice, Cotton
Fred Lawrance	Somerville, Kans.	640	Wheat
Richard Lee	Hope, N. D.	640	Wheat, Oats, etc.
J. A. Leitner	Bowen, Tex.	160	Cotton
H. Lemke	Phoenix, Ariz.	20	Citrus Fruits
W. W. Lester	Verdhest, Tex.	200	Cotton, Corn
Fred Lever	Raymondville, Tex.	300	Cotton, Feed
John Lind	Bonneauville, S. D.	2280	Grain
H. B. Long	Port Lavaca, Tex.	600	Cotton
Albert Loomis	Beardstown, Mont.	1700	Wheat
Roy Lowe	Hebert, Okla.	160	Cotton, Corn
T. T. Lorber	Conlen, Tex.	135	Row Crop
Asa Luthringer	Lyford, Tex.	160	Rice
M			
Fred Machetta	Bowens, Tex.	460	Cotton, Maize
Walter Maedje	Vermontville, Mich.	51	General
R. C. Maher	Taft, Tex.	157	Cotton
Geo. Mahler	El Campo, Tex.		Cotton
Chas. Maine	Lyford, Tex.	160	Cotton, Feed
Clyde Martin	Stratford, Tex.	600	Wheat
Marty Bros.	Tracy, Calif.	400	Beans
Carl Marty	Oakdale, Calif.	30	Orchard
Martin Maas	Bowang, Tex.	300	Cotton, Grain
B. O. Massey	Edna, Tex.	200	Cotton, Corn
Otis Mather	Hemlock, N. Y.	200	Grain, Hay
Phillip Mawhirter	Strasburg, Colo.	960	Grain
Robt. McCreery	Conlen, Tex.	1000	Cotton
Claude McDaniel	Dunstable, Mass.	75	General
E. W. McIntyre	Stratford, Tex.	1280	Wheat, Maize
Joe McKibben	Armel, Colo.	800	Grain
Geo. Meeker	Jetmore, Kans.	1120	Wheat, Barley, etc.
Meiers Bros.	Larned, Kans.	1250	Wheat
Frank Meharry	Adrian, N. D.	960	Grain, Flax
S. A. Memmott	Ridgeview, S. D.	640	Wheat, Flax
Jack J. Mercer	Nephi, Utah	700	Wheat, Alfalfa
F. J. Merwerick	Lyford, Tex.	160	Wheat
Henry Mielke	Arrowcreek, Mont.	640	Wheat
Conner Minaloa	Conlen, Tex.	1040	Cotton, Corn
Ben Miller	Bon View, Tex.	170	Cotton, Corn
T. G. Miller	York, Nebr.	240	Corn, Hay, Hogs
Leon Milling	Miles, Tex.	172	Maize, Cot'n, etc.
R. L. Milton	Bowen, Tex.	160	Cotton
Mitten Bros.	Lyford, Tex.	160	Cotton, Potatoes
Everett Mosher	Ladd, Colo.		Wheat
Fred Mosher	Ladd, Colo.	320	Cotton, Corn
Fred Mosher	Lasford, Tex.	160	Cotton, Grain
Ben Moss	Bonneauville, Kans.	640	Grain, Corn
Henry Murdock	Rock City, Illinois	1040	Wheat, Feed
N			
Lohr, H. D.	Lohr, N. D.	320	Wheat, Oats, Flax
Aston, Melvin	Dorsett, Mont.	1280	Wheat
Parshall, N. D.	Parshall, N. D.	640	Wheat, Rye, Oats
Jetmore, Kans.	Jetmore, Kans.	1000	Wheat, Hay
Lamar, Kans.	Lamar, Kans.	1000	Wheat, Row Crop
Bowen, Tex.	Bowen, Tex.	160	Wheat
Conlen, Tex.	Conlen, Tex.	1000	Cotton
Lyford, Tex.	Lyford, Tex.	160	Cotton
O			
Raymondville, Tex.	Raymondville, Tex.	41	Cotton, Cane
Edmond, Okla.	Edmond, Okla.	160	Wheat, Corn, Hay
Bowen, Tex.	Bowen, Tex.	160	Cotton, Corn, Hay
Bowen, N. D.	Bowen, N. D.	640	Small Grain
Bowen, S. D.	Bowen, S. D.	300	Wheat
Bowen, Calif.	Bowen, Calif.	400	Cotton, Corn, Hay
Phoenix, Ariz.	Phoenix, Ariz.	235	Cotton
Raymondville, Tex.	Raymondville, Tex.	80	Cotton
Clarks, Nebr.	Clarks, Nebr.	240	Corn, Hay, etc.
Raymondville, Tex.	Raymondville, Tex.	175	Cotton, Corn
Orchard, Colo.	Orchard, Colo.	320	Grain, Corn
P			
Pabst Farms	Oconomowoc, Wis.	3000	Dairying, Wheat



The Farm Home



When the Country Church Closes

By HILDA RICHMOND

NO COUNTRY church closes abruptly. Those who attend know by unmistakable signs that dissolution is approaching. So many families leaving for the city, so many empty farm houses, so many of the older and reliable workers dying as the years go on and all the rest of the signs have been apparent for some time. It may be a bitter occasion when the church of the pioneers falls into decay, but more important than all else to the community is the planning for the church life in the days to come. Happy is the country family whose religious affiliations are severed with a dead church only to be renewed the very next Sunday with a larger and really active congregation.

Delay in making the change is often fatal. To let even a few Sundays elapse paves the way for utter disregard for any kind of church life. From a secular and social standpoint alone no family can afford to hold aloof from church life. No matter what denomination the church people are the cream of the community. To be sure many good people, substantial and right thinking along educational and civic lines, are not church members, but they are the exceptions to the general rule. There is a training, a culture, a high standard and noble principles to be obtained from regular church life. Saying nothing about duty to God and religious things the church represents the highest type of literary life in many communities to be had in these busy days.

Church Vacation

A town minister making the rounds of the church members in a community where the church was about to close was pained and amazed to find parents right in the presence of their children saying that they meant to take a vacation from church duties. It had been such a struggle to get finances in the past few years and to keep the church alive that now that they were free they intended to rest up a bit. There are hundreds of thousands of dusty church membership letters reposing in old trunks that never will be brought out simply because short-sighted people did not at once affiliate themselves with another church. If the old song, "Come to the Church in the Wildwood" no longer has a meaning for your neighborhood as regards the setting of the church building, by all means get into the nearest large church of your choice and work actively. There is a training, a discipline, a privilege and an education for you and yours in addition to a clear conscience. The old church may have been a very good church, and it may be a great sorrow to give it up, but it is not the only good church. Keep that in mind and let not one Sunday find you without a church home.

Stop That Cold

MANY a cold may be prevented by the right precautions. These, of course, should start with the person who has the cold. He must smother or cover his cough or sneeze, not let any one else get his breath, nor let another drink from the same glass he has used.

The best way to prevent a cold is to get plenty of fresh air every day, keep the body in proper order, the general system well toned-up. But when these things fail, and you first feel the unmistakable signs of the cold, that is the time to get busy eradicating it. For if you wait a day or two, then it may be too late to check the cold, and it will have to run its course. The best way is to let the physician treat the first symptoms, or have in the house that which he prescribes in such an emergency.

Especial care must be used to safeguard a baby from people with colds. Do not let any one who has a cold in the same room with a baby. If the mother herself has the cold, she may wear a cloth mask tied over her mouth and nose while she is tending the baby, and wash her hands well, using some harmless antiseptic on them before touching the little one. Handkerchiefs used by persons with colds should be put to soak in a borax solution immediately after they are discarded. Marion Cossitt Brackin.

Note:

"Cover up each cough and sneeze. Then you will not spread disease."

Children delight in reciting and obeying this couplet, and incidentally while they are enjoying the rhyme and meter, many grown-ups also see the good sense it aims to teach.

Paper handkerchiefs or soft paper napkins (60 cents a 1,000) are not only time-savers for the housewife, but a fine sanitary measure also. They burn, prevent spread of the cold, and cut off dreary moments for the laundress. —G. S. S.



Which Way Do You Stand?

How to Stand While Mopping

HOW do you stand when you mop or sweep or oil a floor? Erect and square on your feet, with your back straight, bending, if at all, from the hips, your head in a normal easy position for inspecting your work? That's the correct posture for mopping or working with any long-handled implement on a floor. The picture shows a farm woman demonstrating good working posture to other members of her club in Hampshire county, Mass. The subject of good and bad posture in doing various household tasks was introduced at a home demonstration meeting by the county extension agent, and followed by a series of interesting poses illustrating good and bad positions at several sorts of housework, such as washing dishes, handling food at the oven, sitting to peel vegetables and mopping and sweeping.

It is being more and more widely recognized that there is an important connection between good posture and avoidance of fatigue in doing any sustained piece of work. Poor posture strains the muscles of the neck and back, hinders the circulation, cramps the chest, and often forces the abdominal organs out of place and after a time may result not only in fatigue but in poor body condition. Farm women are especially interested in whatever knowledge can be applied to their problems to make their work easier and their possession and enjoyment of leisure greater. Compare the good posture in mopping with the bad one, in which the hips and abdomen are thrust forward in such a way that the shoulders are slouched and the head is out of line with the body and the neck muscles are stretched.

Home Helps

By HEPSY NEFF

IT IS possible that some of us, sometimes, have made improvements that did not improve; that brought us no gain. That master business man, Henry Ford, one year junked more machinery and material than any of us could guess, in order to make improvements in his motor car. But he could lose a few millions and feel it less than we would feel the loss of a few dollars.

One of the improvements within reach of any handy man and thinking woman is a window shelf or cooler reached by merely raising a window. For this purpose a north or east window or a window opening on a shaded porch is best. It should be set against the outside wall as tight as possible and fastened against the frame of the window. The window sill makes a firm foundation for the beginning and if the first shelf is fastened to the lower side of the sill it will need but little other support. A second shelf six inches below the top of the lower sash is worth while for cooling pies or cooked fruits. The whole should be the size of the lower sash and enclosed in a frame work covered with ordinary screen wire and, if exposed, a top or roof which serves to shed rain adds to its usefulness. As the purpose of a window shelf is to offer a quick and easily reached means of cooling and keeping food cool, any lad with a little experience in manual training can make it, keeping in mind dependableness and convenience.

Tried-and-True System

The water system discussed last week has further possibilities very much worth considering. These suggestions are no may-be story but a real has-been which the writer has lived and worked in for nearly ten years and which can be duplicated in any farm home that has a small elevation for a building site. Given the possibility of a well-lighted basement with at least a six-foot ceiling, cement floors and walls, a first-class laundry room and even a fully equipped bath room are among the possibilities. A separate laundry room with stationary tubs, filled from a faucet and emptied by the lifting of a plug, can prove its full value to any beholder. A cistern walled off in a corner or under a bay window, square or jug-shaped, provides the water supply and it is economy to keep the plumbing as close together as possible.

Timely Tips

I CLEANED a spot on a silk dress using gasoline and salt. Being in a hurry, the salt had not time to dissolve and a dark ring resulted. Then I thought of starch and its absorbing quality. Using cold water and starch I made a paste the consistency of cream and poured it over the stain.

When dry, I brushed off the starch and was delighted to find the silk like new. A little rinsing in cold water was necessary to get rid of all the starch.

* * *

Carry a small clothespin in your coat pocket or purse. It will hold make your zipper overshoes ZIP and will save the fingers. Merely slip the clothespin over the metal thumb-piece and try for yourself.

Mrs. M. C. Smith.



An Alfalfa for Rigorous Climates

FORREST'S No. 98.—Thoroughly acclimated to rigorous climates. The remarkable root system, with underground buds fully protected by the soil, enables it to survive the most severe weather, even without snow covering) to resist the heaving of the ground from frost in the spring; and permit plant to draw more moisture in dry seasons. Instead of buying just alfalfa, get Forrest's No. 98—and be sure of a hardy enduring strain that will increase soil fertility and produce heavier crops.

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Aunt Jane's Escape

By MRS. A. C. MAMMEL

A True Story

"COME on, Peg, Grandma's going to tell us a story," said Kenneth, pulling his sister away from the brown cookie jar that stood on a low shelf in the pantry. Peggy's face lighted up and she scampered away with her brother to sit at Grandma's feet to listen to one of her always thrilling, true stories of her childhood.

"Well, my dears," began Grandma in her sweet, gentle voice, "I'm going to tell you about your great aunt Jane's narrow escape from being captured by a hungry panther. It happened when I was very small and I do not remember much about it, but my mother told me the story many times. Aunt Jane was about fifteen years old at the time, and although she lived to be an old woman she never forgot her thrilling experience.

Pioneer Times

"There was not yet much cleared land in the neighborhood where I lived as a girl. It had not been settled many years and most of the country was covered with great forest trees. The settlers lived a good piece apart in log houses, and the roads and paths were merely trails through the forest. There were bears, deer and wildcats all about us, and sometimes a panther would creep up near the clearings and kill young farm animals and make off with them.

"One cold, bright November day our father killed a veal and, as was the custom among neighbors there, he set apart a piece for each of the near neighbors. Mother said that Jane could carry a piece to the Wall's place some two miles away by a path straight through the forest. Although we children were not allowed to go far from the house, it was so bright a day, and Jane was now quite a big girl, that father and mother believed it safe enough for her to do the errand, especially since she could go there and back before nightfall, because it was still three hours before sundown.

"Well wrapped up against the cold, Jane started away through the woods with the meat in a package under her arm. It was a beautiful day and she was enjoying the walk and the play of the birds and squirrels in the trees. She was not thinking of danger when she thought she heard a twig snap behind her. She looked around but could see nothing and started on. Again she heard a strange sound, but when she stopped to listen all was still. But the third time she looked around she was horrified to see a panther standing stalk still in the path behind her and gazing steadily at her.

A Long Mile

"You cannot wonder that she was so badly scared that she could not move at first, because she had often heard older folks tell how sneaking and dangerous panthers were. But as she stood there she remembered some one saying that if you kept your eyes fixed steadily on the eyes of a panther they would not molest you. So she began walking backward, staring steadily into the eyes of the panther. The panther followed, but kept at about the same distance. Aunt Jane kept on walking backward, not daring to take her eyes off the panther. Suddenly a new fear came into her mind. She feared that she might stumble and fall over one of the many logs and limbs which lay across her path. This increased her caution but slowed her progress, and it seemed an age since she left home. Although she was more than half way to the Wall place when the panther came upon her, that last half was the longest mile she ever traveled in her life.

"But finally she saw and heard signs which told her she was near her journey's end. Just then it occurred to her for the first time that the panther was following her because it smelled the fresh meat she was carrying, so she threw the package at it and turned and ran as she never had run before. She climbed over the log fence surrounding the clearing and ran breathless to the door. Mrs. Wall saw her coming, opened the door quickly, thinking that something had happened at the Hoover place.

"It was several moments before Jane could get her breath sufficiently to relate her experience. When Mr. Wall heard the story, he took down his gun and went along the path until he heard the panther off by the side of the path and killed it. But it was a long time before Jane would venture from home alone again."

Making Toys a Treat

HELEN received five dolls for Christmas last year. Within two days one was broken and the others did not interest her particularly because she had received so many other gifts throughout the year.

Yet, this same little miss of five spent the morning not long after playing on my back steps with the parings we had cut from a bunch of turnips. She had a glorious time tying strips of pink gingham on the longest parings "pretending" she had dollies with curly hair. And why was she so much more interested in these imaginary dolls, the only tangible evidence of which was their make-shift curls, than she was in the beautiful dolls she had received at Christmas? Almost all children are eager to make something or do something themselves, without interference.

They Make Their Own Fun

Making use of every-day things teaches children to be creative besides amusing them, usually, far more than ready-made toys do, especially when given in an overabundance. There are countless ways that a mother or a father can let children make their own fun. For example, one of the happiest boys we have seen in many a day was swinging in an old auto tire he had hung from a tree, to make a swing that was "different" and a substitute, used, no doubt, because of lack of rope. A short piece of rope was used, however, to suspend this old tire from a tree and the boy was getting an extra thrill by the "bounce" of the rubber.

Of course, not all children want to do things for themselves and if they lack initiative, a little help in starting them to fashion toys that they will enjoy is a sure way to build up their interest in creating, in both a material and a mental sense. If Betty's doll furniture goes to pieces, let Betty mend it or make it over, or devise something to take its place. If Bobbie's toy dog loses its leash or collar, let him make a new one or "invent" a harness that will serve the purpose.

A few suggestions from adults, at the start, will put children on the "right track" and after that, "little interference" is the best rule if the children are really to learn for themselves. They should not be overstimulated by outside help or by outside prodding. Even babies will enjoy the game of making playthings—of course, very simple ones.

When the children come to realize the work that goes into their making, toys will be truly "a treat!"—Theodora Brownfield, Nat'l Kindergarten Ass'n.

Famous Recipe For Stopping a Severe Cough

You'll be pleasantly surprised when you make up this simple home mixture and try it for a distressing cough or chest cold. It takes but a moment to mix and costs little, but it can be depended upon to give quick and lasting relief.

Get 2½ ounces of Pinex from any druggist. Pour this into a pint bottle; then fill it with plain granulated sugar syrup or strained honey. The full pint thus made costs no more than a small bottle of ready-made medicine, yet it is much more effective. It is pure, keeps perfectly and children love its pleasant taste.

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Farm Problems in Ancient World

(Continued from page 5.)

inscriptions. As to keeping them in shape—Hammurabi, 2130 B. C., directs a governor "to call together the people who possess fields on the banks of the canal Damanum to clean it out. . . . It must be finished by the end of the month."

His famous code imposed severe penalties on the careless farmer who failed to keep his ditch or dike in good shape, or flooded accidentally his neighbor's land or stole his watering machine. And as a result of it all the land was like an Eden. Old Herodotus chants its praises. When the flood did at last overwhelm it, 'twas the human flood from the steppes.

The Nile

Meanwhile, a thousand miles away, another people of Berber stock were handling a somewhat simpler problem along the Nile. There through a desert flanked valley, two, five, fifteen miles wide, the river wound sluggishly northward for some three hundred miles till it reached its delta broadening toward the sea. Where the river came from no one exactly knew then; nor how long it was above the narrow sluiceway of the first cataract; nor just why every mid-summer it rose, spread out in a great flood which did not abate till about November. Indeed the later Greek sages did not agree on that point. Some endorsed Euripides when he sang of

> "The Nile, the fairest stream on earth
> Filled by the summer of the Aethiop land,
> The Negro's home, when the deep snow does melt
> And o'er the land the Sun his chariot drives."

Others gave the truer explanation, heavy summer rains in the highlands of Abyssinia. But Euthymenes claimed, from his own knowledge, that it was fed by the encircling sea, which flowed north, when the wind would let it. But whatever the cause it did rise twenty, twenty-five feet, and stayed up quite a long time. What should they do about it? Build dikes? Reclaim the land? Fortunately no one thought of that. Egypt was a "dry state" if there ever was one. Its natural soil was none too good. But the fine particles brought down by the river, and with which it had built up its delta, formed just the soil for grain growing.

To Take Advantage of Floods

The thing to do then was to cooperate with each other and the river. Let it flood the land, and renew it each year; and where the normal flood could not reach, let ditches be dug back, and up and down, to widen the cultivable area. Then when the water had receded—plant. A quaint wall fresco in Italy gives us a picture of Egypt in flood-time 2,000 years ago. It reminds one at first very faintly of a scene on the Mississippi in 1927, with houses sticking up above the water and people, soldiers and civilians traveling in boats. But look closely—the houses are well placed, suffering no damage, the housewives seem unworried, the travelers quite good natured. 'Tis a picture of one of the great granaries of the world.

So the Egyptian succeeded. Far simpler his problem, however, than the one which then, as since, rather staggered still another group of farmers in southeastern Asia. There some 3000 B. C. a people of Mongoloid type had pushed down from the central highlands of the continent along the course of the Hoang-ho.

A Rich Land

The land they entered was extraordinarily rich. For a depth of from 30 to 100 feet or more the earth was carpeted with loess, a soil of peculiar structure, brought down from the uplands by the winds of thousands of years. Naturally then the immigrants took to agriculture. Their rulers fostered it. Without accepting all their traditions as sober history, they are worth a glance.

Shonnung, 2737 B. C., is hailed as the pioneer. 'Twas he who persuaded the people to settle down, give up the chase, clear the fields, sow crops and plant melons so that from his time

> "they began to have sufficient food and drink getting provisions from grains. Also the people were taught the use of hemp and the mulberry tree and the making of cotton and silk. Cheh Tsi was ordered to invent rice threshers, to make various implements for cultivation and to dig wells and make stoves for the people."

Add to this that they were introduced to the plow, and there seems little left for his successor Huangti, 2698 B. C., to accomplish; but he went on to divide the year (how thoughtful of him!) into four seasons, develop a system of weights and measures, invent writing, start the building of houses (and barns?) and then again devise agricultural implements. Evidently swift progress was being made, when, 2293 B. C., down came the deluge. Pathetically the Emperor Yao makes his appeal, recorded in the Shu King:

> "Oh, chief of the four mountains, destructive in their overflow are the waters of the inundation. In their vast extent they embrace the mountains and overtop the hills threatening the heavens with their floods so that the inferior people groan and murmur. Is there a capable man to whom I can assign the correction of this calamity?"

Considering the reported depth of the flood, 'tis hardly strange that the first engineer proved incapable, and resigned after nine years. Then the monarch called in the "Great Yu" and the troubles were all ended.

System of Canals

So the story. What really happened? Presumably a great flood on the Hoang-ho, whose recurrence the Chinese engineers sought to prevent by developing a system of canals. These canals moreover would not only divert the surplus water and add to the country's means of communication, but aid the irrigation of the porous loess, and prevent soil depletion. And the last two objectives were fairly well attained. Of course China had her ups and downs. Irrigation ditches left uncared for became choked. While from time to time the system needed extension. So in the "Han Book" we read:

> "The government of Chin State appointed Chen Kou from Han state as an engineer to open the King river to make water channels for a distance of over three hundred li (over 100 miles)",

and again later under the Han dynasty, 100 B. C.:

> "Emperor Wuti took the advice of Cheng Dong Sze, and sent out several ten thousands of soldiers to cut the Wai River to make waterways."
> "One load of King River contains several do. It can be used both for irrigation and fertilization so that it increases our rice and millet crop."

So far the canal system was successful. But when it came to preventing floods along the Hoang-ho, that was another matter. Not but what through the centuries strenuous attempts have been made. Great dikes have been reared some two miles back from the natural course of the river, dikes sixty to seventy feet high, sometimes three hundred and fifty feet in width, and on whose care, 'tis said, sixty thousand workmen are continually employed.

Despite these efforts, however, the problem has never been really solved. Draining as it does a great mountain region again and again the Hoang-ho has burst its dikes; ten times within 2,500 years it has shifted its course

(Continued on page 33.)

EVENTS CAUGHT BY THE CAMERA



(Copyright by Underwood & Underwood)

1. Museum gets ten-million-year-old cat. "Dinictis Squaliden," meaning the cat with the teeth like a shark, is a member of the oldest known cat family. This specimen is approximately ten million years old, and was found by Paul C. Miller, associate curator of paleontology at Walker Museum, University of Chicago, at Hat Creek Basin, Sioux county, Nebraska. From this type the sabre-tooth tiger and the common house cat developed. Prof. Miller is pointing to the long teeth.

2. Champion alligator wrestler. Photo shows Albert Coppinger subduing an alligator with vise-like jaws—in the heart of the wild Florida Everglades—and all for sport. The thrilling battle lasted 45 minutes, Coppinger escaping death a number of times.

3. Skiers enjoy poetic beauty of winter in Bernese Oberland, Switzerland. Photo shows a study in semi-silhouette at Adelboden, in the Bernese Oberland, Switzerland, where the season for winter sports is now in full swing.

4. A royal lady celebrates her birthday. Photo shows the most recent picture of Princess Shigoku Terumo-Miya, daughter of the Japanese Emperor, taken on her third birthday.

5. Mayor Ernest Thrasher of Sandwich (right, holding wire) being assisted by C. Ross McColl, city engineer (in foreground) in lifting the last wire from the traveling pulley to place it in the last cable strand of the Ambassador International Bridge which will join Detroit and the Ontario border cities. It will be ready for traffic on July 1, 1929.

6. The Fairchild K-8 military camera, with which Captain A. W. Stevens, and Captain St. Clair Street, altitude stars of the U. S. Army Air Corps, took the world's highest photo—a distance of seven miles in the air. The camera automatically takes 110 seven by nineteen-inch photos, and at the same time records the exact time of the exposures, the altitude at which it was made, the focal length of the lens and the date.

In Enemy Country

By James Willard Schultz

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Synopsis

Many Swans, a Sun medicine man, Lone Woman, his wife and Bear Plume, their son, who tells the story, have left the lodges of their own Blackfeet tribe and after perilous adventures, have joined the enemy tribe, the Crows. Lone Woman and Bear Plume cannot understand the move and Many Swans' only explanation is that he has done some secret wrong and must be punished. A tame wolf has joined the trio and is the constant companion of the boy. At the Crow tribe they find a welcome, much to their surprise, and Bear Plume and Black Elk, son of Chief Dusty Bull, pledge everlasting friendship. Comes a day when Many Swans gives a feast and smoke to Dusty Bull, Long Bow, Low Born, an aspiring leader, and other chiefs and warriors. After the feast, the guests tell of their war trails and the coups they have made. Low Horn tells a tale of bravery and killing but is exposed as a liar by Many Swans and is severely punished by his own people. Lone Woman is warned that the disgraced chief has sworn revenge. Many Swans leads the Crows in battle against the Assiniboines and in the absence of the warriors, Bear Plume and Black Elk are required to provide meat for the families. Buffalo and antelope become scarce and the boys start out on a secret journey for game. They are surprised and captured by the Spotted People. At night they plan to escape.

SIGNED the chief: "Some of these who are coming are my close friends. I have to give them feasts, smokes; we shall not go out for buffalo tomorrow. Now, let us sleep."

On the following morning, the chief's young brother, Lone Antelope, came in, shared with us our early meal, and then the chief signed that Black Elk and I should take our weapons and go with the young man to bring in the horses.

"It is good that you two are to go with me. You and I are, I think, to be friends," he signed.

"Yes," we signed.

He led us across the river and up onto the rim of the plain, trying, as we went, to make friends with Wolf, who would not go near him. We did not know that we ourselves wanted to be friends with him. He signed to us to see how many were the horses of his people. Truly, they were many: all up and down the valley of the river, and upon the plain on each side of it, band after band of the animals; bands of many heads; the greater number of them spotted horses, beautiful, and fat. A little way out upon the plain, we came upon the chief's band, all of a hundred head, and tied to four of them, neck and neck, were our four animals. There were also five large mules in the band, and those, Lone Antelope told us, his brother had captured from white soldiers during a fight with them, somewhere to the south.

"In that fight," he went on, "killed were my two uncles. Bad, very bad are the white soldiers. I pray Sun to destroy them all. You two, do you not also hate them?"

"We Crows, we do not know, do not see them," Black Elk answered.

"In my country, where join together South Big River and Elk River, are white soldiers. They come not to trouble us, we go not to trouble them," signed I.

Lone Antelope blew out a deep breath. "Soon those white ones will try to take your country, just as they are trying to take our country: you will fight them," he signed.

I did not believe that that would ever happen. How could I know that, but a few winters hence, those soldiers would destroy a whole camp of our brother tribe, the Pikuni?*

"Your brother, the chief, what is his name?" I asked.

"Otter Head. His sits-beside-him woman, her name is Lance Woman. His other woman is Good Singer. They like you; they like you both," he signed.

We drove the horses down to the river, watered them, and left them to graze back up onto the plain, excepting one that Lone Antelope caught for his brother to ride. Going back into camp, we saw that many of the men were already dressed in their war clothes, ready to go out to meet their friends the Big Bellies. The chief, our captor, Otter Head, had on fine bighorn leather shirt and leggins, beautifully embroidered with colored quills, and fringed with white weasel skins and enemy scalps. He was surprised when he saw that we had brought in but one horse; spoke sternly to his brother, and then signed to Black Elk and me: "This day, when our true friends, the Big Bellies, are coming, is a great day, a happy day for us. I want you to be happy with us; go back to our band and catch each of you a horse. I want you also to ride to meet them."

WE did as we were told, and, after saddling the animals, sat with the chief outside his lodge. All of the people of the camp had their eyes on three men, who, with their horses, were standing at the edge of the west-side plain. After a time they turned about and looked down at us and waved their robes: they had sighted the Big Bellies; they were near. At that, we all got upon our horses, and Otter Head signed Black Elk and me to follow Lone Antelope; that he himself would join his band of fighting men. We rode up the steep slope of the valley, and, looking out over the plain, saw the approaching long caravan of the other tribe. Here the different warrior bands of the Spotted People formed in line, seven bands in all, Otter Head leading one of them, which we afterward learned was the Bull band of the society. They numbered about one hundred, mostly oldish men, so we knew that our captor must have counted a great many coups in order to become their leader. They all carried red shields, some of them having a center black painting of a bull's head, others a center ornament of a bull's tail. Two long black painted lances, ornamented with bunches of raven tail-feathers, belonged to this band, and were carried by the two men riding next behind the chief. Each member of this band had a cap made of the head, skin, and horns of a buffalo bull, which he wore when the band gathered together for a ceremonial dance. Whenever camp was to be moved on the following morning, the two lances were stuck into the ground in front of Otter Head's lodge, not straight up, but slanting in the direction that the people were to go; but if the lances were stuck straight up, they indicated that the camp was to remain where it was until further notice.

With many other youths we three rode a little to the right of the long column of the warrior bands. Soon they stopped, and sang, in time to the beating of their drums, a song of greeting to the advancing warrier bands of the Big Bellies. Then, presently, the latter came to a halt and sang, while the Spotted People bands moved forward. And so, alternately halting and singing and moving forward, the two columns at last came together, and friends greeted friends, leaning out from their horses and embracing one another. The Spotted People warriors then turned about and escorted the others down to camp, to entertain them while their women were making their own camp at the lower end of the big bottom.

A little later, when Black Elk, Lone Antelope and I returned to Otter Head's lodge, we found him entertaining four of the newcomers, men of fine appearance and well-dressed; speaking sometimes their own language and again the language of the Spotted People; truly, I thought, the two tribes were friends for many, many winters back, that they should speak equally well the two very different languages.

I noticed that the visitors looked often at Black Elk and me, and so knew that the chief had been telling them about his capturing us; that made me feel angry and ashamed. Presently the one who sat next to the chief on his right said something to him, and, as he replied, he looked and pointed to me.

Said the man then, in my own language: "Youth, your father, what is his name?"

So surprised was I that I nearly fell over backward; my heart seemed to start beating up in my throat; I felt trembly. My questioner, his companions, the chief, and his women were all of them smiling as they looked at me.

Somehow, afraid-voiced, I answered: "Named Many Swans."

"Ah! Many Swans! He who always goes alone to war. I have met him. In the camp of the Pikuni, once, I smoked with him."

Still was I so surprised that I could not speak. The man went on talking to me in my very own language, and at the same time using the sign language, so that the others there would understand.

"Long ago, with my father and mother and other relatives, I visited our brother tribe, the North Big Bellies," he said. "Two winters we remained with them, and during all that time we all camped side by side with the Pikuni, hunted with them, traveled with them. So was it that I saw much of your country, as far north as Bely River, and from the Lakes Inside out past the Sweetgrass Hills as far east as the Divided Hills. Yes. Also have I camped in your Bear Paw Mountains, your Wolf Mountains, and along your Big River to the south of them."

Ha! As he mentioned those mountains and those rivers, one by one, how I wished that, with my father and mother, I were back there, safe with my own tribe in my own country.

Now again Otter Head and this speaker of my language had some talk together, and then the latter said to me: "Your friend Otter Head would like to know, and so would I, just how it is that you, and, as he tells me, your father and mother too, came to live with the Crows, enemies of you Blackfeet and your brother tribes."

At that, I took heart. I was suddenly glad to speak my own language to one who understood it. I told how my father, because of something he had done that caused him great unrest, had decided that we must leave our own people and go to live with the Crows. I told of our fight with the Crees at Arrow River; and of how, finding the Crow camp on Bighorn River, we had in the night set up our lodge close to it, and on the following morning been visited and welcomed by the great Crow chief, Dusty Bull, whose son was there beside me.

"Ha! So this youth is the son of that Dusty Bull, man of fierce heart! I cannot understand how it was that he welcomed, instead of killing, you and your father."

"My father is a Sun priest; he has the powerful buffalo sacred lodge," I explained.

"Ha! that explains it; because of that, the Crows made friends with him. When I was with the Pikuni, I heard much about that buffalo medicine, its great power. It was then owned by a man of your other brother tribe, the Bloods; by one named Eagle Ribs."

"Yes. From him my father got it."

"Your Crow friend here, what is his name?"

"Black Elk."

At that, the man signed Black Elk to give my name. He told it.

"Ah! Now this I say to you two: I am glad that I have met you here this day. I have much to talk over with my friend here, Otter Head. Tomorrow, when Sun goes down from sight, come to my lodge, you two and Otter Head, and smoke with me. There is that that I have to say to you."

"Yes. We will do as you ask," I replied.

A LONG time this man and his companions talked with Otter Head, and when, at last, they left us, the latter signed to Black Elk and me: "He who talked with you, he who speaks the Blackfeet language, is a great chief of the South Big Bellies. It is good that he likes you two. His name is Morning Eagle."

Well, for this man who spoke my language, who was almost the same as a man of the North Big Bellies, close friends of my people, I had sudden and great liking. I felt that I could hardly wait for the setting of next day's Sun, to go to his lodge and again talk with him.

Day was barely come when Lance Woman and Good Singer got up, built a fire, and began preparing our morning meal. With Otter Head, Black Elk and I went to the river and bathed. Then, after eating, we two went with Lone Antelope and brought in the horses, and, as we were on this day to go out after meat, we drove the whole herd into camp, so that the chief and his women could select the ones that they were to use. They were awaiting our coming, and, when we had brought the band to a stand before them, Otter Head signed: "You, Bear Plume, and you, Black Elk. Now, on this good day, my women and I are going to give you horses. Look well at those that are to be yours, so that you will always know them."

We could hardly believe that we rightly understood his sign talk; we looked at each other, at him and his women, our mouths wide open, our eyes very big.

Then, smiling, but with eyes a little wet, Lance Woman signed: "My sister and I, we like you two! As were our sons to us, so are you now to us. We love you. We do not want you to be poor; so it is that we now give you horses on which to hunt and ride about as you will."

"Yes, Truth, that she told you. Come, now, and we will point out those that are to be yours," signed the chief.

We all went in among the horses, and the chief pointed out a big pinto, which he gave to Black Elk, and then selected another one for me. Then Good Singer gave Black Elk two animals, her very own, she signed; and last, Lance Woman gave me a big gray and a beautiful black-and-white pinto. I cried to her that she was very generous.

Signed the chief: "It was my thought to go with you after meat, but now have come the Big Bellies and I must visit with them. So go, you three, and try to get fat meat."

We saddled, each of us, Black Elk, Lone Antelope, and I, a trained runner, and, mounting, joined a number of hunters who were setting out for a large herd of buffalo that had, the previous evening, been seen heading toward the river at some distance below camp. Sun was well up toward the middle when scouts who had been sent on ahead rejoined our party and said that the big herd was in a long wide bottom of the valley just below, and on the east side of the river. There followed some talk between the older men of our party, which Black Elk and I did not understand, but, when it ended and we all started on, Lone Antelope signed to us to remain close to him and we should make a good killing.

So was it that, when we arrived opposite the bottom in which the buffalo were resting, we three remained—with ten or twelve other hunters—in a strip of willows bordering the river, and the others, separating into two parties, left us and crossed over to the other side of the stream, well above and below the herd. We could not see the animals, as they were hidden from us by a grove of cottonwoods on the opposite shore. Lone Antelope signed to us that the two parties were to surround and attack the herd on three sides, and then our party was to attack and drive it back when it sought escape by crossing the river.

AFTER a long wait, we heard a shot and knew the attack had begun; a few more shots followed, then the thunder of hoofs. Our horses heard it and began to prance and paw the ground, so anxious were they to join the chase. Above the trees across from us rose a cloud of dust; the thunder of hoofs, so loud at first, was becoming fainter and fainter, and we feared that the herd had broken through the circle and was heading up onto the plain. We were all about to cross the river, our hope of making a killing gone, when one of our party shouted something, and Lone Antelope signed: "They have turned the herd; it is coming."

Sure enough, the thunder of hoofs was growing louder; and soon, with great crashing of brush and dead sticks, a small part of the herd, forty or fifty animls, came through the grove and splashed into the shallow river. We learned afterward that the hunters on the other side had so closely pressed the big herd that it had split into three bands, one going up onto the plain, one down the valley, and the other toward us; but for all that they made a good killing of the animals.

When the small band of cows broke through the timber and into the river, we all charged out to meet them, but, as though they did not see us, they kept coming, with great splashing of the water, and we all turned about and rode with them out across the bottom, each of us intent upon making a good killing. I was not using my gun: the bow was a better, quicker weapon for the chase. I shot an arrow deep into the lungs of a fat cow, saw her red blood gush from mouth and nose, and knew that she was finished. I then went after a fat two-winters cow, and, just as I was getting up beside her, she turned short off to the right, close past my horse's nose, and went off down the bottom. Almost I went to the ground, so suddenly did my horse turn after her. She was the swiftest cow that I had ever chased, but I felt that I must have her. Little by little I gained upon her, and at last, at the very end of the long bottom, let go an arrow deep into her side, just as she again was turning suddenly to the right. The arrow pierced her heart; down she fell and with a few kicks and jerks of her feet was dead. I looked up the bottom: the chase was over; the survivors of the little herd were just topping the rim of the valley; the other hunters upon their winded horses were turning back to butcher their kills. I decided that I would first butcher the big cow that I had killed, and then return to this smaller one.

As I neared the line of the chase, Black Elk and Lone Antelope, standing beside one of their kills, signed me to join them, and I learned that they had each killed two cows, and that few of the other hunters had killed more than one each.

"Our six kills are much meat, but the women will soon be here with enough horses to carry all of it, so let us hurry with our skinning and cutting," Lone Antelope signed.

We had not understood that the women were to follow us.

"You and I, let us first butcher your kill down below," Black Elk signed to me.

"Yes. Do that, you two, and I will here soon have women to help," Lone Antelope signed.

We hurried to the lower end of the bottom, got out of the saddle, sat down beside my kill, where, at last, we could talk to each other without being seen.

"These Spotted People, these dog people—let us, tonight, take many of their horses and return to our camp," my friend quickly signed.

"I do not call them dogs; they are of good hearts; they are good to us. Think of all that they have given us: fine clothing; thick couches; and, this morning, each of us five horses," I answered.

"They give because they want us to help them fight their many enemies; they want us to turn against our own people."

"We do not have to fight them. I should like to remain for a time with Otter Head and his good women; visit with this newcomer, Morning Eagle, and his Big Bellies people. These two tribes, I should like to know their hearts, their ways of life."

"Down there on Rosebud River, our fathers and mothers are mourning for us; they think that we are dead——"

"Enough have you said; we will leave tonight."

"Good! We will take with us many horses!"

"No, only those that are our own. These people have been good to us; we have smoked with them; they have given us many presents; we will take not one of their horses!"

That did not please Black Elk; very angrily he looked at me; but at last signed: "As you say!"

Black Elk and I quickly skinned the young cow, and, while cutting the carcass into suitable pieces for packing, we saw many women and some old men ride into the bottom, driving and leading plenty of horses on which to pack the meat of our kills. The most of the party turned off across the river, and of those who remained on our side were Lance Woman, Good Singer, and Lone Antelope's mother.

Leading a pack-horse, singing happily, Lance Woman came on to us and dismounted. "Good meat! Fat meat that!" she signed, pointing to my kill. "I hear that our two sons killed four cows. I am pleased. There will be plenty of meat for us, and some for those who have no hunting men or sons."

Black Elk made no answer to that. She pretended that she did not notice his angry eyes, his tight-closed lips, and just smiled at him and at me.

"Did any of the poor come with you?" I asked.

"Yes. We will take of this kill only the tongue and bosse ribs. I will tell two widows, up there, to take the rest," she answered.

I loaded her selections on her pack-horse, and we went up to our other kills, where she told the two women that the remainder of the young cow was theirs, that I gave it to them. That made their hearts glad; they signed that they prayed Sun to protect me, give me long life. So was my own heart made glad.

"And you, my son, will you not give of your kills to the poor? See, here are other women who have none to hunt for them." Good Singer signed to Black Elk.

"My kills, I don't want them. Do as you will with them. Give them to the dogs if you want to," he scowlingly signed.

Sadly then Good Singer looked at him, and after a little went and put an arm around him, kissed him, smoothed his hair, and signed: "Why so angry-hearted? As though you were my real son, I love you. As was my son to me, he the white soldiers killed, so now are you. Do not hurt me; make glad my heart."

At that, Black Elk bent his head, turned from us; and after a little he turned again; and wet were his eyes as he signed to her: "I am not angry at you. Give my two cows to the poor. I am ashamed that I said to give them to the dogs."

"Good! Good! Take us to your kills," she signed, and they went off to them, followed by three or four old women and men.

For a share of the meat other women helped Lance Woman and me butcher my two kills, while some of the old men sat by, smoking, talking, as now and then breaking out into song. Nothing makes us plains people so happy as plenty of meat in sight. The whites are content with their flour and beans, rice and pork, potatoes and corn, but with us, meat is the one, the only food.

SOON the hunters who had rounded up the herd on the other side of the river began coming over the pack-horses that their women had brought them all heavily loaded with meat, and we all lined it with them upon the homeward way. Not one of them gave Black Elk and me other than friendly smiles; and, when Lance Woman and Good Singer told one and another of them that their new sons had each made two fat cow kills, they signed to us that we were real hunters. Arrived in camp, Otter Head also gave us much praise for our success. Wolf, whom I had left tied in the lodge, went almost crazy when he saw me, jumped upon me and licked my face again and again when I freed him. His leash was a rope of braided horsetail hair; rawhide ropes he bit in two as quickly as I tied him with them.

"Come. It is time for us to go to the lodge of our Big Bellies friend," signed Otter Head.

"Myself, I do not want to go," Black Elk replied.

"No; you must go. In the lodge of our friend you are to get a big surprise; something that will make glad your heart."

Black Elk made no reply to that, but got up and followed us when we started for the other camp. I wondered what the big surprise could be.

This camp of the South Big Bellies numbered about two hundred lodges; some of them, like the lodges of our Blackfeet tribes, painted with the medicine symbols of their Sun priest owners. One of them even had upon it the symbols of the water medicine; at the bottom, a red-and-black band of circles—day and night; at the top seven blue stars; and between the two a band of four otters, in black. I said to myself: "How can this be? In the very-long-ago were these people and my people so friendly that they exchanged with one another their sacred medicines? If so, which of them first had this water-medicine? I felt very uneasy about it.

The lodge of Morning Eagle was a very large one and was well-furnished. He smiled when we entered, and said to me in my own language: "Welcome, youth of the Blackfeet, friend of my North relatives, and also my friend."

"Ah! I am glad to come into your lodge," I replied.

He had the three of us sit upon an unoccupied couch, the one next to his couch on his left. Upon one of the couches opposite us, the first couch on his right, were his two women; as he filled a pipe for us, they hung a big kettle of meat upon a tripod over the fire. Came in then a good-looking man of about thirty winters, and a woman, tall, slender, gray-haired, of pleasant face and well-dressed. They seated themselves upon the couch first at the left of the doorway, and the woman spoke to our host and he replied shortly, pointing at the same time to Black Elk. At that, the woman addressed Black Elk in his own language, and at her very first word he was as startled, as surprised, as I had been upon hearing my own language from the lips of the South Big Bellies chief. Otter Head and Morning Eagle clapped their hands and laughed and so did the women. The younger man, smiling, also spoke to Black Elk in Crow language and still more startled him. But he soon answered them, questioned them, and then the talk of the three was like the buzzing of a flight of bees.

Said Morning Eagle to me: "That Crow woman, now a widow, was long ago captured by one of our tribe. The man beside her, named Fish Robe, is her son, her half-blood son."

"The woman, doesn't she want to return to her own people? And her son, which way is his heart?" I asked.

"She is at heart one with us, has been so ever since her son was born. And he, ha! One winter back he killed one of a party of Crows who tried one night to get away with some of our horses."

The women of the lodge now set before us the meat that they had boiled, some back fat and dried camas, a good little feast. While we were eating, and afterward while the pipe went the round of our circle, Black Elk excitedly talked with the Crow woman and her son; and quietly Otter Head and Morning Eagle questioned me, and told me of their troubles with the white men, much that made me truly low of heart. They said that they, with several tribes of Parted Hairs (The Blackfeet name for the Sioux tribes is Kaispa, Parted Hair), owned a vast country of plains and mountains that whites were gradually taking from them; they had made treaty after treaty with the whites, and always the whites had broken them. (To be continued.)

* On January 1, 1870, on the Marias River, about eighty miles north of Fort Benton, Montana, United States troops, under Colonel Baker, massacred a friendly camp of about four hundred Pikuni, men, women and children. It is one of the darkest chapters in the history of our dealings with the Indians.



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THESE sparrows are a bother when other birds are here, each rascal and his father are nuisances, 'tis clear. They frisk in countless numbers without a bit of rest disturbing robins' slumbers and stealing pretty nests, yes stealing nest and cover in bureaucratic way from titmouse, finch and plover on happy summer day.

They should be punished double for all the grief they cause; they spell discord and trouble without a halt or pause! But here they are all asking a crumb and crust to eat while I'm in comfort basking in pleasant furnace heat. They shiver there so humble upon my window sill; I can't condemn and grumble and speak a stubborn will.

They haunt my old veranda and beg for food from me, it may be propaganda, but they are shrewd, you see; but none the less, I'm cozy with heat and food to spare, my bank account is rosy, I'm feeling plump and fair; so though their record's shady, each one a branded thief, the female not a lady, the male a source of grief, I cannot know refuse them the daily wants of life, I cannot abuse them, this sparrow and his wife! —J. E. T.

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The College Herd Doing Their "Daily Dozen" in the Exercise Lots

The State College Dairy Herd

By A. A. BORLAND

THE Pennsylvania State College dairy herd includes over 150 animals. It consists of Ayrshires, Brown Swiss, Guernseys, Holsteins and Jerseys. Of these, seventy-five are cows in milk.

Instruction and research are the two purposes of the herd. For instruction it serves for practice work for students in the judging, feeding, care, management of dairy cattle. For research purposes the animals furnish data concerning the milk producing capacity of various feeds, the value of grinding roughage, the vitamin and mineral requirements of dairy cattle, the use of milk substitutes for raising calves, the relation of type to milk production, the effects of molasses on the digestibility of rations, and a multitude of other subjects.

These results are published in bulletin form free for the asking. Farmers should write to the College for the 38th, 39th and 40th annual reports, which give brief results of many of the experiments. Under these experimental conditions, the yield of milk and butterfat from the herd is naturally reduced considerably below normal since some of the cows are likely to be put nearly dry on certain experiments. Nevertheless, in spite of these adverse conditions the average yield is very creditable as will later be noted.

Starting the Herd

The present herd was started in 1889, and consisted mostly of grades with a few pure-breds. The grades being less profitable were gradually weeded out and for years only pure-breds have been kept. This system of gradually growing into a pure-bred herd is sound dairy practice and is in line with the experience of the best dairy farmers in the state. An abundance of evidence is available that pure-breds are more profitable than grades.

In Bradford county cow-testing association records of Holstein cows were classified as pure-breds or grade. It was found that the average pure-bred cow produced 1,343 pounds more milk and 39 pounds more butterfat than the average grade, or an increase of 19 per cent in milk and 15 per cent in butterfat for pure-breds over grades. In the same way pure-bred Jerseys were found to produce 13 per cent more butterfat than grade Jerseys.

Lessons in Breeding

Only pure-bred sires were used, no culling was practiced for several years, all daughters of all sires being raised to maturity to determine the influence if any of a pure-bred sire in improving production. The average yield of butterfat per cow for the first five years was 226 pounds, for the next five years 243 pounds, for the next five years 267 pounds. Had culling been practiced the increase in production would naturally have been much greater, but such culling would have interfered with the plan of the experiment.

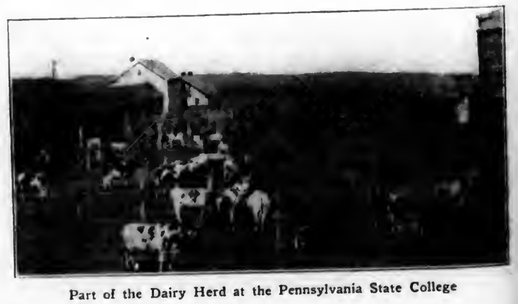
Furthermore in the early years of the experiment the only requirement of a herd sire was that he be a pure-bred. Some of the sires improved the production of the herd and some decreased it, a fact which shows the great importance of using only such bulls for herd sires as are backed by high records of production.

In later years after culling had begun and after sires were in use whose dams had good records of production, the yield greatly increased, the average for the last four years having been 8,750 pounds of milk and 355 pounds of butterfat.

Mature Bulls

Some painful lessons have been learned concerning bulls. Handsome bull calves have repeatedly grown up to be bitter disappointments as to type. The daughters of others have been terribly disappointing both in type and production. For these reasons the policy has been adopted of trying to secure mature bulls as College herd sires, bulls that look right as mature animals and whose daughters show good type and liberal production.

This system is proving very satisfactory since often real good mature bulls may be secured at little more than beef prices. Breeders frequently have such bulls that they must pass along to avoid inbreeding and are willing to do so at moderate prices, preferring to see the bull in service rather than send him to the butcher. This situation affords an opportunity to see



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the type of the bull's daughters and to ascertain their production.

A mature Holstein bull of this sort was purchased a few years ago from Ivo V. Otto, one of the outstanding dairymen of Cumberland county, Pa. His herd for eight years in the cow-testing association has averaged over 420 pounds of butterfat. Twelve daughters of the bull, on a mature basis, averaged 15,414 pounds milk and 524.5 pounds butterfat in the cow-testing association, while their dams averaged 13,936 pounds milk and 469 pounds butterfat. This is an increase of 1,478 pounds of milk and 55.5 pounds of butterfat for each daughter compared with her dam.

When one considers the high production of the dams, it is evident that this bull has made a remarkable improvement in the production of his daughters. The bull himself, Lothian DeKol Korndyke, 19932, is a symmetrical animal with a straight top line, a level rump and his daughters are a decided improvement in type over their dams.

A mature Jersey bull, Raleigh's Warder, 154327, was recently secured from Borden Home Farm, Ulster county, New York. Ten of his daughters have averaged over 400 pounds of butterfat as two-year-olds on twice a day milking. Furthermore they are very attractive cows, while the bull himself



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is a show animal whose dam, Warder's Fern's Blossom, is a gold medal cow with 724 pounds of butterfat and the winner of first prize in the Register of Merit class at the National Dairy Show in 1919. Her sire in turn is Golden Fern's Noble, grand champion at the National Dairy Show in 1916 and the sire of Fern's Wexford Noble, three times grand champion at the National Dairy Show.

A mature Guernsey bull, Langwater Master Fred, 51494, has recently been purchased from Brookmead Farm, Chester county, Pa. He is the sire of twelve two-year-olds that average 555 pounds of butterfat, and is also the sire of a class leader in AA, Brookmeads Veronica, with 14,503 pounds milk and 864.5 pounds butterfat.

Too many good bulls are going to the butcher before their true value is discovered. Dairymen would do well to keep on the watchout for matnre bulls whose daughters are promising rather than gamble on a young nutried bull.

Cooperative Bull Associations

One of the best plans that has ever been devised for herd improvement is the cooperative bull association. By this means dairymen of limited means or with herds too small in number to justify the purchase of a high-priced bull may cooperate in the use of a good bull. When there are several blocks in the bull association it reaches its highest possibilities for usefulness, since bulls may be exchanged among the various blocks and no new sires need be purchased for six or eight years.

The College has made use of this cooperative principle in its Ayrshire herd by entering into a cooperative arrangement with the Tioga County Home by which their respective Ayrshire herd sires, which are bred along generally similar lines, are exchanged from time to time.

Most cooperative bull associations



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might be organized with great advantage to the dairy industry and to individual dairymen in the state. The county agricultural agent will be glad to assist in the organization of such an association in your locality.

Lessons in Culling

Every milking (barring accidents) of every cow in the College herd has been weighed since 1889 when the herd was started. The milk is tested three times monthly for butterfat and an accurate record is kept of the feed eaten by each cow. In fact a miniature cow-testing association is thus operated and the unprofitable cows are weeded out from time to time. Last year the herd of 63 milking cows returned an average profit above feed cost of $407.91 each.

Pennsylvania dairymen are finding that it pays, as never before, to have accurate records of the production of each individual cow through the cow-testing association, not only may unprofitable cows be weeded out but where the records reveal an extra good cow, she brings an extra good price if her owner cares to sell her.

Last spring a dairyman who had just completed his first year in the cow-testing association sold a cow for $500 that ordinarily would have brought only about $250. The reason for this extra sale value was the fact that the association records showed that this cow produced over 500 pounds of butterfat in eight months. The purchaser, therefore, felt justified in paying the extra price for her.



Mr. Bowen's Milkers Belonging to the Gwennie Family

First Herd in 1927 Repeats

THE pure-bred Holstein herd of Roy S. Bowen, Tioga county, Pennsylvania, which won state honors in herd improvement work in 1927 with an average of 15,500 pounds milk and 490.9 pounds butterfat, came back in 1928 making an average of 20,400 pounds milk and 656.6 pounds butterfat. So far as we know no record has ever been made which equals this one.

Three years ago Mr. Bowen consulted the writer regarding the purchase of a family of cows consisting of a dam and five daughters, one of which was a calf. Knowing the history of this family I advised Mr. Bowen to purchase this group for the handsome sum of $2,400, for which he gave his note. He headed home with this fine family of cows with his head high, confident of victory with the equipment at hand to fight a good battle.

Mr. Bowen and his wife with all the courage and vigor of youth started the next day to lay their plans for the future. The cows were given good farm care during the first winter. The next season the old barn was remodeled and a comfortable, practical dairy barn was the result. That fall the herd was placed in a cow-testing association with the results as published above.

Highest Average Production

Mr. Bowen attended the dairy meeting at Harrisburg during the Farm Products Show where he received a silver cup from the Holstein-Friesian Association of America for having the highest average production with Holstein cattle in association work. Fired by this encouragement Mr. Bowen returned home to his good wife where another resolve was made, namely, to improve the past record by a substantial margin and the record for 1928 is the result.

Gwennie Prilly Pontiac, 339371, which derives thirty per cent of her blood from King of the Pontiacs, the only double century sire, had previously made an A. R. S. O. record in a small farm herd, under a man who had never tested before, of 903.43 pounds butter and 20,228.4 pounds milk in 305 days, carrying twin calves 208 days. This grand old cow has had eleven calves, seven of which were females, six of which are in Mr. Bowen's herd. The five daughters in milk have produced an average of 21,381 pounds of milk and 681.7 pounds of butterfat during the past year.

Some Records

Three of the daughters are sired by Blacrea Pershing Pontiac, 249099, which is a son of Cornucopia Ormsby Lad, 144370, the best son of O. K. L. The other two daughters are sired by Charlevoix Ormsby Finderne King, 360987, which is a son of S. P. O. M. 40th and out of Kolrain Deane Finderne, 291571, a daughter of the great sire, Finderne Pride Fayne. The sixth daughter, a calf, is sired by Meadow Holm Pontiac Pet, a proved son of Pet Concorde 2nd, 79453, with 23,682 pounds of milk and 1,011 pounds of butter to her credit made at ten years of age.

The individual records of production of the herd are given below.

Elsie and Sadie Vale were in the herd only nine months of the year.

Wanda's production has probably never been equalled in herd improvement work anywhere in the country.

The present herd sire, Count Maxie Posh, 528229, is a son of the first prize show bull at New York State Fair, Count Korndyke Posh, a son of an 1,100-pound cow. The dam, Sadie Butter Girl Maxie 605338, has 1,109.51 pounds of butter and 26,737.2 pounds of milk as a four and a half year old. Mr. Bowen states that his biggest problem is to get sires whose daughters will advance the work of this great family.

Good Farm Care

The herd management in this herd is only such as might be duplicated in

Cow's Name and Number		Age	Milk	Butterfat
Wanda	688421, Daughter	7 years	27,255	946.0
Wilda	688420 "	7 "	21,213	682.1
Winnie	1027692 "	3 "	22,879	630.4
June	907025 "	4 "	19,210	698.9
Arelene	779205 "	5 "	16,348	542.0
Gwennie	339371, Dam	12 "	15,864	488.9
Elsie	588501	7 "	17,641	585.2
Sadie Vale	1085742	9 "	14,231	471.7

herd worthy of good care. The s have been milked and fed three s daily, they are confined to aver- cow stalls and watered in drink- cups. The grain mixture is a good d of twenty per cent feed contain- no cottonseed meal. The rough- has not been very high quality and this reason the grain is supple- ted with a small amount of soaked pulp.

Whether this herd can pay for the d and management may be answer- in the following herd improvement mmary for 1928:

verage value of product per cow,	$468.26
otal cost of feed	183.99
alue of product above feed cost,	284.27
eturns for $1 expended for feed,	2.55
eed cost per 100 pounds of milk,	.90
eed cost per pound of butterfat	.28

Whether good cows pay or whether hey are only "a rich man's hobby" ay be answered by this little hill-side farmer's experience which was predicated only by faith in good cows, the sing of credit and a will to do.

Paul P. Korb.



Gwennie Prilly Korndyke

A Feed Question

I have plenty of corn and can buy all the oats I wish at 50c a bushel and it weighs 35 pounds to the bushel. The mixed feed I buy is tagged 22 per cent protein. I have mixed 200 pounds of corn, 200 pounds of oats, 100 pounds of bran and 500 pounds of the mixed feed and my cows are not doing as well as they should. What do you think is the matter with the ration?

I SUSPECT there is not enough protein in your ration. The actual digestible protein in your mixed feed is doubtless considerably lower than the crude protein given on the tag.

Buy a mixed feed that runs higher in protein or buy linseed and cottonseed meal to mix with the groin and bran ration so as to make a ration with a ratio of one to five.

Fat in Cream

How much cream would you get from 100 pounds Holstein milk through a cream separator, and what would be the cream test? Milk percentage about 3.3 or 3.4 test. W. L. B.

THE amount of cream you get from 100 pounds of 3.4 per cent milk will depend entirely on how rich you make the cream. The cream screw on the separator bowl is turned in, in order to skim a richer cream or outward in order to skim a thinner cream. Naturally if you skim a richer cream there will be less of it than in case you skim a thin cream.

From 100 pounds of 3.4 per cent milk you would expect to get about 17 pounds of 20 per cent cream, or 11 1-3 pounds of 30 per cent cream, or 8½ pounds of 40 per cent cream. It is advisable to skim a rich cream containing at least 30 per cent butterfat if you are using cream for butter making purposes. In this way there is more skimmed milk, the cream will keep better and can be handled more advantageously for butter making purposes.

If you are using the cream for market purposes, it must contain at least 18 per cent butterfat to be legal cream. This is known as single cream and usually contains from 18 to 20 per cent of butterfat. Double cream, or whipping cream, as it is sometimes called, usually contains from 36 to 40 per cent butterfat.

A. A. Borland.



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LIVESTOCK

West Virginia's War on Scrub Sires

ALMOST a year ago the West Virginia Cooperative Livestock Shippers' Association and its allies declared war on all the scrub beef bulls, mutton rams and boars in the state. At the close of the year a census was taken of losses and gains in the score of counties where the campaign was operating, and the results were very gratifying to the aggressors.

The census showed that the scrubs had casualties in their ranks as follows: One hundred and five beef bulls, sixty-seven mutton rams and thirty-seven boars—a total of two hundred and nine followers of General Poor Profit.

The aggressors had no losses, but succeeded in placing within scrub territory ninety-eight pure-bred bulls, three hundred and ten pure-bred rams and forty-seven pure-bred boars—a total of four hundred and fifty-five.

In conference after the first year's campaign had ended it was unanimously voted to continue the war with unabated interest, and to lend every effort to the complete eradication of scrub sires throughout the state during the present year, 1929.

Special recognition was given to the county farm bureaus and shipping associations in the three counties that rid their territory of the largest number of the enemy, and placed the largest number of pure-bred sires with farmers. This recognition was in the form of cash prizes, given with the understanding that these organizations would use it for an educational trip.

The winning three counties in this contest, which closed November first, were: First, Pendleton, D. W. McFarland, county agent; second, Harrison, H. G. Sturm, county agent; and third, Nicholas, W. M. Simpson, county agent. I. B. Boggs.

Forty-Three Pigs

I SAW some big litters from sows but none over exciting. I had a sow that had three litters in ten months or less. Her first litter was 13 pigs on the 22nd of August, 1922; in January, 1923, she had 17, then on June 10 she farrowed 13 again—total 43 pigs. F. E.

Fewer Pigs per Litter

I have a brood sow six or seven years old that has given satisfaction till last March when she dropped only six pigs and September the first only three. If she is at the end of her usefulness for a brood sow I would be glad to know it. J. D. B.

AS A SOW approaches the end of a useful breeding period the size of the litter dwindles. The most practical suggestion I could make would be to fatten the sow and sell for pork some time during the winter months. H. H. H.

Heaviest Ton Litter

L. O. CORMAN & SON have the heaviest ton litter so far reported in Clinton county with their 12 Chester White pigs which weighed 2,876 pounds at the end of the 180-day period.

This litter was fed on rape and oats pasture and from a self-feeder with the Pennsylvania standard swine ration consisting of 400 lbs. corn, 300 lbs. oats, 200 lbs. middlings, 100 lbs. 60 per cent tankage or fish meal.

This is the third litter produced by this sow. Her former litters each had 14 pigs. She is a pure-bred. The sire is a pure-bred. Mr. Corman states that he will continue to produce ton litters. J. B. McCool, County Agent.

Swine Sales at State Show

ONE HUNDRED head of bred sows and gilts will be offered to Pennsylvania farmers by the four state swine breed associations at the Farm Products Show at Harrisburg, January 22 and 23.

A change in the method of consignment has been adopted this year in three of the breeds to introduce new blood lines into Keystone herds. In cooperation with the Pennsylvania Chester White Breeders' Association, C. E. Cassel, Hershey, Pa., secretary, the White City Farm, I. T. Hickman and Son, proprietors, Marion, Ohio, will furnish 25 head of bred sows and gilts for this breed. The same arrangement has been effected by the Pennsylvania Poland-China Breeders' Association, C. L. Rumberger, Uniontown, Pa., secretary, with the cooperation of Greenfield Farms, Washburn, Hershey and Lewix, proprietors, Tiffin, Ohio. The Pennsylvania Duroc-Jersey Breeders' Association, S. R. Zug, Scranton, Pa., secretary, has arranged with Chinchina Farms, Smith Brothers, proprietors, New Carlisle, Ohio, to furnish the 25 representatives of this breed.

Berkshires will be consigned by members of the Pennsylvania Berkshire Breeders' Association, J. P. Winslow, Brookville, Pa., secretary.

Duroc-Jerseys will be sold at 9:30 a. m. Tuesday, January 22; the Chester Whites will go on sale at 2:30 that afternoon; the Berkshires will be auctioned off at 9:30 Wednesday morning, and the Poland-Chinas will be offered for sale at 2:30 o'clock the same day. The sales will be held in the Inez Building (formerly Dunn Building) on Cameron Street. E. H. R.

Silage for Sheep

Can you explain the value of corn silage for sheep, whether it can take the place of clover and alfalfa and other such feeds? Can one feed too much silage along with timothy hay cut green?

Would like very much to have a practical explanation on the feeding of corn silage, and can it be fed to fatten lambs for early winter use? Can silage can be raised much cheaper than clover and much more on the ground. Albert Shakespeare.

CORN silage is being fed to rather widely among our sh... men in Pennsylvania. It is being ... to breeding ewes as well as being ... in a fattening ration for lambs or ... ers. Corn silage will not replace ... ver and alfalfa hay entirely, but ... fed very profitably in conjunction ... both of these.

A few precautions must be take... feeding corn silage. First, do not ... more than three to four pounds ... head per day to ewes. A bushel ... of corn silage well packed will ... about 30 pounds. You can feed ... a bushel of corn silage for every ... breeding ewes you have in your ... The general practice is to feed ... once a day and corn silage once. T... is another precaution that must be ... in the use of silage, and that is that ... silage should be clean and sweet—... feed frozen or mouldy silage to ... Too much silage fed to breeding ... has a tendency to produce weak, ... lambs.

Corn silage fed in the proper amo... is a very desirable roughage for ... it furnishes a source of succulence ... the average farmer gets from ... tically no other winter feed. It ... be advisable to feed some grain ... corn silage and timothy hay cut ... You no doubt realize that timothy ... is a poor sheep feed. I would su... that you feed some oats, bran a... meal with your corn silage and ti... hay in the following mixture: ... pounds oats, 100 pounds bran a... pounds oilmeal. W. B. Con...
Pennsylvania State College.

...arm Conditions

...caster Co., S. E. Pa.

Jan. 8: A very mild winter so far, no ...ow but quite a lot of rainfall. After ...ch rain it is much colder for a few days, ...t then moderates. A great deal of sick... but not serious. Tobacco is moving ...wly. Only a few crops sold but the ...ice was good. The crop is considered ...ry fine one and should bring a neat ... to the growers. Eggs are 40c, butter ... R. C. R.

...tmoreland Co., S. W. Pa.

...n. 4: Mean temperature for 1928 was ... degrees which is two degrees short of ...rmal. Rainfall amounted to 37.20 inches, ...including 13 inches for June and July. Milk 30c per gallon, butter retail 55@60c. Most farmers retail eggs at 60c now, as they are getting more plentiful, were 70c ...and very scarce to December 15th. F. J. Wagner.

Highland Co., Southern Ohio

Jan. 8: Cold and clear. We are having the coldest weather of the season, thermometers registering five above this morning. The wheat is looking fairly well but it needs some protection. There hasn't been enough snow to track a chicken thief. Hogs $9.15@9.25, eggs 30c. M. B. Williams.

Tioga Co., Northern Pa.

Jan. 8: We have had much cloudy weather with snow flurries, no big storms. The thermometer touched zero once in December and came very near it again last night. Many farmers are short of water for stock. Ground is bare. More winter milk being produced than in former years. Quite a few bologna cows being got rid of. Tioga county now leads in cow-testing association members. Eggs 35c. Hens doing fairly well. Mrs. Perley Lawton.

Marshall Co., Northern W. Va.

Jan. 4: Sub-zero weather with no snow. Hard on wheat and new meadows. Influenza epidemic raging, hundreds of cases. Some mine props being sold. Many hogs going to market at low prices. Hard-surface roads in good condition. County Farm Bureau very active and community meetings are largely attended. F. M. Day.

Frederick Co., Northern Md.

Jan. 7: Weather the past month has been the mildest for some years. No snow and very little rain. Many farmers have been plowing. Spring will find the largest acreage of plowing finished for many years. Grain looking about as good as usual, also grass. Several community shows are staged for this month. Pork is low. Beef prices still good. Roy J. Wivell.

Butler Co., Western Pa.

Jas. 7: Little cold weather and scarcely any snow. Flu milder than in 1918, but causing many deaths. Farmers quite well cleaned up with work and now busy with chores, working in woods and other places. Baby chicks, fertilizer, seeds, fruit trees and so forth being ordered for early spring delivery. Indications are that the acreage to be planted in spring will be near average during the past few years. Chickens laying fair with eggs 54c per dozen. Many products to be sent to State Farm Products Show at Harrisburg, January 22-25. Howard F. Fox.

Carroll Co., Northern Md.

Jan. 8: A remarkable fall, for up to the present farm work was not hindered by weather conditions. A number of farmers have all the fall plowing finished. The growing grain is looking fair. Forage and corn plentiful on farms for stock feed. Harry I. Rinehart.

Problems in Ancient World

(Continued from page 24.)

across the alluvial plain, and found at widely distant points (six hundred miles apart) a new outlet on the sea. Indeed with the deforestation of the uplands the situation has grown worse. Now it sweeps away 800-1,500 villages, floods a space a third as large as France to a depth of ten feet. While the toll of lives—in the flood of 1887 the government admitted it amounted to some two and one-half million. Verily, the so-called Yellow river has also rightly been called "The River of Sorrow" or again "The River of Death".

The only consolation for the farmers on its banks lies in the old Chinese saying:—"How grand was the achievement of Yu! How far-reaching his glorious energy! But for Yu we should have all been fishes."

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CHESTER WHITES.—Pedigreed big type Cham. blood, all ages, 13 sows farrowed 151 pigs, priced low, must please. C. E. Cassel, Hershey, Pa.

CHESTER WHITES.—Big type. Stock of all ages for sale, from my undefeated show herd. Priced low. S. J. Bowman, Fisherville, Pa.

CHESTER WHITES since 1887. Choice bred gilts. Large fall pigs, either sex. Immune. J. C. & O. H. Brantigam, R. 6, Sidney, Ohio

Reg. Spotted Poland-Chinas. Spring gilts and boars ready for service. Fall pigs at 10 wks. age, $10.50 each. A. M. Kensel, R.3, Honey Brook, Pa.

Poland Chinas Big type. Bred sows and gilts. Pigs $8.00 each up JOHN W. SIGRIST, Dundee, Ohio

BIG TYPE POLAND-CHINA GILTS, bred for March farrow, as fixed as grow. Prolific. Price right. Registered. O. C. FOWELL, Ada, Ohio

DUROCS We bred and raised Grand Champion sow, 1928 Penn's Farm Show. Write us your wants. G. E. Frommeyer & Son, Chambersburg, Pa.

DUROCS and SHROPSHIRES Duroc gilts, bred to farrow in March. Also fall boar pigs. Shropshire ewes bred for March lambs. White Holland Turkeys. JOHN F. OBRECHT, R. 8, Loudonville, Ohio

DUROC bred Sows and Gilts, Best champion blood. Big type, also service boars. Buy now. Charles J. Stuckey, Mechanicsburg, Ohio

SWINE

O.I.C. BRED GILTS, young sows, fall pigs, both sexes. Price reasonable. Satisfaction guaranteed. C. B. BELL, Millersburg, Ohio

Hampshire Hogs Spring gilts, service boars, pigs. J. J. RAILING, R 2, Shippensburg, Pa.

DAIRY CATTLE

Serviceable Ayrshire Bulls.—From dams having C.T.A. records from 500-600 lbs. butterfat; two time milking. Av. for entire herd over 400 lbs. fat last 2 yrs. 4.45% test. Write for information. C. M. Barker & Son, Ulysses, Pa.

REG. JERSEY BULLS ready for service. Also younger bulls. Accredited herd. C. F. & M. W. BIGHAM, Gettysburg, Pa.

TWO EXCELLENT REGISTERED JERSEY heifer calves, three months. Accredited herd. W. F. McSPARRAN, Furnias, Pa.

FOR GUERNSEY DAIRY HEIFERS. Tuberculin tested. Shipped C. O. D. Write, L. Terwilliger, Wauwatosa, Wis.

SHEEP

Reg. Shropshire Ewes Good quality and bred to champion rams. D. D. CLIFTON, Agosta, Ohio

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BARRED PLYMOUTH ROCKS.—Big, vigorous, well barred, Mar. hatched cockerels. Descendants from high producing state fair winners. Circular. B. L. EVANS, Spencer, Ind

Exhibition Barred Rocks, Male and female. ART MASON, Ashland, Ohio

BUFF ROCKS Exclusively. Cockerels, hens and pullets. Large bone, golden plumage. Reasonable. W. L. Gladish, R. 6, Petersburg, Ind.

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TURKEYS, DUCKS, GEESE. Leading breeds. Buy your breeders now at special fall prices. Catalog. Highland Farm, Bx. F, Sellersville, Pa.

Special Fall Prices on high-class breeding Turkeys, Geese, Ducks and Guineas, write your wants and for mating list. Pioneer Stock Farm, Telford, Pa.

MAMMOTH PEKIN DUCKS For Sale N. V. HOSACK, Jackson Center, Pa.

HORSES

NINE REGISTERED BELGIAN COLTS for sale. Sorrels, five mares, four studs. Prizewinners at many fairs. WILLOW FARM, M. G. Salters, Mgr., R. 5, Chambersburg, Pa.

Buy Your Bred Sows
at the
State Farm Products Show

The four Pennsylvania State Swine Breeders' Associations, in cooperation with outstanding breeders, are offering 100 bred gilts and sows at the State Farm Products Show in Harrisburg.

These animals have been obtained by the state organizations in cooperation with breeders of national reputation and have been picked, after careful inspection by a selecting committee, for proper type, popular breeding, prolificacy, and easy feeding qualities. All of the animals are descendants of and are bred to prize-winning stock.

All of the sows are immunized against hog cholera and are guaranteed to be bred or satisfactory settlement will be made.

You will find your opportunity in these sales to secure animals of proper breeding and type as a foundation for a pure-bred herd or an efficient sow or two that will produce pork at a profit.

Duroc Jerseys, furnished by Chinchinma Farms, Smith Brothers, proprietors, New Carlisle, O., will sell Tuesday, January 22, at 9:30 a. m. Write **S. R. Zug, Secretary, 313 Monroe Ave., Scranton, Pa.**, for catalog.

Chester Whites, furnished by I. T. Hickman & Son, Marion, O., will sell Tuesday, January 22, at 2:30 p. m. Write **C. E. Hershey, Secretary, Hershey, Pa.**, for catalog.

Berkshires, furnished by members of the Pennsylvania Berkshire Breeders' Association, will sell Wednesday, January 23, at 9:30 a. m. Write **J. P. Winslow, Secretary, Brookville, Pa.**, for catalog.

Poland Chinas, furnished by Greenfield Farms, Washburn, Hershey and Lewis, proprietors, Tiffin, Ohio, will sell Wednesday, January 23, at 2:30 p. m. Write **C. L. Rumberger, Secretary, Uniontown, Pa.**, for catalog.

Geo. W. Baxter, Auctioneer. All sales held in the Inez Building (formerly Duco Bldg). Cameron St., north of Market, Harrisburg, Pa.

THE LATE J. J. JERMYN DISPERSAL SALE
125 REGISTERED HOLSTEIN-FRIESIAN CATTLE
JANUARY 23-24, 1929
FULLY ACCREDITED HERD—60-DAY RETEST

Sale held at Jermyn Farm, which is located 10 miles north of Scranton, Pa., 4 miles west of Carbondale, 2 miles from concrete road, 4 miles from Jermyn, Pa. Parties arriving by train can phone J. J. Jermyn office in Scranton, and arrangements will be made for transportation to the farm.

ONE OF PENNSYLVANIA'S RICHEST BRED HERDS

Sale includes the famous herd sire, Butchland Colantha Dewer King, who is a 37,000 bull, out of a four time 1,000 lb. daughter of a 1,500 lb. cow, and his 19 nearest dams average over 1,200 lbs. of butter, and 27,000 lbs. of milk in a year. The first daughters of this famous bull will also be sold.

45 daughters of this famous bull will also be sold.

two-year-olds in official test.

Three other herd sires to be sold, including a son of the New York State Champion yearly butter producing and milk producing two-year-old, Ness Fairmont Pontiac Lyons, with over 1,000 lbs. of butter and 25,000 lbs. of milk as a two-year-old. Another herd bull just past a year old by the great "Domestic" bull at Winterthur Farms, and out of a 1,200 lb. four-year-old, that gave almost 20,000 lbs. milk in a year.

Here are just a few of the wonderful animals to be sold—a 32-lb. four-year-old, a 30-lb. cow, two 27-lb. cows, half a dozen from 25 to 26 lbs. Also an 1,129-lb. cow, several 900-lb. cows, and many with records above 800 lbs. in two-year-old, three-year-old and four-year-old form. Daughters of these high record cows, from dams up to 37 lbs. as three-year-olds, and 1,193 lbs. in 365 days. Many fresh cows and very heavy springers. A dozen young bulls out of the best cows in the herd, and by the wonderful herd bred sires.

THIS SALE WILL BE HELD IN A HEATED SALE PAVILION ON THE FARM, and will start promptly at 10 A. M. each morning. Lunch served each noon day. Every animal in this sale goes for the high dollar, without reservation. Send for catalog to

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R. AUSTIN BACKUS, "In the Sun".
AUCTIONEERS: Col. Glenn R. Mead, East Aurora, N. Y., and William T. Jones, Factoryville, Pa.

CHICKS Pure bred, Blood tested, free range breeders Leghorns, Anconas, 12c. Rocks, Reds, 14c. Wyandottes, Orpingtons, Minorcas, 15c. Black Giants, 20c. 100% live delivery. Valuable Chick Manual Free.
SEIDELTON FARMS, Washingtonville, Pa.

CATTLE

Streamside Milking Shorthorns (Founded 1880) FOR SALE.—Streamside Red Royal, born June 1st, 1928, Dam Belle Crawford, 11,220 lbs. milk, 4% fat., by Royal Crawford with 16 daughters averaging 10,506.3 lbs. milk. Sire Glenside Royal Duke whose three nearest dams average 10,000 lbs. milk. Price $165. Also a few heifers. Accredited herd. F. N. HUBBARD & SON, Trey. Bradford Co., Pa.

MILKING SHORTHORNS.—6 cows, 2 heifers. Come and see them, or write. HOMESTEAD FARMS, Westford, Pa.

MILKING SHORTHORNS.—Cows, heifers, and bulls. Best breeding, accredited herd. C. M. Kennedy & Sons, Ulster, Bradford Co., Pa.

FAIRVIEW HEREFORDS.—Bulls, Heifers, Cows, Federal Accredited, bred right and priced to sell. GEO. G. COCHRAN, Dawson, Pa.

REGISTERED HEREFORD CATTLE. Breeding cows, heifers and bull calves for sale. A high-class herd of Woodford breeding. FRED J. BROWN, DuBois, Pa.

D. S. POLLED HEREFORDS.—A fine selection. Cows, heifers, bulls. Come or write CHAS. D. GILL, Millersport, Ohio

BUCK & DOE RUN VALLEY FARMS Hereford Cattle—Poland-China Hogs—Hampshire Sheep—Draft Horses. THE SAINT AMOUR COMPANY, Mortonville, Penna.

If You Want Angus heifers at a reasonable figure, write us. Pure-bred cattle always for sale. BAYARD BROS., Waynesburg, Pa.

To know what to buy—read the advertisements. They will keep you informed of the latest and best products of the manufacturers. Their aim is to meet your needs. You will find that time spent in reading the advertisements is time well spent. Read them regularly, with care, and when answering, mention Pennsylvania Farmer.

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SEE package at Right—one horse only. Just 2 words—Caustic Balsam.
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SENSATION—One of the most productive oats in cultivation. 75 lbs. and upward per acre are frequently reported. Large, white, meaty grains, weighing 41-1/6 lbs. per measured bu. of the highest quality. We are making an exceptionally low price in quantities. You should by all means try these oats. Also Early Champion and White Cap Seed Corn, Bearded and Smooth Barley, Soy Beans and Sweet Clover. Write us for samples and prices.
THEO. BURT & SONS Box 50, Melrose, Ohio

Farmer's Business Letter

THE cattle market weakened a little on heavy steers this week, though yearlings were strong, and in general trade was fairly active. Receipts at 52,000 were in the same notch as a year ago this week, but 12,000 under the same week two years ago. Top steers brought $17.25, an outside sale to a railroad dining car system, only nine head averaging 1,333 lbs. being involved. Otherwise the top was $17, for 892-pound steers, the same price as was paid last week for 1,160-pound cattle.

For the most part, the yearling trade was strong. Butcher stock was in only moderate demand the fore part of the week, but trade showed more activity later, with prices about 25 cents below last week.

Stockers and feeders strong, supply light, but enough demand to absorb offerings. The average price of steers was figured at $13 this week, a loss of 15 cents from last week, and comparing with $13.80 the same week last year.

Many Hogs Direct

The feature of the hog market this winter is the vast amount of direct buying being done by packers. Yesterday, for instance, receipts totaling 46,000 included nearly 18,000 direct to packers, and the big packers bought altogether only a few hundred head on the open market. However, shipping demand was good and the market advanced 10 to 20 cents.

The hog supply here this week, including directs, totaled 251,000 head, the second largest week since early in 1928, and comparing with 187,000 the same week last year. The market showed a gain of 20 to 25 cents for the week, with the average price at $9, standing 15 cents higher than last week and comparing with $8.25 the same week last year.

Lambs Sell High

Receipts of sheep and lambs were fairly liberal this week, 81,000, against 61,000 last week and 89,000 the same week last year. The lamb market shot up during the week, reaching a peak of $17.25 on both natives and fed westerns, a gain of 75 cents over last week's top. But there was a reaction later and the net gain was 25 cents. Tops were highest since last June. Feeders sold up to $15, highest since last April.

Average price of lambs this week was figured at $16.30, against $15.40 last week and $12.75 a year ago.

Activity in Grains

Comment during the week was to the effect that the grain markets had finally been lifted out of the rut in which they had been for months. Houses that heretofore have been confining operations almost exclusively to the stock market came into the corn market as free buyers. Corn was moved up to a new high for the season, at 97¾c for July delivery. Wheat futures moved up a little, also, but later lost some ground. A pronounced feed shortage in Europe has helped the corn situation, but wheat statistics are still unfavorable.

The Chicago Milk Situation

Efforts to avert a strike of milk producers in the Chicago district may not succeed. Some farmers are now refusing to make deliveries. The two largest distributors in the city are said to be agreed that the economic situation now does not warrant an increase of one cent a quart in the retail price of milk, as suggested by the Chicago milk investigating committee, in order to pay the farmers $2.85 a hundred-weight for raw milk, an increase of 35 cents above the present price. The controversy remains unsettled.

Milk dealers in the Chicago market realized net profits of 3.44 cents out of the average consumer's dollar spent for milk during the two years 1925 and 1926, according to results of a two-year study by the Illinois Experiment Station. Farmers got 46 cents out of the dollar to cover both their expenses and profits, with the remaining 50.56 cents going largely to cover purchasing, receiving, processing, selling, delivery and administration. The dealer's net profit of 3.44 cents was the balance remaining after these expenses had been paid.

$2,500 for Peach Tree

After several years of experimenting an Illinois farmer, James E. Markham, succeeded in producing a peach of normal size on a small pit. He sold the tree to a nursery for $2,500. It is called the Markham peach.

Horseradish Tariff

Horseradish growers in the vicinity of St. Louis are seeking tariff protection. They produce 75 per cent of the product grown in the United States and make the claim that European horseradish is grown more cheaply than the American variety, and that, while transportation from Europe to the east coast markets costs $1 per ton, the freight charge from East St. Louis to New York is $1.38 per ton.

An Illinois Farm Sale

An Illinois farm of 700 acres, located in one of the best sections of the state and described as in all respects desirable, bought at forced sale $100,560, about $143 an acre. It was regarded as a very low price.

WATSON.

Chicago, January 12, 1929.

Produce Markets

THE potato market was slightly stronger during the early part of the week and prices averaged somewhat higher in the East. Shipments increased and later in the week several markets showed signs of weakening. The demand was less active in most other cities. In Philadelphia track receipts of Pennsylvania potatoes showed an increase.

Inquiry among dealers indicates that truck receipts from Pennsylvania are much heavier than ever before and are estimated as about half of the total supply arriving on the market.

Late in the week Pennsylvania round whites were quoted at $1.40@1.60 per 120-pound sack and at $1.25@1.35 per 100-pound sack. Pennsylvania bulk potatoes sold at $2.10@2.25 per 180 pounds in New York and at $2@2.10 per 150-pound sack in Pittsburgh.

Apples

The apple market in Philadelphia and New York was quiet during the past week and trading was not very active. Extra fancy fruit was in fair demand but average offerings sold slowly. In Philadelphia 2½-inch up Stayman sold at $4@4.25 per barrel while truck receipts of Romes, Staymen and Delicious brought $1@1.75 per bushel. Only the especially fancy grades brought top prices. Yorks and Black Twigs sold at $1@1.50.

The apple market was irregular in New York and a fair demand was reported for fancy marks. Delicious ranged from $3 to $5.50 per barrel and Yorks from $3 to $5.

Sweet Potatoes

The sweet potato market in Philadelphia was slightly weaker and while prices did not decline to any extent, there were fewer sales at the upper end of the price range. The demand for sweet potatoes appears to have dropped off to some extent and dealers reported a very slow movement. The best New Jersey yellows sold at $1@1.10 per ⅝ basket in Philadelphia with a few lots of extra fancy stock bringing $1.25. Red varieties sold at $1.10@1.25 with a few lots at $1.35.

Dairy and Poultry Products

The eastern butter markets were unsettled with fairly liberal supplies of fresh butter and a light demand. The buyers were purchasing only for their immediate needs and, with heavier arrivals, prices dropped sharply on all eastern markets. The large receipts of fresh butter curtailed the use of storage stock and withdrawals from storage were much smaller than a week ago.

The egg market in New York was irregular. Fresh eggs from nearby sections met a rather slow demand while receipts of fresh eggs of mixed colors from the West were more active. Several chain stores have stepped using storage eggs and this has helped the market for this class of stock. Nearby white average extras sold at 42@43c per dozen and the other grades at 29@41c depending on quality. The market was irregular in Philadelphia. Extra firsts sold at 40c and firsts at 37½@38c. Carefully selected candled fresh eggs brought 46@48c.

Express receipts of live poultry were light on the New York market with freight receipts only moderate. Fowl were firm and high early in the week but dropped at the close. Chickens held steady throughout the week. Leghorn fowl were quoted at 33@35c per pound and colored fowl at 35@38c. Receipts of dressed poultry in New York from nearby sections and from the West were light during the week, and the demand was fair with prices holding steady. Fowls brought 25@35c per pound, broilers 35@42c and roasting chickens 30@45c.

W. R. W.

Livestock Markets

PITTSBURGH
Cattle

Monday's receipts were very light, only 30 carloads, but other markets had liberal supplies and there was no excitement over a shortage here. Steers were held higher but buyers refused to pay much advance, so trading was rather slow. Good weighty steers were a little higher but other kinds failed to show much change from recent basis. One carload of 1,450-pounds steers, fat but a trifle old-fashioned, brought $13.75, other weights but plainer steers gave at $12.50@12.75, and coarse weights steers at $11.75@12. Good handy-weight butcher steers brought $12@12.50, fair kind around $11.50 and ordinary sort $10.50@11. Fair light butcher steers sold around $11.50, but a few with finish sold up to $12.75@13. Ordinary light steers brought $10.50@10.75 and common ones less. Good heifers were scarce, selling at $11 or over. Cows were higher, good thick kind quotable up to $10.50 and a few sold above that figure. Good but not choice market cows went at $9@9.50 largely. Canners sold largely at $5.75@6, a few down to $5. Bulls were higher, the ordinary bologna kind going at $9.25@9.75, and nothing but common light bulls below $9. Good butcher bulls were scarce and quotable at $10.50 or better. One 1,800-pound bull brought $10.75.

Choice grain-fed steers, 1,200 lbs. or over	$13 75@14 00
Good to choice	13 25@13 50
Fair to good, do.	12 25@13 25
Plain heavy steers	10 00@12 00
Choice handyweight steers	12 75@13 25
Good butcher steers, 1,000 to 1,150 lbs.	12 25@12 75
Fair to good, do.	11 50@12 25
Ordinary to fair, do.	11 00@11 50
Common, do.	10 00@10 50
Good light butcher steers	12 00@12 50
Fair to good light steers	11 00@12 00
Common to medium, do.	10 00@11 00
Inferior light steers	9 00@ 9 50
Feeders	Nominal
Stockers	Nominal
Choice heavy bulls	10 25@10 50
Choice handy butcher bulls	10 25@10 50
Good handy bulls	10 00@10 25
Fair to good bulls	9 50@10 00
Common to fair bulls	7 75@ 9 50
Inferior bulls	8 00@ 8 50
Choice fat heifers	11 00@11 50
Good to choice heifers	10 25@11 00
Fair to good heifers	9 50@10 00
Common to fair heifers	8 50@ 9 50
Thin light heifers	7 00@ 8 00
Choice fat cows	10 00@10 50
Good to choice fat cows	9 00@10 00
Fair to good cows	8 00@ 9 00
Common to fair cows	6 00@ 7 50
Canners and cutters	5 00@ 6 00
Fresh cows, calf at side	50 00@150 00

Monday's Representative Sales
Steers

No.	Wt.	Pr.	No.	Wt.	Pr.	No.	Wt.	Pr.
17	1448	13.75	7	1003	13.00	15	1394	12.75
20	1145	12.75	12	1081	12.75	7	980	12.75
4	1367	12.50	15	1138	12.50	6	1135	12.25
6	1025	12.25	5	1286	12.00	15	1142	12.00
7	995	12.00	21	1125	11.75	13	1084	12.75
10	1200	11.60	9	1032	11.60	8	835	11.60
10	1052	11.50	22	1046	11.50	5	996	11.40
6	1063	11.25	11	1150	11.00	19	775	10.75

Hogs

Monday's receipts were not heavy, around 45 carloads, but Chicago reported 70,000, a good-sized run for January. After sellers had taken off about 15c per cwt. trade was fairly active and all were sold. All grades above light Yorkers went mainly at $9.65 but extreme heavy weights would not command quite so much. Light Yorkers sold largely at $9.25 and pigs at $8.50. Quality of hogs is very good and most of them are of handy weight.

Heavy wts., 250 lbs. or over	$ 9 50@ 9 65
Heavy mixed	9 60@ 9 65
Medium wts., 180-200 lbs.	9 60@ 9 65
Heavy Yorkers, 165-180 lbs.	9 60@ 9 65
Light Yorkers, 125-150 lbs.	9 00@ 9 25
Pigs, 100-110 lbs.	8 25@ 8 50
Roughs	7 50@ 8 00
Stags	5 50@ 6 75

Sheep and Lambs

About 12 carloads were in the pens on Monday, about three carloads of them sheep. The sheep market was steady on the basis of $11 for good handy wethers. Some good wooled but not fat wethers brought $9.80. Lambs were little changed at $16.50@16.75 for good handy weights. Medium class of lambs went at $14@15, and culls at $13@14.50 according to quality. Heavy lambs are not numerous but sell $1 to 2 below handy weights, the heavier the cheaper. Last week's sheep quotations were accidentally left unchanged and were consequently too low.

Good to best wethers	$10 50@11 00
Fair to good wethers	9 50@10 50
Good mixed	10 00@10 50
Fair to good, do.	8 50@10 00
Common to fair	6 00@ 8 00
Inferior sheep	4 00@ 6 00
Good to best spring lambs	16 50@16 75
Medium lambs	14 50@15 50
Culls and throwouts	12 00@14 00

Calves

Receipts on Monday were around 600 head. Best veal calves brought $18.50 and second cut $14@15 largely. The calves looked bad on account of zero weather.

LANCASTER
Cattle

Lancaster, Jan. 14. Receipts head. Market slow and draggy. Beef steers a quarter lower, bulls and she-stock about steady. Stockers and feeders nominal.

Good steers	$12 00@13 50
Medium to good	10 50@12 00
Common to medium	9 00@10 50
Good to choice heifers	10 00@11 50
Medium and common	7 50@10 00
Good to choice cows	7 25@10 00
Common and medium	6 00@ 7 25
Low cutter and cutter	3 75@ 6 00
Good to choice beef bulls	10 00@11 50
Cutter, common and medium	7 50@10 00
Feeder and stocker cattle	Nominal
Good to choice calves	16 50@19 00
Medium	14 00@16 50
Culls and common	8 00@14 00

Hogs

About hogs were on sale. Market fully steady. Top of $10.75 paid for hogs in the 200-250-lb. class.

Heavyweights, 250-350 lbs.	$10 25@10 75
Medium weights, 200-250 lbs.	10 25@10 75
Light weights, 160-200 lbs.	10 00@10 50
Packing sows (rough and smooth)	7 50@ 9 75

MISCELLANEOUS PRODUCE
Philadelphia

Eggs.—Extra firsts, 40c; firsts, 38c; seconds, 34@37c; storage, 24@28c; selected and candled fresh eggs, 46@48c; select in cartons, 48@50c.

Butter. Creamery, tubs, 92 score, 47½c; 88@89 score, 45@47½c.

Poultry. Fowls, 32@34c; Leghorns, 26@32c; springers, 28@35c; broilers, 36@38c; old roosters, 22@24c; ducks, 24@34c; turkeys, 25@35c; geese, 25@27c; rabbits, pr., 18@20c; guineas, per pair, $1.25@1.75.

Apples. U. S. No. 1, per bbl., Grimes, $3.50; Yorks, per bu., 81@1.20; Black Twig, $1.40@1.50.

Cranberries. Per ¼ bbl., N. J., 83@4.

Celery.—N. Y., 2-3 crates, large rough, $2.50@2.75; Pa. & N. J. bunches, wired, 17@20c.

Potatoes. Pa. round whites, per 120 lbs., $1.50@1.55.

New York

Butter.—Creamery, higher than extras, 47¾@48½c; extras, 47¾@47½c; seconds, 43@44c.

Eggs.—White eggs, current receipts average extras, 44@45c; extra firsts, 30@42c; firsts, 28@40c; mediums, 28@40c.

Poultry.—Live, by freight, fowls, 34@37c; chickens, 31@37c; old roosters, 20c; ducks, 30c; geese, 25c.

Apples. Eastern and Southern bskts., McIntosh, $1.50@3.75; Greening, 90c@$2.25; Delicious, $1@2; Wealthy, 85c@$1.65; Jonathan, 90c@$1.75; barreled stock, Greening, $2.75@7; McIntosh, $3@12; No. Spys $3@8; York, $3.50@5.25.

Potatoes.—L. I., 150-lb. sack, 81@2.75; Maine, $2@2.15.

Sweet potatoes. Jersey, best basket, $1.50@2.50.

Cranberries. Per ¼ bbl., N. J., $3@4.

Celery.—N. Y., 2-3 crates, large rough, $2.50@2.75; Pa. & N. J. bunches, wired, 17@20c.

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Potatoes.—L. I., 150-lb. sack, 81@2.75; Maine, $2@2.15.

Sweet potatoes. Jersey, best basket, $1.50@2.50.

Vegetables.—Beets, 80@90c per bunch; asparagus, 25c bunch; string beans, 40@45c per ¾ pk.; beans, lima, 45@50c per pt. bx.; cabbage, 50@75c per head; carrots, 8 to 15c per bunch; cauliflower, 20@40c per head; celery, 10@25c per bunch; cucumbers, 10@15c each; endive, 50@10c per head; lettuce 40@20c per head; mushrooms, 25@30c per pt. box; onions, 20@25c per ¾ pk.; green onions, 10c per bunch; onions, Spanish, 50@10c each; peppers, 5@8c each; potatoes, 60@75c per bu.; sweet potatoes, 20@25c per ¾ pk.; parsley, 10@3c per bunch; peas, 40@45c per ¾ pk.; radishes, 5@10c per bunch; spinach, 15c ¾ pk.; turnips, 15c per ¾ pk.; Brussels sprouts, 25@30c per qt. box.

York

Butter and eggs. Country butter, 55@60c; separator, 60@65c. Eggs, whites, 45 to 50c; brown, 45c.

Poultry. Hens, Leghorn, 24@28c; heavy, 26@30c.

Vegetables. Potatoes, 60@75c per bu.; cabbage, 4@5c lb.; lettuce, 5@10c bd.; spinach, 15@20c ¾ pk.; parsley, 20@3c; turnips, 15c ¾ pk.; celery, 5@10c stalk.

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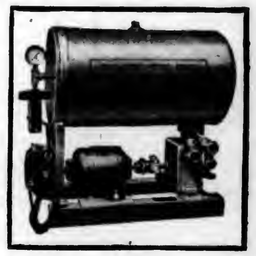
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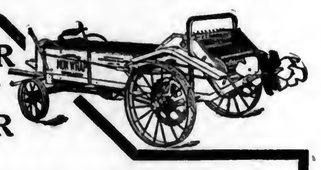
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About Saving Money

By W. D. ZINN

HENRY FORD certainly started something when he said, "No successful boy ever saved any money. They spent it just as fast as they could for things to improve themselves." He is being severely criticised by a good many papers, but Henry was right and the thing that makes him right is the clause in his statement "for things to improve themselves". By this statement he does by no means approve the wasting of money.

Some days ago I was talking to a young man who I knew had received four dollars per day all summer and had boarded at home and I said, "Henry, you certainly have saved a lot of money this summer." His reply was: "No one can save money if he gets only four dollars a day." He simply wasted his money. I told him it would have been better for him if he had received only one dollar a day. With the extra three dollars he had bought a lot of bad habits that might cling to him through life.

Young men ought to spend money to improve themselves, but they ought not spend money with which to purchase bad habits, and Mr. Ford never intended to teach such a thing. Many of our schools are teaching extravagance rather than thrift.

An Investment

The writer well remembers the first dollar he ever had or earned. It was a brand, splinter, new greenback dollar and he could not sleep until he had spent it, but he did not waste it. He invested it in a lamb and when the lamb was grown to be a sheep it was sold and the proceeds were invested in a calf.

That first dollar was the origin from which every dollar that was spent on my education came. I spent every dollar I earned for years on self-improvement. The only reason that I have such a limited education is that I could not earn enough dollars during those days to secure a better education.

I now recall two young men who had the same college opportunities. One earned all the money he spent in college. The other had all the money that an over-indulgent father thought he needed. The former has made a success in life; the latter has never owned his own home. He had fully as much ability as the other, but in college he was furnished money with which to purchase extravagant habits and they were the ruination of him.

I have known scores of young men who worked their way through college and I have the first one to know who did not make a success. On the other hand, I have known hundreds who had all the money they thought they needed furnished them and they have made shipwrecks of their lives. We need to face right about and teach our children to spend their money for improving themselves, but to discontinue the sinful waste of money. Henry Ford is absolutely right.

Can't Get the Fertilizer

A West Virginia reader writes: "You recommended me to apply 400 pounds of superphosphate broadcast over my corn ground and put 150 pounds of a 4-16-4 goods in the row. I can buy the superphosphate, but I cannot get the 4-16-4 goods. My neighbors say no such a formula is made. Could I buy the ingredients and mix it myself? If so what should I use for a filler? Be specific in your instructions for home mixing."

Your neighbors are simply mistaken. Such a formula is on the market and your dealer can get it for you. The reason every dealer does not keep it in stock is that very few farmers will buy that high a priced goods. The dealer in my town might buy five tons of a 4-16-4 goods that he would offer for $40 per ton and at the same time buy 25 tons of a 2-8-2 goods that he would offer for $24, and the 25 tons would be sold a long time before the five tons. The five tons would be just as cheap at $48 as the 25 tons were at $24, yes, a little cheaper, for the farmer would have to haul and handle only half as much, but because the 2-8-2 goods look the cheaper most of the farmers buy it.

Am I making an extravagant statement? Let us see. In a certain state a few years ago two formulas were offered, one a 2-8-2, which was priced at $27, and a 4-16-4 goods, priced at $34. The farmers bought 900 tons of the former and 500 tons of the latter. Does not this prove my point?

If farmers knew as much about fertilizers as they should there would be no sale for a 2-8-2 goods. I have estimated the cost of plant food in both a high-grade and a low-grade goods and in most cases the high-grade is the cheaper. The exception is in 16 per cent and 20 per cent superphosphate.

To Make a 4-16-4 Goods

Now as to the mixing of a 4-16-4 goods. The nitrogen, phosphoric acid and potash may be derived from two or more sources, but farmers are interested in the cheapest sources and I am going to use these in this formula. We take 325 pounds sulphate of ammonia, carrying about 25 per cent nitrogen, 1,600 pounds of superphosphate (20 per cent), carrying 320 pounds phosphoric acid, and 160 pounds muriate of potash, carrying 80 pounds potash. We now have 2,080 pounds, just a little over a ton, and if we want to be exact and apply 200 pounds of the 4-16-4 goods we will apply 208 pounds of this mixture and we will have the same amount of plant food.

How about the filler? In the sulphate we had 75 pounds of filler in every hundred pounds and in the phosphoric acid we had 80 pounds and in the muriate of potash we had 50 pounds. Or in other words, in a ton of 4-16-4 goods we have 480 pounds of plant food and 1,520 pounds of filler, but in a ton of a 2-8-2 goods we have but 240 pounds plant food and 1,760 pounds of filler. Who would want any more filler?

Misleading

In a prominent farm magazine a writer spent quite a little time recommending rye for a cover crop. Many writers have been guilty of the same thing years ago, but not many of them are doing it today. Some of our best authorities, among whom is Dr. Firman E. Bear, head of the Soils Department of the Ohio State University, say that when rye is turned down it renders the soil temporarily less productive. Their reason is that the bacteria necessary to break down this rye cannot get a sufficient amount of nitrogen out of the rye to maintain their bodies while doing the work and must draw from the soil, thus rendering the soil less productive.

It is little wonder that the average farmer becomes puzzled over these questions when they read so many different recommendations. The safest thing to do is to stick to some legume for a cover crop where it is at all possible to grow it. Hairy vetch is one of the hardiest of the legumes and it will grow in an acid soil, but will grow better in a sweet soil.

Alfalfa Seeded in Wheat

A Pennsylvania reader writes that he sowed alfalfa when he sowed his wheat last fall and got a fine stand. He cut it September 10th and it came on and went into winter with eight inches of growth.

There is no need arguing against success. Had he asked any of the so-called authorities on alfalfa whether it would be safe to do this I [illegible] would have advised against it, but he has succeeded. He will [illegible] tried the same thing this [illegible] alfalfa looks fine. I hope

next year whether his alfalfa came through the winter and whether he got a good crop.

Several years ago Mr. Shirer of Indiana told us about what wonderful success he was having by sowing alfalfa in his wheat, but many could hardly believe it. The Bible says that in the mouth of two or three witnesses every word shall be established, and we have the two witnesses.

Make Use of the County Agent

Most counties of the country have county agents, but what puzzles me is the indifference of many farmers in getting any help from them. Last summer a West Virginia farmer came to me asking how he should proceed to grow alfalfa on his farm. When I suggested that his land might need lime he said he had arranged to apply three tons of lime per acre and said it would cost him seven dollars per ton. He had three acres that he wanted to sow to alfalfa. Had he carried out his intentions he would have spent $63 for lime on his land.

I suggested that he get his county agent to test his soil for acidity before he bought any lime, which he did and was informed by the agent that his soil was neutral and therefore needed no lime. Money saved is money made and that was a very easy way to make $63. I once met an Ohio farmer who had bought 25 tons of lime, paying $7.75 per ton more than it was worth compared to other forms of lime that he could have bought. He lost $193.75 because he failed to get in touch with the county agent before he bought his lime.

County agents are not able to answer all the questions that may be asked by the farmers, but they are in position to get the information in most instances. I have been county agent long enough to know that it is a great pleasure to agents to be the means of helping the farmers.

Clover in Wheat

A reader asks me to describe in detail my method of seeding clover in the spring. I wait until the ground has settled from the winter freezing and the wheat has sufficient roothold so as not to be easily pulled out with the harrow, grain drill or disk seeder—and I have used all three methods.

If the harrow is used I sow the seed with a hand seeder and apply the fertilizer with a lime spreader. If the grain drill is used the clover seed is put in it and we apply the fertilizer at the same time. Some farmers use a hoe drill for this purpose, but I have always used a disk drill. In more recent years we have been using the alfalfa and clover disk seeder. As it has no fertilizer attachment we put the fertilizer on ahead of the disk seeder with the lime spreader.

We sow this seed between the first and the fifteenth of April. We have been employing this method for twenty years and have never had a single failure. Before we began to seed in this way we had a failure about two years out of five. During all this time we have applied fertilizer when sowing the clover, 250 pounds of superphosphate per acre.

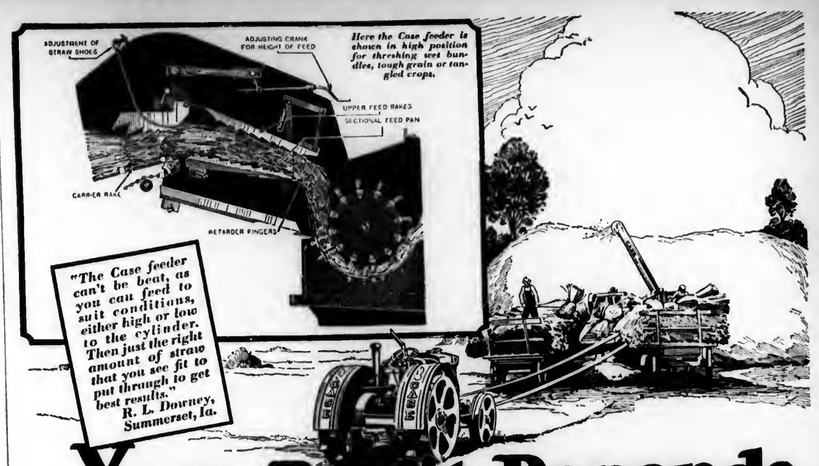
Time Wanted

It was my business last Saturday to pass up and down the streets of a town several times and my attention was called to the vast amount of time that was being wasted. There were more than 100 farmers loafing on the streets and it was a beautiful day.

I had a visitor with me and he remarked that many of these farmers looked like they were poor, judging by the clothes they wore. It is all right for farmers to take Saturday afternoon off to do their shopping and visit with their neighbors, but I see no necessity for their loafing the whole day.

My friend was right, many of these farmers are poor, and they will always be unless they mend their ways. Some of them have no disposition to be anything else but poor.

The command to work six days is just as binding as to remember the Sabbath day to keep it holy.



Your Profit Depends on 4 Operations

THE profit to be made from threshing your crops or those of your neighbors depends largely upon how well your thresher performs these four operations: (1) feeding; (2) threshing; (3) separating; (4) cleaning.

Let us discuss the first one here, for feeding is the key job that largely affects the other three.

You want a thresher with a feeder that can be set to feed high or low on the cylinder as conditions may require. High, when the bundles are damp, or the grain is tough or tangled. Low, for dry, easily threshed grain. Only a Case thresher can give you this important and exclusive feature. This adjustment can be easily made while the thresher is running.

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And so it is with the Case thresher all the way through. Its many exclusive features will save your grain and make more profit for you. Its simplicity makes it easy to operate. That is why more Case threshers are in use than any other three makes combined. Write for "Bigger Profits by Better Threshing" and the new Thresher Catalog. Both are free.

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RELIABLE MEN WANTED to sell guaranteed trees, shrubs and roses. Steady work. Pay weekly. Start now for Spring business. Wholesale and retail. Webb Nursery Co., Rochester, New York.

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POSITIONS WANTED by Farm School Graduates, 20 years of age, having had three years practical and theoretical training on the large School farms. Some of these graduates are trained as dairymen; herdsmen; tractor operators; vegetable gardeners; poultrymen; greenhousemen; landscape men; and general farm management. Only interested in good farms. Ready for employment April 1st. Communicate with C. L. Goodling, Dean, Farm School, Penna.

WORKING FARM MANAGER wants position March 1 to 15. Married, age 36, one child. Life experience in farm and Advanced Registry work. Eleven years working nonpartner. Experienced with crops, machinery, marketing, dairying. Understand handling men, soil improvement, repairs of machinery, building. Four years agricultural college training. Address Box W, Pennsylvania Farmer, Pittsburgh, Pa.

Harrison County Soil Progra

By DANA D. REYNOLDS

TO its being definitely linked with the development of churches, schools, recreation and other phases of a well-rounded rural program is credited much of the success of soil fertility work in Harrison county, West Virginia. Through creating higher standards of living, highly productive soil has become an economic necessity.

Entered in competition with soil fertility programs of counties in the northern and eastern states, the Harrison county plan was selected as one of the best eight by a committee of prominent extension directors and agronomists. This was the fifth annual contest conducted by the National Fertilizer Association. The various plans were judged November 9.

Sturm Is Leader

As leader of an extensive program carried on for the past three years and as author of the plan submitted in the national contest, H. G. Sturm, county agricultural agent, received a three-day trip to the annual meeting of the American Society of Agronomy in Washington. He also received a gold medal and a framed certificate of award.

Much of the open-minded attitude and the progressiveness in the county is attributed to the work done ten years ago by another county agent who was particularly interested in soil retention, maintenance and development.

Having had such a large part in its development, the people of the county feel that the program is their own and are vitally interested in its present and future. Distinguishing this from many other soil fertility campaigns is the confidence which the farmers have in the Extension Division and the Farm Bureau. These agencies need only to suggest ideas and lead.

Program Meets Needs

In discovering the best ways and means of maintaining and increasing soil fertility with the greatest net gains from crop yields lies the future of the Harrison county farmer. Coal, oil and gas have either been exhausted or have passed into the hands of operators and developers, removing a former source of revenue for the farm. Furthermore, the 10,000 people in the rural sections must aid in providing adequate schools, churches and roads for 80,000 industrial workers of the county who are not extensive property holders.

Large local markets afford easy and profitable sale of increasing quantities of farm produce. At the present time the large consuming public is supplied mainly from outside the county, since graded products can be obtained in larger quantities and more regularly from the "foreign" producers.

Intensification of agriculture is coming to the point where it can provide graded products in sufficient quantities and in a dependable way to meet the demands of local markets is the objective. To this extent the livestock and general farming methods of days before the coming of industry are being revolutionized.

Hard Roads Aid

Hard roads are bringing about a community of interest throughout the county in such matters as public health, sociability, recreation, civic affairs, etc. Natural gas, electric light and power and other modern conveniences tend to make farm life in Harrison county satisfying and appealing.

West Virginia Teachers

NOTE one of the points touched by the West Virginia State Grange is a resolution favoring "examination as a part basis for the certification of teachers."

The law as it now stands gives a teacher a certificate on completing a high-school course and also a certain number of hours of a normal course. Forty hours entitles the holder to a short normal certificate good for three years. This certificate is renewed on the completion of a certain number of hours of normal work.

There are various grades granted according to the normal work completed. The requirement to pass a subject in a high school is seventy-five per cent. This is a very low grade for a teacher to undertake to teach a subject.

There has been much complaint of the high-school graduates not being proficient in some of the primary subjects. Especially the subject of arithmetic has been apparently neglected by many of the high school certificated teachers. In some instances this criticism does not appear just.

Under the present system the high-school student who barely passes in a subject is on the same footing as the teacher as the one who makes 95 to 100 per cent. If an examination test were required it would be an inducement for the ones who are just barely passing to make an effort to really learn the subject. If they failed to make the necessary effort to learn the subject, they would suffer in their teacher's grade and the standard of those who really knew the subject would not be lowered to the level of the poorest student.

The Grange has committed itself in West Virginia in favor of a much-needed reform in our school system.

A. J. Legg.

Nicholas county, W. Va.



Picking the Winning Ears from a Feld on the Farm of Arthur Sheets, Lost Creek, Harrison County

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Minimum 10 words; 10c per word per insertion if four consecutive insertions are used.

FARM LAND PENNSYLVANIA

89 ACRES, $5,000 INCOME.—Borders water, stock, crops, machinery, horses, 5 registered cows, hay, corn, oats, potatoes, etc., included; cows, hay, corn, oats, potatoes, etc., included; 200 acres easily-worked tillage, spring-watered pasture, valuable wood, sugar grove, 125 fruit trees; only 1¼ miles village; homelike 8-room house, 80-ft. hip-roof basement barn, piped water, garage, etc. 16-cow herd. Big bargain at $5,000 complete, part cash. Picture and details pg. 35 big Illustrated catalog. Free. Strout Agency, 1422-BG, Land Title Bldg., Philadelphia, Pa.

FOR SALE.—Farm of 131 acres lying between two State Highways. Near city. Good soil and excellent buildings. Soft spring water piped to house and barn. Price $13,000. Easy terms. Write or see B. R. Fisher, Greensburg, Pa.

BUY OR SELL your properties through me. Service guaranteed. Real Estate Specialist, 19 N. 15th St., Harrisburg, Pa.

FARMS FOR SALE.—Anywhere in Pennsylvania. Tell me the kind you want. Real Estate Specialist, 19 N. 15th, Harrisburg, Pa.

MISCELLANEOUS LANDS

IN THE SAN JOAQUIN VALLEY of California general farming is a paying business, feeding millions of people in towns and cities. Alfalfa combined with dairying, hogs and poultry, yields a good income. A small one-family farm, with little hired labor, insures success. You can work outdoors all the year. Newcomers welcome. The Santa Fe Railway has no land to sell, but offers a free service in helping you get right location. Write for illustrated San Joaquin Valley folder and get—our farm paper—"The Earth" free for six months. C. L. Seagraves, General Colonization Agent, Santa Fe Railway, 818 Railway Exchange, Chicago.

DEL-MAR-VA—THE MARKET BASKET of the East. Three to ten hours by motor truck to New York, Philadelphia, Baltimore and Washington markets. Pennsylvania Railroad permeates Peninsula. Splendid productive land, farms, town lots, waterfront homes. Low prices. Good Schools, long seasons. Very little snow and freezing. Handsome descriptive booklet, Free. Address 163 Del-Mar-Va Building, Salisbury, Md.

150 ACRES.—Deep, dark loam soil, rolling upland, fine for tractor. In highest state of fertility. Two sets of buildings, electric, water, furnace. Bordering improved highway, ½ mile railroad, 6 miles county seat. Price $10,500. Eastern Ohio. K. E. Wallace, Carrollton, Ohio.

FOR THE HOME

BUY PEANUTS DIRECT from growers. Roast them yourself. 10 pounds, $1.75; 25 lbs., $3.50; 100 lbs., $12.00; 500 lbs., $50.00; 2,000 lbs., $160.00. Now booking orders for "Frostproof" Cabbage Plants. J. F. Council Company, Franklin, Va.

100 ASSORTED dishes packed as first quality consisting of cups, saucers, plates, bowls, oatmeals, platters, etc. All useful. Slightly imperfect, $5.50, prepaid. Send money to us for immediate shipment. Home China Co., Millis, Mass.

YARN.—Virgin wool; for sale by manufacturer at bargain. Samples Free. H. A. Barlett, (Dept. F), Harmony, Maine.

RAW FURS

WANTED.—Raw Furs, Ginseng, Minks, Muskrats, Raccoons. Especially head stripe Skunks. $1.40. Sterns Fur Co., New Brunswick, New Jersey.

ALFALFA

ALFALFA.—First and second cuttings, and mixed hay. Deal direct with a farmer and save money. Write for prices. The Cross Farm, R. D., Fayetteville, N. Y.

HAY.—All kinds, alfalfa, clover, timothy and mixed. Delivered prices. Harry D. Gates Company, Jackson, Michigan.

ALFALFA HAY.—Car lots for sale. Chas. B. Wing, Box 22, Mechanicsburg, Ohio.

PET STOCK

PEAFOWL, Pheasants, Bantams, Pigeons, Birds, Rabbits. Free Circular. John Hass, Bettendorf, Iowa.

AVIATION

AVIATION.—Salary while learning, $18 to $35 per week, while under instruction in our factory, and at our airport. Call or write for information without obligation. Weeks Aircraft Corporation, Bayerfront L, Plankinton Building, Milwaukee, Wisconsin.

Veterinary

Stringy Milk

We have a cow that is giving stringy, thick milk. She seems to be in good health. L. B.

This is a condition in the intetion of the udder which cannot always be corrected. It is a fact that some udders have a decided lack of tone, vigor and resistance in the internal glandular secreting structure. It is also true that such udders are chronically affected, and are subject to frequent periods of abnormal milk.

For a trial give the following treatment: A full dose of Epsom salts (one and one-half pounds) in two quarts of water as a drench. Follow with a similar dose in five days. Give on the grain feed once daily for a five-day period a full tablespoonful of saltpeter. For several days milk out the quarters four or five times a day.

Would suggest also a highly stimulating grain ration. This is important. A mixture of 100 pounds each of corn and cob meal, ground oats and cottonseed meal is satisfactory. Please bear in mind that there are many such cases with which we cannot cope. Some cows are apt to be subject to this trouble toward end of lactation period.

Fistula of the Withers

I have a valuable mare that has a fistula. It has broken on both sides of the shoulder. One side is healed up, but the other is discharging. E. W. F.

After all has been said, really the most satisfactory procedure in a case of fistula of the withers is for an operation to be performed at which time all the decayed tissue can be removed and incisions made at the proper point so that all pus will drain to the outside. After such an operation the injection of a standard disinfectant solution will have to be followed out at least once daily.

If your veterinarian does not believe that an operation combined with the use of bacterins would benefit, other agents advised will also be of no avail. No doubt you will have opportunity to counsel with another successful practitioner on the same matter. It is true, of course, that various caustic agents have been used in such cases and it is also probably true that in certain instances they were beneficial.

In summing up the whole proposition, however, I would rather depend on an operation followed by a systematic irrigation of antiseptic solutions, and perhaps also the use of bacterins or vaccines manufactured especially for such cases.

Barrow is Stiff

I am writing about my hog, a barrow ten and one-half months old. He seems stiff in his hind quarters and has to make several attempts before he can get up. Walks stiff and limps in right hind leg. When he stands and eats keeps stepping with his hind feet. Lies around most all the time. Eats well and is in fair order. R. L. K.

The mineral and vitamin content or lack of same is a factor in this stiffness. A mixture which insures ample mineral and vitamins in the feed consists of: Tankage two parts, oilmeal one part and alfalfa meal one part. Use as ten per cent of the grain ration fed. In addition you might give also once a day on the grain feed a tablespoonful of cod-liver oil.

HAY AND GRAIN WANTED

WANTED.—Hay, Straw, Grain, Potatoes, Apples, Cabbage, etc. Carlots. Pay highest market prices. The Hamilton Co., New Castle, Pa.

MALE HELP

WANTED.—Married or single man to work on poultry and general farm. Must be capable and industrious. No bad habits. Send references and wages expected. Adress J, Pennsylvania Farmer, Pittsburgh, Pa.

WANTED.—About March 1st, one or two married men, with small family, to work on dairy farm. Capable of operating farm machinery Tranquility Farms, Alhambra, N. J.

BAGS

BAGS.—We buy your empty bags at good prices. We also manufacture and sell new or second-hand burlap bags. Write us for prices today. **Simmon Bros., 135 Washington Place, Pittsburgh, Pa.**

TURKEYS

SOME OF AMERICA'S BEST MAMMOTH Bronze Turkeys. Original Gold Coin strain. Excellent yearlings and young stock bred from prize-winners. Mrs. S. Owen, Seville, Ohio.

BRONZE TURKEYS.—Pure-bred, strong and healthy. Also Toulouse geese and Pekin ducks. Prize reasonable. 10th year. Jesse McLaughlin, Belleville, Ohio.

TURKEY HENS, $6.00; gobblers, $10.00; Geese, $5.00; Ducks, $3.00; Guineas, $2.00. Baby chicks cheap. Free circular. Edwin A. Souder, R. 1, Sellersville, Pa.

TURKEYS. All breeds. Strictly pure-bred. Pairs and trios, not akin. Reasonable prices. Eastern Ohio Poultry Farm, Bealeville, Ohio.

GIANT MAMMOTH BRONZE TOMS.—Disease free. Big Buff Rock cockerels. J. C. Clipp & Son, Dp. Campbellsburg, Ind.

M. B. TURKEYS, bred for size, vigor and color. Prize-winners. Extremely healthy. C. G. Jordan, R. 5, Box 106, Charleston, W. Va.

FOR SALE.—Bourbon turkeys, Toulouse geese. Elva Corman, Beech Creek, Pa.

MAMMOTH BRONZE TURKEYS.—Best breeding, size and color. Sunnyside, Jonesville, Va.

POULTRY

100 RHODE ISLAND RED COCKERELS, Rose and Single Combs. Cockerels that will mat the lay in your flock as well as select birds of exhibition quality. My birds always win, in both production and exhibition classes. They are the big-boned fellows, dark, rich cherry red, glossy and fine, from an extra heavy laying strain. Prices $3.50, $5.00 and $7.00 each. Eggs for hatching, 15 eggs from Pen One, $5.00; 15 eggs from Pen Two, $3.50; 15 eggs from all other pens, $2.50. C. R. Burdette, Mound Hill Poultry Farm, 129 East Main St., Barnesville, Ohio.

BUFF ORPINGTON COCKERELS, $3.00. Golden buff color. Berkshire sow pigs, 4 months old, good ones. Farmers' prices. W. A. Lothers, Pennbeck, Pa.

PARDEE'S PERFECT PEKIN DUCKLINGS $25. Eggs $14.100. "World's Best" Service. Satisfaction. "Duck News" Free. Roy E. Pardee, Ash St., Islip, L. I., New York.

SINGLE COMB BROWN and WHITE LEGHORNS, 357-egg. Pedigreed, trapnested, contest winners. Stock, eggs, etc. Catalog. Vera Fulton, R.8, Gallipolis, Ohio.

BARRED ROCKS. The utmost in utility, and rich in quality. L. W. Clelland, R. 2, Box 78, Fairmont, West Virginia.

BARRED ROCK COCKERELS.—Big lone type. Certified stock, hatching eggs and baby chicks. Eugene A. Grove, Lime Kiln, Md.

BARRED ROCK PULLETS.—Heavy laying Thompson strain. Also extra good cockerels. H. E. Akers, R. 2, Clearville, Pa.

SINGLE COMB WHITE MINORCA hatching eggs. Write Fred Golden, Penn Run, Pa.

BABY CHICKS

POTENCY that rare quality, is bred into our Tancred chix, carrying blood of Tancred's best bird. Every chick produced on our own farm. Positively no birds farmed out. Bred S. C. White Leghorn Pen, 1928 Penna. State Standard Production Show, State College. No pullets used. Breeders. All breeders trapnested. Males pedigreed, Illustrated booklet Paden's White Leghorn Farm, Dept. B, Millerstown, Pa.

REAL PROFITS from quality chicks. We sell our Barred Rocks rightly, set only large eggs. For large, vigorous pullets from pedigreed flocks of from 180 to 250 egg record, which assures you the utmost in quality and liveability, White, Buff, Barred Rocks and R. I. Reds, $12. Leghorns, $12. Heavy Assorted, $11 per 100. 5% discount on orders received three weeks in advance. Circular. Fairview Heights Hatchery, Blanchester, Ohio.

TANCRED WHITE LEGHORN CHICKS. Individual trapnest records back of every hen on Tancred farms. Every male pedigreed, every egg set on our farms. Prices you can afford. Brentnam Poultry Farm, Arthurs, Pa.

BABY CHICKS

KWALITEED BLOOD TESTED ROCKS, REDS, Leghorns. Bred for color, egg production, and blood-tested four years for Bacillary White Diarrhoea by the Virginia State Department of Agriculture. All Chicks shipped under State Label. Catalog and price list free, order early, so we can supply your wants. Harrisonburg Hatchery, Inc., Box 222, Harrisonburg, Va.

MT. AIRY CHICKS.—Strong and Sturdy. Rocks, Reds, Leghorns, Wyandottes. Healthy and of wages expected. Adress J, Pennsylvania Farmer, Pittsburgh, Pa.

WHITE LEGHORN EGGS AND CHICKS.—Big discount if ordered now for spring shipment. Sired by 200 to 300 egg males. Egg bred 29 years. Winners at 20 egg contests. Shipped c.o.d. Catalog, special price bulletin free. Thousands of pullets, hens, cockerels at low prices. Geo. B. Ferris, 980 Union, Grand Rapids, Michigan.

BUTCHER SUPER-QUALITY CHICKS from inspected free range, money-making stock. Reds, White Wyandottes, White, Barred Rocks, Giants, Black Minorcas, Anconas, White and Brown Leghorns. Booklet Free. Low Prices. Pure Breeds. Bucher Bros. Hatchery, Dept. B, Bucyrus, Ohio.

ALL CHICKS from breeders R. W. D. tested for New England Accredited. Leghorns, Reds, Barred Rocks, White Wyandottes, for spring delivery. Special prices Now on Reds and Rocks for winter broilers. Free circular. Hall Bros., Box 61, Wallingford, Conn.

EARLY SPRING BROILER CHICKS.—Butcher, market men pay extra prices for your pure-bred Rocks, Reds, Wyandottes, Orpingtons, Description free picture folder free, showing best varieties money-making market chickens. Farm Service, Route 81, Tyrone, Pa.

HUSKI-HATCHED BARRED ROCKS, Reds and White Leghorn breeders are State Certified and Blood Tested. Strong, hardy, healthy, Huskie Chicks ready for delivery at date to suit your convenience. Write for catalog. Huski-Hatched Chick Farms, Box PA-c, Mt. Solon, Virginia.

PETERSIME Electrically hatched pure-bred Barred Rocks, Reds. "Petersime Tancred" White Leghorns. Breeders rigidly culled and specially fed for highest vitality. Disease free. Get catalog, attractive prices stating number. Garber Hatchery, Harrisonburg, Va.

FAMOUS TANCRED STRAIN S. C. White Leghorns. Baby Chicks and Hatching Eggs. Pennsylvania State Certified, Officially Blood Tested. Only mates from trapnested 200 to 314-egg dams head our matings. Free booklet. North Poultry Farm, McAlisterville, Pa.

BABY CHICKS from heavy laying strains of Rocks and Reds, $14.00; White and Brown Leghorns, $12.00; mixed, $10.00 per 100. Member U. S. C. A. Sunnyside Hatchery, Liverpool, Pa.

AMERICAN MOTTLED ANCONAS.—Record Layers, Lay large white eggs. Extra large type. Exceptional markings. Fine matings. Low prices. Catalogue. American Ancona Farms, Grampian, Pa.

SUNNYFIELD EXTRA LARGE Single Comb Black Minorcas, exclusively. Chicks, Eggs, Stock. Extraordinary layers. Lay exceptionally large white eggs, two matings, low prices. Catalogue, Sunnyfield Minorca Farms, Grampian, Pa.

REGAL DORCAS WHITE WYANDOTTES. Eggs, Chicks, Stock. 258-Egg Record Ledger. North American contest. White layers. Excellent type. Fine matings. Low prices. Catalogue. Keiser's Regal Rahma Farms, Grampian, Pa.

SINGLE COMB REDS. Barred Rocks. Eggs, Chicks. Extraordinary matings. Fine type. Bred for winter production. Catalogue. Low prices. Grampian Hills Poultry Farms, Grampian, Pa.

GIANT LIGHT BRAHMAS.—Chicks, Eggs. Extraordinary large breeders. Fine color. Record layers. Standard bred. Low price. Catalogue. Giant Brahma Farms, Grampian, Pa.

WHITE LEGHORNS. White Rocks, Buff Orpingtons. Chicks that live and grow into large healthy birds. Exceptionally heavy layers. R. M. Elliott, West Brownsville, Pa.

BABY CHICKS.—Leading strains of Barred Rocks and Reds. Kulp's famous Brown and White Leghorns. Catalog free. W. W. Kulp, R3A, Pottstown, Pa.

BABY CHICKS and EGGS.—Superior Ringlet Barred Rocks, Rose Comb Reds, Tancred and English White Leghorns. Catalogue. Wyndham's Ideal Poultry Yards, Tiffin, Ohio.

KEISER'S SINGLE COMB BROWN LEGHORNS and Golden Buff Orpingtons. Excellent matings—Catalogue. C. Keiser, Grampian, Pa.

FERRIS STRAIN WHITE LEGHORN CHICKS. $12.00 per 100; 537.50, 500; $110.00 per 1,000. Juniata Poultry Farm, Richfield, Pa.

CHICKS. Real Quality. Reds and Leghorns, Chicks hatched February, March specials. Pinehurst Farm, Box 3, Perkiomenville, Pa.

CHIX. Big English Leghorns. Big discount for early orders 3 weeks old pullets. Maple Acres Farm, Box P, Tiffin, Ohio.

COLEMBIAN ROCK EGGS and Chicks from show birds that really lay. Runner eggs also. B. C. Sherman, East New Market, Md.

Herb, the Handy Man





A BEAUTIFUL THING

—and the beauty goes deeper than the frosting!

SOME women seem to be born lucky. In the first place, every cake they bake is good looking. More than that, there seems to be something different about the flavor—a delicate, unmistakable richness that is often lacking in another cake made by an equally skillful but less fortunate cook.

Usually, however, this luck is not kitchen luck—it's grocery-store luck. Investigate—you'll find that these women have discovered, or have learned from a wise, experienced mother, that there is one flour that gives a little better flavor to everything they bake. They buy Pillsbury's Best Flour, because they know it gives their baked foods a flavor and a richness that is the envy of every woman in the neighborhood!

The secret is in the wheat fields

Food experts of leading women's magazines, say that the flour you use has a lot to do with the flavor of the foods you bake. This is true. The secret is in the wheat—the Pillsbury Flour Mills Company has developed its own method of selecting and blending wheats to produce this superior flavor. The grain is then milled according to standards of dependability which have been famous for sixty years. The result is Pillsbury's Best Flour—your surest protection against baking failures, and your guarantee of finer flavor in everything you bake — cakes, biscuits, pastry, bread!



for finer flavor in everything you bake ~ cakes, pastry, biscuits, bread

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PENNSYLVANIA FARMER

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January 26, 1929

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Mapes results are so remarkable, so outstanding, so evident, that you have only to see them to be convinced that the Mapes slogan, *"cost little more—worth much more"*, is a modest statement of the true worth of Mapes Manures.

Mapes Manures have always produced outstanding results because we find out from the crop what materials it likes best and we put these materials into Mapes. Mapes Manures are made to grow good crops—not to sell at a price. They are first made right, then priced as low as possible.

Try Mapes this year. Compare the results—yield, quality, profits—with the results from any other fertilizer you can buy. Write today for list of crop brands and prices—also for Special Trial Offer.

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I use.....tons of fertilizer on the following crops:.....

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DIBBLE'S Farm Seed Catalog For 1929

is now ready to mail.



Dibble's Farm Seed Book is the leading strictly Farm Seed Catalog of the year. It is different from all others. It is illustrated throughout in colors and the printed matter in large type on heavy paper describes all that is newest and best in Farm Seeds.

It is written by Farmers (over a 1,000 acres in our own Seed Farms) and appeals directly to the practical Business Farmer. It tells the plain truth about the Farm Seed Situation, what varieties are plentiful and cheap and those that are in short supply and higher in value this year.

This information is invaluable and every Farmer should have a copy before placing his order for Farm Seeds. Send for yours today. A minute or two of your time and a postal card will bring it to you by return mail absolutely

FREE

Address

Edward F. Dibble Seedgrower
Box P, Honeoye Falls, N. Y.

Certified Seed Potatoes

Quaker Hill Farm

NORTHERN MICHIGAN RUSSETS — PRINCE EDWARD ISLAND COBBLERS AND MOUNTAINS—NEW YORK RUSSETS AND RURALS

High-yielding strains—Officially inspected and certified. Let us quote prices on your requirements of potatoes and other farm seeds.

K. C. LIVERMORE, BOX P, HONEOYE FALLS, N. Y.

Agricultural Lime

Hydrated
Ground Burned
Burned Lump

Our lime, burned from Western Pennsylvania high-calcium grey limestone and sold in these three forms for the past 14 years, represents the standard, unfailing and economical method of sweetening the soil. The wonderful results enjoyed by our many customers over this period of time prove these facts. Can anyone afford to waste both time and money by using substitutes? If your dealer cannot furnish our Agricultural Lime write to us for prices.

Rose Point Stone & Lime Co., New Castle, Pa.

Farm Facts and Fancies

By ALVA AGEE

I HOPE that farm legislation will not be put over for the consideration of a special session of the Congress. Whatever plan may be in the President-elect's mind can be adopted now, and the benefit can be realized when grain crops are ready for market this year. Something could have been done a year ago, but those having a fixed plan of their own were unwilling to have any other. The party in power and its candidate for president last November are on record against the outstanding features of that plan, and the welfare of agriculture demands that right-of-way be given the legislation that is in the President-elect's program for helping the situation.

If nothing is done in this session of the Congress, and a special session takes the matter under consideration, we cannot expect a new way of dealing with surplus production to be functioning satisfactorily next summer and fall. Mr. Hoover's plan, so far as worked out by him, probably is known to certain leaders, and an end of delay should be made. Congressional debate does not get us anywhere. There has been ample opportunity to talk. Let's have the legislation, and next winter there can be whatever modification experience suggests.

Rice Displacing Potatoes

Mr. E. J. Baker, Jr., associate editor of Farm Implement News, writes: "I believe that you would find, if the information were available, that the decline in potato consumption in urban markets has just about equalled the increase in rice. Our family, living in the Chicago area, is typical. During the war you remember one year when potato prices went out of sight. That year we substituted rice quite regularly for potatoes. Both children and adults found that rice was quite enjoyable as a regular article of diet instead of an occasional one. The habit of eating rice being formed, we simply continue, irrespective of the price of potatoes. Habit is a strong factor in planning meals."

There is much in what Mr. Baker says. Sometimes when a crop is very short and the price very high the comment is made that the producer is better off. That may be true for the time being, but there is such a wide range in choice of food materials today that many people easily lose the feeling that any one thing is essential, and the habit of using a substitute is formed.

Basic Truths

Mr. Lighty tells us that Storer's "Agriculture" may be profitably studied by any farmer who would master his business. I have known for many years that the soundness of our friend's teachings on soils and crops could be traced back directly to his early study of that old treatise on agriculture.

Some of us did not have the advantage of training in an agricultural course at college, and we got some fundamental knowledge of soils and plants from a few standard books, of which Storer was easily the best. To this day I commend it to studious folk who want to learn about farming. I suppose our modern scientists regard it as superseded and probably it should be so if the reader is wanting to be told exactly what to do rather than to learn basic truths on which he can build his own program. There is need of both kinds of help.

Dr. Storer reasoned from broad observation, and modern research shows that he went amiss at times, but he had fundamental facts, and knew their relation to each other. Then, too, he had that gift of making his subject interesting that the historian Macaulay had. I wonder whether any young man reads Storer today. If he does, amending some statements of belief in the light of modern station results is wiser than he could be by dint of science solely on more modern books.

Wanting a Formula

I have visited farms where the owner wanted only specific suggestions regarding a program for his farm. No one can make another's plan for him surely unless he knows why the other is what it is. More than that, he must know a lot that makes farming interesting. Storer saw that the farmer was in partnership with nature and tried to find out what she was trying to do, and by what methods she used, and what help from man would be real help. He gives us understanding and puts us to reasoning out our own problems.

When we fully appreciate the soil's hunger for organic matter, and its difficulty in having the right supply of moisture for what it would grow, we begin to feel at home with it and use station results intelligently. Indeed, if a man really knew all that Storer has to tell him in a most interesting way, he would know more than he probably would get out of half a dozen college courses. If he would draw some inferences from observations of that earlier day that scientists would know were faulty, he would be a pretty well educated man and be prepared to be a first-class farmer.

Does this make the modern scientist and teacher smile? Probably so, and maybe rightly so, and yet I am telling the truth in what I have said. Let him smile, as usual.

A Bluegrass Sod

There are some things that one is willing to try on a small scale in time when he may be in doubt about getting net profit. I hope that thousands of northern farmers may be inclined to try Prof. J. W. White's method of securing a heavy bluegrass sod as given in bulletins of the Pennsylvania Experiment Station. Try a few acres and see the result.

Bluegrass will not live as a boarder; it must be well-fed, and then it will feed liberally for its food. It has been a source of wealth to sections of Kentucky where nature provided lime and phosphorus freely. It has done much for eastern Tennessee, the most of the valleys of Virginia and West Virginia, some parts of southern Pennsylvania and that formerly noted home of the Merino sheep in western Pennsylvania and eastern Ohio. I am speaking of Kentucky bluegrass.

Our poorer soils cannot make such sods without applications of lime, phosphorus, and nitrogen and potash are needed. The treatment is expensive, and that is why I suggest only five acres to those who do not know what amount of rich feed a fine bluegrass sod can produce. Then more money will be found for more acres. I am sure that Professor White's work will have far-reaching results.

THE U. S. Department of Agriculture states that much more profit could be realized from the growing of sweet potatoes than is now made. If diseases in the field, storage and transit were reduced. The inability of farmers to keep sweet potatoes in storage forces them to sell the bulk of the crop as soon as it is dug. The specialists believe that more sweet potatoes would be available for winter use and disposed of at a good price if ordinary principles were better understood.

In Farmers' Bulletin No. 1015, "Sweet Potato Diseases", just issued by the Department, sweet potato growers will find much information of value concerning the prevention and control of disease. A copy of the bulletin may be secured from the United States Department of Agriculture, Washington, D. C.

W. R. W.

When Buying a Farm

MANY farm communities are welcoming strangers—families who have purchased abandoned farms. Too often these people come with high hopes and small sums of money, the land bank advances a loan, follows a year or more of heroic struggle; the farm is once more abandoned along with the tiny nest egg it had taken so long to acquire.

If only the purchasers could and would visit the location before investing, if possible work for a time in the neighborhood of the farm, its value or lack of value would soon be learned.

The advertisements often refer to mostly farms adjacent to the advertised property, but refrain from stating that said farms have been in the hands of several farmers for generations, while the one for sale has been carted to market by renters or lies facing prevailing winds and erosion has removed the deep soil from the surface.

Near our home a farm has just been turned over to the land bank after a desperate struggle on the part of people from far away, people no longer young.

Value of Buildings

That place has been a standing joke (standing is correct when applied to a large part of the place) in the neighborhood for a score of years. Lumbermen had rented it to get fodder for horses as long as it would produce any sort of a crop without being plowed.

Beside it a fertile farm in fair condition—the house worth the price asked for the farm—was sold by heirs for no more than the worth of a fine stand of virgin timber it supported.

If one has money enough to invest in a farm it is well to consider the farm buildings. Our home place when we bought it was not an abandoned farm, but the buildings were out of repair and inadequate. We soon found that it is cheaper to buy buildings than to erect them.

During a motor trip I stopped at an empty house for water. One door of the house stood open and the plain substantial beauty of the living-room revealed has stayed with me. A spacious room it was with large fireplace and an old-fashioned mantel; such a room as interior decorators delight in and as are pictured in alluring ads.

Rare, beautiful woods in these old houses; oak and cherry and bird's-eye maple, oftimes worn by the touch of hands until it is smooth and polished, and golden-hued by years, until it resembles old violins.

Many Good Vacant Farms

Early American pine? Much of it. Only three-quarters of a century ago when my father came to this county men drew hardwood logs into heaps of pine logs that today would be almost priceless so that the pine would burn (pine chars over the surface deep and the center is unharmed) to clear land which fifty years later was worth less than the timber destroyed.

In Ohio a farm deed has attached to it a record of all papers of conveyance that have preceded it. If some provision could be made whereby prospective buyers of abandoned farms could obtain histories of the property they have in view there would be fewer cases of high hope and heroic endeavor ending in sad disappointment and loss.

There are many good abandoned farms—old people no longer able to work them, boys gone after four-dollar-per-diem jobs in towns where it costs five dollars a day to live; farms the heirs to which, having homes and work elsewhere, pay the taxes and let the land lie idle.

Neighbors are glad to welcome purchasers of these farms; thrifty, industrious people can make them pay; loans on such properties are hailed with delight by land banks.

What can be done to show the would-be buyers away from the farm on road to the poorhouse and allure them to the land that will respond to honest effort?

M. C. S.

Better Work is the Big Reason for Their Popularity



JOHN DEERE Tractor Plows have won widespread popularity by doing better work—the kind of work that means good, high-producing seed beds... the kind of clean plowing so essential in fighting the European Corn Borer.

But better work is not the only reason why farmers prefer these plows. Long life, the result of great strength and high-quality materials... light draft, because weight is all wheel-carried and because of clean-scouring, correctly-shaped bottoms... easy handling with the convenient lever controls, the positive power lifts—these, too, are reasons for the popularity of John Deere Tractor Plows.

There's a size of John Deere to fit the power of your tractor. If you have a small tractor, you'll want the light-draft No. 40-C. The No. 45 is for small or medium-sized tractors; the No. 5 for the more powerful tractors.

Special equipment can be furnished for Corn Borer control.

Read about the three plows illustrated here—see them at your John Deere dealer's store—write for folders.



The No. 40-C at Work

The Light-Draft Plow for Small Tractors

It's the combination of rolling landside and self-adjusting hitch that makes the No. 40-C lighter in draft. The rear weight rolls—there's no dragging friction on the bottoms. The hitch is always correct, regardless of plowing depth.

Special process John Deere steel used in beams, and braces gives the 40-C lighter weight yet greater strength—another reason for light draft. A cushion spring-release hitch protects the plow and tractor when an obstruction is hit.

Good-working, long-wearing John Deere bottoms assure the kind of plowing you want.

The Stronger Three-Bottom Plow

For years, farmers have known the John Deere No. 5 for its great strength and durability. Now, it's even stronger. Extra-heavy beams, heavily braced, have an extra brace across rear. Wheels, axles—every part is unusually strong.

Genuine John Deere bottoms assure good work—clean-scouring and light draft is the result of correct shape. Quick-detachable shares save time and work.

Positive Power Lift

Heavy-duty power lift is long lived and positive in its action.

The land wheel is set back, just as on your sulky—plow works at even depth in uneven ground.

If your conditions warrant, you may want the John Deere No. 6, the four-bottom plow that's exactly like the No. 5 except as to size.

The No. 45 Is Known for Its Good Work

In plowing contests, in the fields of the most particular plowmen, the John Deere No. 45 tractor plow has won its reputation for good work.

Light draft, too, is a feature that every user likes. Its clean-scouring John Deere bottoms, its perfect balance, its freedom from dragging friction because all weight is wheel-carried, and its rigid frame construction are responsible for this fuel-saving feature.

Every part of the No. 45 is built to give good service for many years—you'll see strength and durability standing out all over this plow.



The No. 45 in the Field

Your John Deere dealer will be pleased to show you these plows and tell you about their many features. Write to us, TODAY, for free folders describing and illustrating them. Address, John Deere, Moline, Illinois, and ask for booklet AD-236 Please state whether you want booklets on the No. 5, the No. 45 or on the No. 40-C.

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NESHAMINY GARDENS

By R. P. KESTER

I WANT to open up a question which has been on my mind for some time, but one which I would like to dismiss as a fancy if I could. It is one that is frequently suggested by social observers, and I have heard some intelligent farm people intimate it. I shall introduce it by asking, How does the intellectual and social status of rural people of today compare with those of twenty years ago? In other words, are the people of the average rural communities the equals of those of a generation ago?

* * *

The reason these questions are serious is that they intimate there has been a deterioration in the quality of the farm population as compared to that of former years. I give herewith a conversation I had with a representative farmer of the older days, a man who still lives on his fine, productive farm but who seems to be pessimistic over conditions as they exist today in his neighborhood. I had not seen him in a dozen years and it was like meeting with a long lost friend to run across him again. After we had conversed on matters of mutual interest, including personal affairs, he said:

"But many of the factors which made living in my neighborhood so enjoyable in years past have so changed that I have lost interest in most things."

"What do you mean by that?" I asked him.

"Well, in the first place, Mother and I are the only ones of our generation now living in our community. Our five children, after we had given them a good education, have all left the farm and the closest one is living in a town, thirty miles away, and the oldest son is in a bank in Chicago. Other oldtime families have changed as much as our own, and most of the farms have been sold or rented and are occupied by people having standards different from those of our old neighborhood. Many of them are ignorant and have no interest in the community beyond living a kind of sloppy life. What was once the fine home of T - M - was rented by a family of foreigners some time ago and was raided recently as a bootlegger's join."

I knew that neighborhood in other years and was sorry to hear of the decline. But in thinking over the conversation, I could recall other neighborhood which seem to have gone backward. In many places that once had live farm organizations there is now nothing of the kind. The influence of the unusual era of industrial prosperity, causing many of the country's brightest and best young men and women to enter into other lines of work, has without doubt changed the character of many rural neighborhoods. And the present system of rural education has not helped to prevent it. How is it in your neighborhood? If there has been a deterioration, how can a change for the better be brought about?

* * *

Until the time comes for pruning the apple and peach trees, grape vines, berry bushes, etc., I expect to have some real leisure. I do not remember having a stretch of three months with little to do since I was seventeen years old. But I am making good use of it by reading, writing, visiting and plain loafing. I have read several books—some on farming and gardening, some biographies, several magazines and a few stories and novels. It may be a sign of old fogyism that I get disgusted before finishing a modern novel. If country neighborhoods have deteriorated, novels and novel writers have deteriorated to a much greater extent in the last ten years.

But to get on to more cheering and more important subjects. The seed and nursery catalogs are coming in, and their attractiveness and variety are worthy of serious consideration. They always inspire me with plans and ambitions. New varieties, when recommended by reliable firms, are always worth considering, and it you are a real investigating mind worth a trial. But it is not wise to discard proved varieties for new ones, until the new ones have been tried a few seasons. Careful investigators are always at work, and the fact that great progress has been made is proof that still better things may be in store.

* * *

A reader has asked for more information about the variety of celery called Emperor, mentioned here some time ago. I believe that Emperor is the same as Fordhook. At least I am unable to note any difference. Emperor is a late celery, being listed as a late-day variety. Last year we set in the field a little too late and it was caught as far on when put away as it should have been. For this reason, it was slow in ripening and blanching. The texture and quality of Emperor celery is unsurpassed. The stalks are smooth, very thick and absolutely stringless. It is so brittle that care must be exercised in handling it as it breaks easily. For this reason, it should be given extra first handling in the row while quite small so that the stalks may be brought together firm.

* * *

Our experience with celery teaches us that celery should be sprayed with Bordeaux mixture more frequently than is usually done if it is to grow rapidly and keep well. The spraying should be commenced as soon as the plants are about 6 or 8 inches high. Celery which has not been sufficiently sprayed will not keep well in the trench, even a slight amount of rust or blight will cause rotting after being in the trench a short time.

The Golden Plume was our best pink celery last year. It is a good grower of excellent quality. We blanched it in the usual soil-and-board method in the field with satisfactory results. It is listed in Hoskins catalog, and is almost equal to the Emperor for quality.

Del-Bay Farms Sold

THE Del-Bay Farms, the large fruit and vegetable farm in operation in New Jersey, was sold recently to a New York syndicate for a sum reported to be in excess of $1,000,000. The farm consists of 3,200 acres, a large part of which was in orchards and under irrigation.

Around 400 carloads of fruit and 200 carloads of vegetables have been shipped in normal years from this farm. The former owners were the A. J. White, investment bankers of New York City. This property was formerly the Charles Seabrook property and was sold two years ago at receiver's sale for $412,000 subject to a mortgage of $400,000.

W. R. W.

AN experiment to determine the best type of broccoli greens to grow for shipment to New York and other markets is being carried on by the Delaware Experiment Station. The test will also determine which strains are best adapted to local conditions and give the largest yields. Test shipments will be made to Philadelphia, New York, Wilmington and Baltimore. R. R. Snyder, county agent of Sussex county is supervising the experiment.

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1928 Master Farmers Honored at State Show

BEFORE most of our readers receive this issue the men chosen as Master Farmers for the year 1928 will have received the Master Farmer Medal at a dinner given in their honor at Harrisburg by the Pennsylvania Farmer. Nearly 300 men and women prominent in agricultural and public affairs in the East accepted invitations to this second Master Farmer Dinner held in the Ballroom of the Penn-Harris Hotel on Thursday evening of State Farm Products Show week. The Master Farmers of 1927 were given similar recognition during last year's show.

The Master Farmers of 1928 who were the guests of honor at this year's dinner are listed on this page.

The Master Farmer movement has been defined as an organized effort "to dignify agriculture by recognizing and dramatizing its successes; to encourage farmers to take pride in their calling; to inspire farm boys and girls by showing them that outstanding success is possible in agriculture as in other occupations—not only the success that is measured in money, but what is more important, the success that comes from an upright and useful life in family and community."

The movement was started in the East in 1927 by the Pennsylvania Farmer. Twelve men were chosen for recognition the first year, nine from Pennsylvania, two from New Jersey and one from Delaware and Maryland. Fourteen Master Farmers have been chosen from the same territory for the year 1928, or really 16, since two of this year's awards go to father-and-son partnerships. Pennsylvania Farmer also cooperated with the American Agriculturist of New York City in selecting two additional Master Farmers in New Jersey.

How the Master Farmers Were Chosen

The men chosen to receive the Master Farmer awards were selected from a group of candidates named by the general public. Announcement of the project, the Master Farmers Score Card and directions for scoring were published early in the summer of 1928. Any one interested was asked to nominate farmers who had reached a high and well rounded standard of achievement as measured by the score card. Any farmer living in Pennsylvania, New Jersey, Delaware or Maryland could be nominated. West Virginia was not included since Pennsylvania Farmer had few readers in that state prior to the recent consolidation with the Pennsylvania Stockman and Farmer.

The Master Farmers Score Card is the scale used in measuring the qualifications of Master Farmer candidates throughout the country. This basic standard is uniform in its essentials but, after consultation with State College, extension service and agricultural department officials, it is varied to meet local conditions. The essential features of the Score Card are as follows:

Operation of Farm.—Maintenance of soil fertility; crop rotation; seed used; quality of livestock; quality and variety of fruit trees and truck crops; feeding and care of livestock; care of fruit trees and truck crops; efficient use of man and horse labor; adequate tools, machinery and equipment well housed and repaired; convenience of farm arrangement; products of farm, yield and quality.

Business Methods and Ability.—Relation of income to expenses; accounting methods; business reputation; marketing methods.

General Farm Appearance and Upkeep. Repair and upkeep of buildings; appearance of yards; condition of fields; condition of fences and ditches.

Home Life.—Convenient home; labor-saving equipment in home; character as father and husband; education and training of children.

Citizenship.—Neighborliness; interest in schools and churches; interest in other community enterprises; interest in local and national governments.

In response to the call for nominees, Pennsylvania Farmer received the names of 250 outstanding farmers. They were nominated by other farmers, by bankers and business men, by county agents and extension specialists.

Every candidate thus nominated was asked to fill out an exhaustive questionnaire, giving complete information covering every point in the score card. This information was used in the preliminary judging which was followed by visits to the various farms by members of Pennsylvania Farmer staff. About eighty of the nominees were visited personally.

The questionnaires were then laid before the Boards of Judges, together with reports on the personal visits and information gathered from many other sources. After studying this material in the light of the score card the judges cast their ballots for the Master Farmers of 1928.

Judges

The Judges for Pennsylvania, Delaware and Maryland were: R. L. Watts, Dean of the School of Agriculture and Director of the Experiment Station, Pennsylvania State College; Charles G. Jordan, Pennsylvania State Secretary of Agriculture; John Light, Secretary of the Pennsylvania State Grange; R. G. Brecht, Pennsylvania Deputy Secretary of Agriculture.

The judges for New Jersey were: J. G. Lipman, Dean of the New Jersey State College of Agriculture and Director of the Experiment Station; William B. Duryee, New Jersey State Secretary of Agriculture; H. E. Taylor, Secretary of the New Jersey Federation of County Boards of Agriculture.

The Master Farmer movement is in no sense a contest. No prizes is made of selecting the "best farmer" in a county or state. The aim is simply to give recognition to a few of the men who represent the best in eastern agriculture. In every case the honor seeks the man, not the man the honor.

Why They Are Master Farmers

These men are named Master Farmers first, of course, because they are master farmers in the literal sense. All are experts in the operation of their farms. Five of them are dairymen and seven are fruit growers in the groups are 400-Bushel Club members; two are in the 500-bushel class. Seven of the dairymen have herds with annual averages exceeding 300 pounds of butterfat per cow, two are above 400 pounds. The 14 men apply an average of 31 tons of commercial fertilizer per year. All use machines to save man labor. They have 13 tractors, 14 motor trucks, 15 gas engines and more than 30 electric motors.

These Master Farmers keep books and know what they are doing financially. They make profits by studying and supplying the needs of the East's unequalled markets. Two have gross incomes between $40,000 and $50,000 per year, others nearly as much. They use bank credit rather than store or dealer credit. Five are bank directors.

Believing that appearance counts, they keep their buildings painted; their lawns are mowed, their fields and fence rows are clean.

The Master Farmers place home and family first. Their children go to high school and college. All of their homes have electricity and running water. Most of them have modern plumbing, bathrooms, refrigerators, power washers, radios. Four Master Farmers' wives cook only by electricity; eight have oil ranges. The 14 families have 21 automobiles.

The Master Farmers of 1928 head numerous associations, from local farmers' groups to powerful state organizations. Three are president of their county agricultural extension associations. Seven hold or have held public office, ranging from that of township auditor to state senator and state secretary of agriculture. Nearly all attend church and Sunday School regularly. Three are Sunday School teachers and three others are superintendents of Sunday Schools.

These men are good farmers, good husbands and fathers, and good citizens. That is why they are Master Farmers.

Master Farmers of 1928

PENNSYLVANIA

Ray F. Brown	Huntingdon County
E. S. Ferry	Bedford County
Edison M. Hay	Somerset County
Amandus Larson	Elk County
S. S. Lehman	Erie County
William G. Mendenhall	Chester County
Harrison S. Nolt	Lancaster County
Clarence H. Smith	Bucks County
C. B. Snyder	Lancaster County
F. P. Willits and Son	Delaware County

NEW JERSEY

William J. Clayton	Monmouth County
*Willard B. Kille	Gloucester County
*Wallace W. Titsworth	Sussex County
Clifford E. Snyder	Hunterdon County

DELAWARE

C. A. Newton and Son	Sussex County

MARYLAND

L. Otis Corkran	Dorchester County

*Selected in cooperation with the American Agriculturist which awarded them the degree of Master Farmer in New York City, December 19, 1928.

Surplus

By S. H. GREEN

SURPLUS is that which remains over and above what is required. Price has a good deal to say with what the American farmer deems surplus. Farmers in the Kaw Valley of Kansas have turned their hogs into the potato fields because prices do not warrant the expense of digging and marketing the crop as potatoes. Perhaps these Kaw Valley farmers will make a profit out of their potatoes after all. And some poor folks in the potato centers will go without spuds next winter.

Surplus is not always a condition caused by too much of any product. The business of today demands a profit from his product. And he seeks to find that profit from his product in any possible manner in which it may be derived.

Grain, cotton, wool, fruit, meats, eggs, etc., may be stored and the surplus reduced by consumption. But fruit and potatoes are largely consumed within a few months and unless the demand is secure, the producer loses.

Surplus is the farm problem. Product on increases faster than consumption and herein lies the nucleus of the farm problem. When we have succeeded in harnessing both the weather and the human appetite and not until then, we'll be on the open road to farm relief.

CANCELLATION of orders by American importers for 222,000 packages of onions followed the fifty per cent tariff advance as reported. The new tariff becomes effective on January 21 and adds one-half cent per pound to existing duty of one cent per pound. For several Mars the domestic producers have been suffering from low prices due to the increasing onion imports and have urged an increase in tariff. Egypt is the chief competitor with the western growers, as it is in this section that the strong [illegible] is grown.

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THE REGULATOR

A POTATO grower wants to know what other means than low prices can be relied on to prevent continued excess in production. We don't know any other means and don't expect any other will be found. In the future as in the past the acreage of potatoes and other crops will depend largely on the prevailing or expected price. All the schemes to control production sound nice but not one of them is worth a hoot if it is not in harmony with the price, which is and will continue to be the real regulator.

LEADING A BULL

PROBABLY there is no absolutely safe way to lead a vicious bull but there is a best way—using the staff. With the bull-staff the man always has a chance, with a rope or a strap alone he is at the animal's mercy. Last week William Gerber of Hamilton, O., was attacked and killed by a bull which he was leading to water. We have no particulars but apparently this bull was of the gentle, trusted and hence most dangerous variety.

FOREIGN TRADE

ECONOMISTS who see in the "balance of trade" a measure of prosperity should be elated over the Commerce Department's report last week, which stated that exports in 1928 amounted to $5,120,132,000, the highest ever recorded except in 1920. The balance of trade "favorable" to this country is $1,039,202,000. However, prosperity in a country with an "unfavorable" trade balance may be as pronounced as when exports exceed imports, for it is as profitable to buy as to sell, if the price is right. The important thing is that both exports and imports were large last year, measured not only in dollars but in quantity of goods. This volume of commerce is highly desirable from every standpoint, and changes of policy which might curtail it should be undertaken with caution and applied with discretion.

A GENTLE WARNING

BANKS, chambers of commerce, service clubs and other non-agricultural organizations might do better to devote their attention to the improvement of the dairy industry rather than to the expansion of it. Their intentions are good. They are trying to do something for their respective communities and for the farmers thereof. But putting dairy cows on more and more farms, expanding the area devoted to dairying and increasing the number of men engaged in it, may not work out so well as they expect. There is in fact no need of such or any artificial expansion of this industry. It will expand naturally and sufficiently whenever and wherever it pays or promises to pay better than other lines of production.

HIGH WAGES

THE Department of Labor recently published a study of wage and labor conditions in Colonial times. The tenor of reports was that craftsmen were making "exorbitant demands", that wages were "intolerable" and that "excessive rates" charged by workmen "grew into a general complaint" which called for legislative action. The laborers' viewpoint is expressed in a history of "the Province of Pensilvania", by Gabriel Thomas, written for the purpose of inducing poverty-stricken workmen of England to migrate where they could get "three times the wages" they could in England or Wales. In three hundred years human nature has not changed. Workmen still get all they can, and the public feels that it is too much. When lamenting the evils of high wages, extravagance and the frivolity of the present generation we should not forget that this country has done fairly well on a three-century diet of them. Since the records do not state whether we have continued to flourish because or in spite of high wages those for and agin' 'em may both have their convictions confirmed.

AS TO RELIEF

IT IS said with considerable emphasis that there has been plenty of talk about farm relief and no more discussion is necessary. Plenty of talk but not the right kind. Very little investigation or discussion of the fundamental thing, the economy of the proposed plans. If costly mistakes in this legislation are to be avoided haste is impossible. The mere omission of the equalization fee, or some other fatal feature, is not sufficient to insure sound legislation. Removal of the bad from any proposed legislation does not make holy the rest of it. Maybe we should wait until the President-elect comes along with his plan, if he has one. Certainly we should examine carefully any plan. And then, when Congress has done its best, we may hear something about relief for other classes than farmers—the little business men for instance. Very few of them are prospering in these shifting times.

ASKING FOR MORE

AMONG the 197 bills presented to the Pennsylvania Legislature last week were several relating to the automobile. One of them, sponsored by the Highway Department, would increase registration and license fees, and especially the rates on buses. Failing to get the public's approval for a $50,000,000 bond issue the Highway Department plans to collect more from the motorist. Unquestionably the automobile should pay its share of road costs, but we must remember that it is shouldering a heavy end of the load now and that a large part of the public which disapproved of the bond issue is composed of automobile owners. Highway revenues for the coming two years are said to be more than enough for any construction and maintenance program possible of accomplishment in that period. If the public gets the impression now that the Highway Department wants too much it may have trouble to get funds it actually needs later.

FEW GOING CONCERNS

LAST week two agencies asked us, and no doubt all other agricultural papers, for the names of large-scale corporate farming enterprises. We could give them little information about going concerns, for m
the corporation farming in this region
been a failure. Applying the industrial
tice of large-scale production to agricu
is rather difficult. It can be and will be
here and there, but there is no general
dency toward it in this part of the co
In the course of time we shall probably
farms of such size as can be most econ
cally operated by their owners rather
any corporation, syndicate or chain syst
farming.

MODERN ORACLES

IN ANCIENT Greece a man about to
bark on an enterprise could consult
oracle, who in ambiguous language w
reveal to him the future. With the de
in general credulity the oracle business
ed. Now it is being revived, under a
name. For instance the extension servic
one of the leading western states has sch
uled a series of meetings where "college e
ouists will interpret to farmers and farm l
ers the prospects for 1929." In these oth
meetings material from the U. S. Departm
of Agriculture will be largely used. Ob
outlooks are usually embellished with en
reservations to let the outlooker out in
things don't go as he expected. The sch
uled meetings have the advantage of get
farmers together to discuss plans for the c
ing year. If at the same time they would
the outlooks and advice for reference at
end of the year they should yield some us
information on the value and reliability
such things.

THE MASTER FARMER MOVEMEN

ON THREE other pages of this issue
be found a few of the essential fa
about the Master Farmer movement sp
sored in this territory in 1927 and 1928 by
Pennsylvania Farmer. We feel very ke
the responsibility of choosing a group of
and calling them Master Farmers. This
ing is shared by the men themselves. I
they know that the weeds grow just as
that insects are just as troublesome and c
fences are just as likely to fall down on t
farms as on any other farms. And they kn
that they are no less human than any
else. But these are the very things that m
the Master Farmer movement worth wh
for in honoring these men we are honor
the whole class of energetic, far-sighted fa
ers who are helping to make the profess
of agriculture what it should be.

Since the very first we have avoided c
ing the Master Farmer movement a cont
We make no attempt to name merely
"best" farmers in our territory. However,
have spared neither time nor expense in ga
ering information that would help the judg
select the men whose records show them
conform best to the ideals of well-round
rural citizenship set forth in the Mas
Farmer Score Card. The judges couldn't p
sibly go far wrong, thanks to the calibre of
the 250 men nominated.

The New Jersey Master Farmers were
troduced to the public at a banquet of t
Federation of County Boards of Agricultu
in Trenton during Agricultural Week. T
whole group is being honored in Harrisbu
this week during the State Farm Produc
Show. The men themselves and their wiv
dislike the idea of having a fuss made ov
them, for they are truly modest; the awar
came to them unsought and unexpected. B
we take pride in pointing to them as men a
women who represent all that is best
rural life. If the story of their lives is
inspiring to others as it has been to us
shall consider the Master Farmer project w
worth the effort we have put into it.

Eastern Farm Comments

By MILES HORST

A DISCUSSION on how to keep live-stock well occupied a large
rt of the program of the
nnsylvania Veterinary Med-
al Society at its annual
eeting held in Philadelphia
st week. The remainder of
e program was given over
discussions on how to make
ck animals well. The vet-
narians derive their liveli-
ood by telling us how to cure our sick animals,
at they realize that it would pay us better to em-
oy them to keep our animals well and they are
eparing themselves to render this service. The
ower farmers fully appreciate this service, the less
eir losses will be. These losses do not necessarily
clude only animals that actually die, for thousands
f dollars are lost annually by farmers having their
ock polluted by parasites.

* * *

DANIEL RICE of Perry county made this inter-
esting comment on the occasion of the annual
xtension meeting held in that county: In a spray
est conducted on his farm, thirty-four cents worth
f labor and spray materials made the difference be-
ween $2.12 worth of cider apples and $14.25 worth
f quality fruit.

* * *

THE hatching of baby chicks is now one of the
most important branches of the poultry indus-
ry in Pennsylvania. It is estimated that the 244
ommercial hatcheries in the state last year set
6,000,000 eggs. One of these hatcheries alone pro-
uced more than a million chicks and marketed
hem in all but a few states in this country.

* * *

POULTRY, dairy products, baked
and canned foods, green stuff, hand-
work, etc., produced by West Virginia
farm women and sold through the five
Mountain State Home Industries Shops
in the state, brought a total of approx-
imately $33,000 last year. This does
not include the thousands of dollars
realized by women in other parts of
the state who had small shops for the
Christmas trade, roadside markets, etc.

* * *

A ROUND-TABLE discussion,
where questions are asked and
answered by farmers themselves inso-
far as possible, has been planned as a
new feature of Farmers' Week at Mor-
gantown, W. Va., February 4 to 8. Sug-
gestions on crop rotations, potato pro-
duction, dairying, etc., are interesting
and valuable coming from a farmer
who has successfully carried out cer-
tain improved practices on his farm.
This successful farmer can give first-
hand information about practical prob-
lems which arise in carrying out new ideas under
actual farming conditions. Farmers are asked to
mail their questions and problems now to the Col-
lege of Agriculture, Morgantown, W. Va.

* * *

"SHEEP DAY" was observed at the Pennsyl-
vania State College, January 14th. More than
a hundred of the leading sheep breeders of the state
were in attendance.

The dedication of the new sheep barn was one of
the day's leading features. This new barn is located
directly north of the dairy barn and is similar to
it in construction and general lines. The main
structure is two stories in height, 44 feet wide
and 124 feet long. From one end extends the ex-
perimental shed, a one-story structure 30 feet wide
and 200 feet long. The interior is well adapted to
experimental work in breeding and feeding.

The barn was full of sheep on this particular
occasion. Of interest to the visitors were the prize-
winners at the recent International Show which the
College then exhibited and is now using for class-
room purposes. The breeding flocks of five leading
breeds occupied the main barn. In the annex were
the sheep on two experiments now running. One
covers the production of hot-house lambs, the other
the determination of the relative value of native and
western lambs as feeders.

The sheep industry of Pennsylvania is coming
back according to Prof. W. L. Henning. It increas-
ed six per cent during the past year, the sheep pop-
ulation of the state now being 450,000 head. This
increase is in line with a nation-wide movement
now taking place. The sheep industry moved west
during the latter part of the 19th century. It is
now moving east, and in this eastern movement the
farm flock is coming into prominence.

Bill Connell told of the improvement taking place
in Pennsylvania through better feeding and better
breeding methods. These facts alone tell the story—
386 pure-bred rams went into flocks this year not
having such rams before; 28 county wool pools have
increased their grades of wool nine per cent in the
past five years.

In the evening the visitors and members of the
College staff assembled at the Country Club for their
annual roast lamb dinner. J. F. Walker of Ohio,
whom the readers of this paper will know by his
interesting contributions to it, was the principal
speaker. He told of the sheep industry in Australia,
New Zealand and South Africa. It was evident
from his remarks that sheepmen in those countries
from necessity were forced to produce a good quality
of wool and mutton and that they are grading
it far more carefully than are American sheepmen,
as a consequence in spite of distance to market and
tariff barriers in England and America they are
receiving almost as much for their product as are
Americans behind their protection walls.

* * *

FRIDAY, January 18th, was an important day on
the calendar of Lancaster county. In the fore-
noon, the Extension Association of the county held
its annual meeting. At noon some four hundred
business men and farmers joined in the town-country
banquet and in the evening 98 boys and girls of the
county, members of this year's corn club, met at
Lancaster for their annual round-up.

The extension meeting consisted largely of re-
ports by project leaders. Ziegler Hess explained
the methods he used in producing his 683-bushel
yield of potatoes on a single acre. Elmer Snyder
outlined the State College spray service to fruit
growers. The confinement system of raising chicks
was described and heartily endorsed by Harry
Metzler. Norman Garber told of the improved meth-
ods that pure-bred breeders in the county are using.
Space will not permit to give the details of these
projects, but suffice it to say that farmers in Lan-
caster county are by no means standing still.

The banquet was an inspiration to those fortunate
enough to attend it. The menu was characteristic
of Lancaster county in abundance and tastiness. A
serving of apple ice cream was one of its unique
features.

Congressman Charles Brand of Ohio was the
chief speaker. His theme was Farm Relief and he
developed it from a western viewpoint, which does
not meet with that of eastern farmers in all details.
He emphasized the tariff as one means of bringing
relief. Beyond this he ventured with hesitancy.

This is the second year that Lancaster county has
had a corn club; 118 boys and girls entered the pro-
ject and 97 finished. Each grew a half acre under
the supervision of the county agent. A member of
the Lancaster Chamber of Commerce served as the
growers' sponsor and at intervals visited the boy or
girl to check on how well the plot was doing. The
variety grown was Surecrop. In the lobby of the
Brunswick Hotel was an array of ten-ear exhibits
from these club projects. Many of them showed
outstanding skill in selection.

* * *

ALTHOUGH spring is the time to plant trees
on waste land, right now is the time to apply
for the trees from the state. Application blanks and
assistance may be obtained from your county agent.

* * *

BLOOD testing for bovine abortion is gaining
momentum in the Keystone state. Not until
1927 did this work really get under way, but in that
year 250 herds were tested. Only to 49 herds were
issued abortion-free certificates. But in 1928, 666
more herds were tested and 100 issued abortion-free
certificates.



New Sheep Barn at Pennsylvania State College

SINCE it is a common practice among farmers to "rub" the sprouts from seed tubers, the horticulture department, College of Agriculture, W. Va. University, conducted experimental work to determine the effects of "sprouting" on yields.

On stock which was "sprouted" little withering resulted from the first "rubbing". There was a marked wilting and reduction in the size of the tubers after the first time, however. The sprouts also became more spindling with each successive sprout removal. Corresponding results were noted with regard to yield, and the standing and vigor of the plants.

In view of the results obtained, it is questionable if tubers which have had the sprouts "rubbed" from them more than once are of much value as seed stock, the department states.

Few potato growers in West Virginia have specially constructed storage houses or cellars to hold potato seed stock. Some purchase a fresh supply of seed stock each season from the North, but most growers store their stock in outdoor pits or piles, or in ordinary farm cellars. Under these conditions there is usually scant opportunity for effective control of temperature or humidity and sprouting invariably occurs during the latter part of the storage period.

* * *

EXPERIENCE has taught me that the most profitable job I can give my hired men during January when outdoor work is at a standstill is to have them bring all harrows, plows, cultivators, drills and planters and other equipment together on an empty barn floor where with the men I can check all broken parts. I can then order new parts which they can attach. They can tighten bolts or mend parts as the occasion may demand. They do the same with any harness equipment. When spring opens up it saves much delay and annoyance.

* * *

IF you have never visited any of the farmers' markets in the city of Lancaster, Pa., take the first opportunity you have to do so. It will leave a lasting impression.

If you get there early you will find tables and shelves laden to overflowing with farm products, fresh from Lancaster county farms. The abundance and the quality of the products you will see are characteristic of this fine farming community and the tidy and industrious people who occupy it.

At this time of the year you will see stacks of celery, lettuce, cabbage and horse-radish. You will also find good home-made butter, cup cheese and old-fashioned "smearcase", crocks of apple butter and pickled products. There are tables filled with meats and meat products including scrapple and ponhaus. Dressed poultry and fresh eggs, apples and potatoes add to the variety. Some of the farm women have specialized in pies and cakes and home-made candies.

Foot-and-Mouth Disease in California

Washington, D. C., January 19.—An outbreak of foot-and-mouth disease in a herd of hogs near Whittier, Los Angeles county, Calif., is announced by the Bureau of Animal Industry, United States Department of Agriculture. In view of the highly infectious nature of this livestock malady, government and state veterinary officials today slaughtered and buried the entire herd of 3,500 swine in the hope of stopping the outbreak.

As a precautionary measure the Department of Agriculture, by telegraphic orders, assigned a corps of experienced veterinary inspectors from near-by states. Most of the men are already at the scene of action. Although the Department does not minimize the danger to the livestock industry of the appearance of foot-and-mouth disease in the country, the outlook for prompt eradication is unusually favorable. The infected herd was on premises well isolated from other livestock. The disease was promptly recognized and diagnosed by Dr. Rudolph Snyder, Dr. Jacob Traum, Dr. J. P. Iverson and Dr. L. M. Hurt, all with extensive experience with the disease. Hon. George H. Hecke, Director of Agriculture in California, and the Los Angeles county and city officials are giving active cooperation.

The source of the outbreak, though still under investigation appears to have been infected garbage from a ship that had visited a foreign port and that later docked at San Pedro. A positive diagnosis of foot-and-mouth disease was reported to the Department on January 18, and thus far the disease has not appeared on any new premises. As a safeguard, to the livestock industry, however, a quarantine zone has been established by the state and federal governments.

Master Farmers of 1928

Ray F. Brown



FIRST alphabetically among the Pennsylvania Master Farmers of 1928 is Ray F. Brown of Huntingdon county. His 114-acre farm, lying in one of the narrow valleys of the Alleghenies, contains only 44 acres of cultivated land. But fertilizer and lime on fields and pastures enable them to produce most of the feed for 300 pure-bred blood-tested Leghorns and nearly thirty head of dairy cattle. The hens average nearly 200 eggs each per year; the herd is on the National Dairy Herd Roll with an annual average of more than 9,000 pounds of milk and 320 pounds of butterfat per cow. Complete farm records show Mr. Brown where his profits come from and what becomes of the money he receives for his Grade A milk and direct-to-the-consumer eggs. Electric lights, modern plumbing and heating systems and numerous labor-saving devices are to be found in the Brown home. The dairy barn and poultry house, too, are fully equipped. This farm had the first septic tank in Huntingdon county, and the owner has turned over the portable tank forms he built to the free use of the public.

Mr. and Mrs. Brown are leaders in their community, both being very active in the farm and home improvement work sponsored by the agricultural extension service. Laura, 13, the oldest of their three children, belongs to a sewing club, a potato club and a calf club. Before he started farming 15 years ago, Mr. Brown taught school. He retains his interest in all community affairs, having long been township auditor, deacon in the church, superintendent of the Sunday School and Master of the Grange.

William J. Clayton

THE 124-acre farm of William J. Clayton, Monmouth county, is in the heart of the white potato section of New Jersey. Mr. Clayton started as a hired man and since he began farming for himself in 1901 has become a potato grower of note. His 60 acres in potatoes this year averaged over 300 bushels to the acre. Mr. Clayton is a pioneer in field experimental work with potatoes as to seed sources, fertilizers and disease-control and this year conducted about two acres of test plots under the supervision of the New Jersey Agricultural Experiment Station. Men from every part of the United States and many foreign countries visit these plots during the growing season to study potato diseases and the effect of fertilizer concentrates. Each summer Mr. Clayton takes a trip through seed potato regions and selects the fields which will be the source of his seed for the coming year.



Labor-saving equipment is used wherever possible. Two two-row cultivators keep out the weeds and two power sprayers make quick work of spraying the sixty acres of potatoes. Four men with the aid of a potato picker harvested the entire crop this year at a cost of four cents a bushel. By operating his other farm, which in the past has been rented on shares, and by tractor farming, Mr. Clayton and his son plan to more than double their potato acreage next year.

The farmhouse with its cedar shingle siding is typical of the section and has every convenience which adds to comfort. Mr. Clayton takes an active part in the Grange, New Jersey State Potato Growers' Association and the Farm Bureau.

L. Otis Corkran

TYPICAL of Eastern Shore agriculture, L. Otis Corkran of Dorchester county, Maryland, is a large producer of melons and vegetables. The extent of his operations may be judged by his acreage in 1928—75 acres of cantaloupes, 60 acres of asparagus, ten of cauliflower, six of cucumbers, and more than two acres of peppers. Other crops were 50 acres of legumes, including 30 of soy beans, 55 acres of wheat and 50 of corn.



Mr. Corkran has the reputation of being a marketing expert but he emphatically disclaims any credit in this respect. The fact that his products command a premium is due to his production methods. He sees to it that his crops are of the highest quality and that they go to market properly labeled—tion he need not worry about prices. Years of scarcity are usually profitable ones for him, for he knows fertilization, cultivation, spraying and dusting in saves his crops when others lose theirs.

Many consumers in distant markets are familiar with the quality of Chesterfield Farm melons and have tried to buy them direct. But Mr. Corkran believes a large-scale producer located as he is, should sell through the established channels of trade. So he continues to market his large crops through commission houses, while his cucumbers and peppers go direct to a pickle factory.

For many years Mr. Corkran operated the old home farm as a tenant. On his father's death he purchased the place from the other heirs, still later buying additional land which increased his holdings to 380 acres.

Although they hope soon to have central station power the Corkrans have relied for eight years on home electric plants, never in that time having had to use oil lamps. Their beautifully furnished home is modern in every respect.

Mr. Corkran is vice-president and director of a local bank and has served his district in the Maryland house of Delegates.

E. S. Ferry

THE career of E. S. Ferry shows how, under Pennsylvania marketing conditions, widely diversified farming operations can be made to yield large dividends in terms of home comforts, living conditions and educational advantages for the younger generation. Mr. Ferry sold silos, operated a threshing rig and practiced the carpenter trade before he decided to become a farmer. He made his start by renting a farm in the Morrisons Cove section of Bedford county. After six years he bought the farm he had been renting and ever since that time improvement has been the keynote in every phase of his work.



He pioneered in the growing of dahlia; now his yields average four tons of hay per acre. His potato crops have placed him among the members of the Keystone 400-Bushel Club. His well-sprayed orchard is well known for its clean fruit and vigorous trees. Growers of wheat and oats call on him for good seed. His flock of sheep is headed by pure-bred rams. His herds of swine and registered Jerseys also are headed by pure-breds, boar and bull association sires which are owned cooperatively by Mr. Ferry and his neighbors.

The progressive owner of the Keystone Jersey Farm has used the profits from his orchards and herds in two ways. Most noticeable is the modernization of the whole farm.

But material things always have come second on the Ferry farm. The family has been first. Of the six children two boys are now prepared for college, another is a graduate electrical engineer and the two daughters have completed State Teachers' College courses.

Edison M. Hay

EDISON M. HAY, with his never failing interest in new ways of doing things, is one of the pioneers in Somerset county in the trial and acceptance of the best new methods and equipment. The foundation stock for his fine herd of registered Milking Shorthorns was part of the first carload of pure-bred cattle ever imported into the county. He was one of the first to make variety tests on potatoes and now by field selection of seed he is helping develop strains of corn better adapted to the short season of Somerset county's uplands.



He has conducted pasture and potato improvement demonstrations, soy-bean variety tests. He has supported the cow-testing association, tuberculin testing, boys' and girls' clubs and many other forward-looking activities sponsored by the county agent. Thus, like many another public-spirited farmer, Mr. Hay has been able to make many worthwhile contributions to his own and his community's welfare by his cooperation with the agricultural extension service.

Both Mr. and Mrs. Hay are active in church and Grange. The former has been the moving spirit in numerous community organizations, among them some successful farmers' baseball teams, while Mrs. Hay is a past president of the local farm women's society and an active worker in the Pennsylvania Society of Farm Women. Both daughters, now preparing for college, are members of baby beef and potato clubs; the younger's baby beef won the county championship last year.

Pure-bred Milking Shorthorn cattle, beef sheep, potatoes and oats are the major products of Fairview Farm. The Shorthorn herd ranks with the best in the state and is being improved constantly by careful breeding program. For many years Hay has handled beef cattle for his neighbors besides feeding a considerable number himself. The average yield of oats ranges between fifty and sixty bushels per acre. He has qualified for the 400-Bushel Club every year since it started except one season when the proper official did not arrive in time to make the necessary measurements.

In appearance and equipment Fairview Farm ranks with the best. The rolling fields are level and smooth. Weedy fence rows are conspicuous by their absence.

Amandus Larson

THE history of Amandus Larson is one of the stories of achievement which we call typically American. When he emigrated from Sweden at the age of 16 Mr. Larson went to work in an Erie county tannery. Soon he was operating one of the official's farm on shares. Then, fifteen years ago, he used his accumulated savings to buy a 26-acre run-down place on the hills overlooking Ridgway, borrowed some working capital and went to work for himself.



Passing over the intervening years, we now see the Larsons with those 26 acres so highly developed that they produce all of the roughage and part of the grain for two horses and 23 head of cattle—and some years there is hay to sell! The home has been remodeled and well furnished, 5,000 feet of drainage tile have been laid, the dairy barn has been equipped with a milking machine, stanchions, drinking cups, electric lights, etc. The two children have had the best of educational advantages. The son recently completed an agricultural course at the Pennsylvania State College and returned to go into partnership with his father. This necessitated the purchase of the first addition to the farm, 50 acres to be cleared and developed.

The milk from Fair Croft Dairy is retailed in Ridgway. In spite of competition the Larsons still have some of the customers to whom they started delivering milk 13 years ago. The accredited herd is headed by an association sire and has a cow-testing association average of 320 pounds of butterfat and 8,500 pounds of milk per cow in a year. The quarterly income from milk is now much greater than the entire cost of the farm when Mr. Larson bought it 15 years ago.

S. S. Lehman

THE county agent who gives up extension work and starts farming for himself must achieve much more than ordinary success before he is considered to have made good. But measured even by the elongated yardstick of public opinion S. S. Lehman has made good during the years dating back to 1921 when he resigned as Erie county agent to become an Erie county farmer.



The run-down farm which he bought in the western part of the county was an ideal place for him to demonstrate the effectiveness of the practices he had been preaching. The few years he has been farming have been ample to prove that those practices will produce results—even though each year's progress is so great as to justify the statement that Mr. Lehman is just getting started.

From the very beginning Mr. Lehman's first concern has been the upbuilding of his soil. An intensive system of cover cropping and fertilization has been followed concurrently with the development of new orchards and vineyards and the growing of small fruits, for he is a fruit specialist first, even if nearby potatoes, vegetables and swine contribute largely to his income. No field is permitted to lie idle for a day if it can be prevented. Land not producing a cash crop must be kept busy growing millet or rye or soy beans to be plowed down.

Mr. Lehman maintains no poultry breeding flock. He buys pure-bred chicks and keeps them through only one laying season, selling all the pullets every summer. Two carloads of hogs are fed during the winter. His potato yields have placed him in the 400-Bushel Club. Recent purchases of land give him space for the expansion of his potato business and a site for a new home on an improved highway.

Mr. Lehman devotes a very large part of his time to worthwhile community movements. He is president of the County Agricultural Extension Association and is on the executive committee of the County Horticultural Association. He teaches a Sunday School class, is a member of the township school board and secretary of the joint high school board. He effectively represented rural Erie county in the organization of the Erie county taxpayers' association, a notable development in civic progress.

William G. Mendenhall

FORTY acres of potatoes averaging 400 bushels to the acre; sixty cows each producing around 9,000 pounds of milk a year; mushroom sales running into five figures—these are indications of the big things being done by William G. Mendenhall. Although raised in the country this Chester county farmer started his career as a machinist. But the attractions of the machine shop were not enough to hold him. With no backing except his determination and some bank credit he leased one of the two farms he now owns and went into big business for himself.



Mr. Mendenhall's prowess as a potato grower has attracted the attention of the whole state. In 1928 his 65-acre crop averaged 350 bushels per acre, his best measured acre yielding 570 bushels. He does not hesitate to share his proven potato methods with other growers. Last summer he cooperated with the county agent in arranging field day meetings and potato machinery demonstrations which brought several thousand farmers to his fields from all parts of eastern Pennsylvania.

This farmer has proved himself as able in the marketing of his products as in their production. Potatoes and mushrooms are graded to standard, and sold through commission houses. The long distance telephone enables him to keep posted on market conditions and to act quickly to take advantage of suddenly favorable conditions anywhere within range of his or the dealers' motor trucks.

The rundown fields and buildings of the farm on which Mr. Mendenhall started have been transformed. All the charm of the old stone house has been retained, but it has been made more comfortable and attractive with new furnishings, beautiful sun parlor, modern heating and plumbing systems, an electric range, etc.

Oliver A. Newton & Son

OLIVER A. NEWTON and Warren C. Newton of Sussex county, Delaware, conduct one of the most highly organized private enterprises in the East. The Newtons have 125 acres in apples and peaches. Trapnest records are kept on several hundred pedigreed White Leghorns. About 150 swine are fattened annually by leaving them help themselves to stacks of soy-bean hay. Minor products are berries, tomatoes, peppers, etc. Several related business enterprises are carried on in connection with the farming activities.



The Cedar View poultry flocks are being improved by the introduction of pedigreed males backed by 275 to 300-egg records. A comprehensive program of disease control embodying the latest knowledge of this subject is strictly followed. Regular blood-testing has revealed no bacillary white diarrhea for several years. Cultural and test-control methods in the orchards are no less thorough than in the poultry business.

Oliver A. Newton began his agricultural career as a hired hand on one of the farms he later bought. By renting, then buying, he rapidly increased his holdings. In 1910 he was elected president of the Delaware State Board of Agriculture. He has served in that office ever since, except during his four years as State Senator. Mr. Newton received the honorary degree of Master of Agriculture from the University of Delaware at the same time his son, Warren, was graduated from that institution.



After taking a short course at Cornell, Warren returned and has gradually assumed actual direction of the farm work. He is president of the Record of Performance poultry breeders of Delaware, president of the Delaware State Poultry Association and a director of the Delmarva Hatcherymen's Association and of the University of Delaware.

Harrison S. Nolt

HARRISON S. NOLT of Lancaster county takes full advantage of the good local markets which have meant so much to the prosperity of Pennsylvania farmers. Through his stand in one of the market houses in the city of Lancaster he sells direct to the consumer the most of his leading crop, apples.

Mr. Nolt believes that the first and most important step in his marketing is production—the production of high quality fruit. His orchards are pruned and fertilized regularly and sprayed often enough to control disease and insect pests. Last year he sprayed eight times. A common storage cellar ventilated by an electric fan keeps the fruit in top condition for the winter and early spring trade. The quality of Noltview Farm fruit has created a steady demand from customers who rely on this orchardist year after year. The quality ideal is followed, too, in the production of tobacco and of corn and wheat for seed.



The Nolts' beautiful modern home was remodeled from one of the old brick houses so common in this section. The rooms are large, light and tastefully furnished. Mrs. Nolt's well-planned kitchen scored high in a recent kitchen contest. For four years she has used only electricity for cooking.

Mr. Nolt is president of the Lancaster County Agricultural Extension Association, is a director of the state Farm Bureau Federation, a director of the Mountville Tobacco Packing Association, and was one of the organizers of the Columbia Harvest Home Association. The latter stages one of the largest of the ten community shows and fairs held annually in Lancaster county. He is also a bank director, a Rotarian, an active church member, and superintendent of his Sunday School. The Nolt family consists of four children of grammar and high-school age.

C. B. Snyder

MR. C. B. SNYDER of Lancaster county conducts one of those unofficial agricultural experiment stations that contribute so much to the advancement of practical farm knowledge. But even better known than his experimental work is his success in the production and marketing of fancy apples. He profits to the fullest extent by the reputation of eastern fruit for fine quality and flavor.



To Mr. Snyder's customers a bushel of apples means a box containing—depending on the size of the fruit—64, 72, 96, 104 or 113 choice specimens, free from every blemish and wrapped and packed to meet the strictest requirements. His acreage of trees is small but his market extends from the Atlantic to the Rockies and there are no "off" years on prices. He won 22 prizes on 35 entries of apples in the 1928 Pennsylvania Farm Products Show, including the sweepstakes cup. Significant of marketing conditions in Pennsylvania is the fact that most of the crop is sold direct to the consumer at the farm.

By his seed selection work Mr. Snyder has done more than anyone else to fix the type and disease-resistant qualities of Lancaster County Sure Crop corn. This, with his production of disease-free berry plants, has been an important part of his work.

Mr. Snyder was the first in his section to test both dairy and beef cattle for tuberculosis. His present livestock program includes the fattening of steers and the production of pure-bred sheep and swine. He never fails to qualify for the Ton-Litter Club when he enters a litter.

Mr. Snyder is treasurer of the Pennsylvania Horticultural Association and an officer of the Extension Association, Farm Bureau and other county organizations. The youngest son of the family is taking an agricultural course at the Pennsylvania State College.

Clifford E. Snyder

CLIFFORD E. SNYDER, Hunterdon county, New Jersey, does not believe in "putting all the eggs in one basket" in his farming operations. Seed wheat, corn, potatoes, poultry and dairy cattle are the leading sources of income from his 205-acre farm. Last season 13,000 chicks were brooded and reared and the pullets sold at the age of nine or ten weeks.



Certified seed, systematic spraying and care in building up the fertility of the soil account for an average yield of 250 bushels of potatoes per acre during the past five years. Last year about thirty acres were grown, graded and sold to a local market.

As Mr. Snyder found that husking 35 acres of corn was a slow and expensive job under present labor conditions, he went in partnership with a neighbor to buy a corn picker and husker which has successfully solved this problem.

The rotation followed includes a large acreage of hay, for which the market demand is becoming less each year. To care for this crop Mr. Snyder decided to increase his herd of fifteen Holsteins and has recently remodeled his dairy barn and installed efficient dairy equipment.

The home on this typical Hunterdon county farmstead is completely equipped with all conveniences. Mr. Snyder is a graduate of Cornell University and a leader in New Jersey agriculture. He is president of the New Jersey State Board of Agriculture and a member of the Grange, the New Jersey State Potato Growers' Association, New Jersey State Horticultural Society, New Jersey Poultry Association and the Holstein-Friesian Association.

Clarence H. Smith

A FINE stone house built in 1771 by the ancestors of the present occupants is the home of Mr. and Mrs. Clarence H. Smith of Bucks county. Ownership of Robin Run Farm has been in Mrs. Smith's family since 1756. The two sons and daughter of the family comprise the sixth generation to live on the old homestead.



Through the years when he worked the place on shares, and since he assumed full responsibility it has been Mr. Smith's task to modernize the farm, its production methods, its buildings and equipment. Through his efforts a fine registered, tuberculin and abortion tested Guernsey herd has been built up. Advanced Registry work is being carried on regularly. One animal recently established a state championship record in the GGG Class, producing 445 pounds of butterfat in ten months on two milkings per day. The whole herd averaged 411 pounds of butterfat and 7,680 pounds of milk for 1927.

A flock of pure-bred, blood-tested Rhode Island Reds is the second important source of income. This flock has averaged more than 125 eggs per bird for several years. Mr. Smith has entered pens in the Storrs and Bergen county egg-laying contests and for several years had the high producing Rhode Island Red hen at Storrs. He has paid as high as $50 for pedigreed cockerels to head his flock. His eggs bring a premium for hatching purposes.

Mr. Smith is a past or present officer of numerous local organizations, including that of the Inter-State Milk Producers' Association, the Grange, the Wycombe Cooperative Association, the local fire company and protective association, the County Guernsey Breeders' Association and the school board.

The younger members of the family have received the best of educational advantages; the two sons have returned to work with their father on the home farm. The home has running water, up-to-date plumbing, numerous electric appliances, etc. The barn is equipped with electric lights, automatic drinking cups for the cows, a milking machine and all the other labor savers of the modern dairy.

F. P. Willits and Son

FRANK P. WILLITS and Paul L. Willits of Delaware county, Pennsylvania, have been members of a successful father and son partnership since 1908. The business was started in 1885 when the elder Mr. Willits gave up a mercantile career and went $10,000 into debt to purchase this farm. Looking for a way to cancel the debt, Mr. Willits ventured into the mushroom business as one of the pioneers in that industry in Pennsylvania. Mushrooms have been one of the principal sources of his income ever since. Other products of the farm are milk potatoes, peonies and asparagus. The peony blossoms are shipped to wholesale florists. In 1928 the potato crop averaged 400 bushels per acre on fifteen acres.

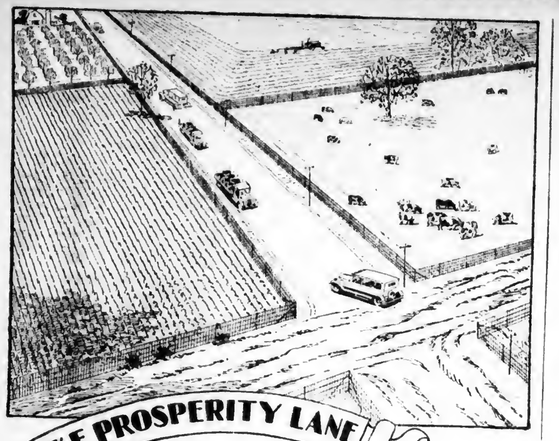


Aroused by the fact that the local dairymen never knew what price they would receive for their milk until the fifteenth of the month following its delivery, Frank Willits helped to reorganize the Inter-State Milk Producers' Association in 1916. He was elected president of the organization at that time. In 1921 he retired as president but has continued on the executive committee.



For fifteen years Mr. Willits has been treasurer of the Pennsylvania State Grange and for ten years has been treasurer and an executive committeeman of the National Cooperative Milk Producers' Federation. He is director of a Downingtown Bank and of one of the Joint Stock Land Banks. He was Pennsylvania State Secretary of Agriculture for four years, beginning January, 1923.

The younger member of the firm is also active in public affairs. He has been treasurer of the township supervisors for five years, is a director and treasurer of the local fire company and a director of the Cooperative Mushroom Association.



TAKE PROSPERITY LANE

AT THE cross roads of farming methods, Prosperity Lane is well marked with well fenced fields and their proper rotation with crops and live stock. These simple, essential principles are characteristic of master farmer farms, and by following them you can be one of the leading, prosperous farmers of your community.

Because of the importance of fences in modern farming practice it pays to build fences that last. Do not waste time and labor on inferior fences that are not effective and that require frequent repairs and early replacement. The best fences that experience, research and money can produce are Pittsburgh Fences.

Pittsburgh Fences

HINGE-JOINT or STIFF-STAY

are made of full gauge wires from a special formula of steel. They are Super-Zinced, that is, armored against rust by the heaviest coating of zinc that can be successfully applied to wire. This Super-Zinced coating is so closely bonded to the special formula steel that it will not flake or peel. Remember, galvanizing that flakes or peels will not protect a fence from rust.

There is a Pittsburgh Fence for every need or preference; hinge-joint and stiff-stay types in the standard farm and poultry weights and styles. Pittsburgh Chicktite—the wonderful close mesh poultry fence, and beautiful Pittsburgh Lawn Fence. Every rod guaranteed. Write today for new catalogue and name of nearest dealer.

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Two Sizes—22-40 and 25-50

The tractor with the answer. Strong substantial frame. Heavy duty Unit Transmission. Brass bushed axle resolving on roller bearings. Four plate heavy duty clutch. Especially designed drive pulley shaft with three bearings. The harder the tractor pulls the closer it hugs the ground due to special draw bar hitch. Moderately priced. Terms fair. Complete tractor and thresher catalogs free.

THE A. D. BAKER COMPANY

Swanton, Ohio



Handy Feed Rack

Practically every dairyman has some green corn or a similar soiling crop to feed during the year. By just throwing this feed on the ground the cattle tramp over it, which in turn causes waste. The combination hay and feed rack illustrated will be found handy on many dairy farms. It can be moved from one place to another as desired. Luke W. Martin.

Soil Improvement

By W. D. ZINN

A WEST VIRGINIA reader writes that he has good timothy hay and straw to which his yearling cattle can go at pleasure. Can he winter them well on that ration? Will it pay him to buy cottonseed meal?

If the cattle were older and his timothy cut just when it was in bloom I would say that he could winter them fairly well on that ration. Since the cattle are at the age when they require a good deal of muscle-making material I would say that he cannot afford to require them to live on that kind of feed. Cattle have just so many years in which to make their growth and if they are not given the material out of which to make growth they will never attain to the weight that they otherwise would make if they were fed the proper feed.

I would certainly not feed cottonseed meal to animals eating timothy hay and straw. Both are constipating and so is cottonseed meal. Oilmeal is the proper feed. It may cost $65 or $70 per ton, but half a pound daily will soon give a good account of itself, and that would cost only three and one-half cents per day. If silage is being fed then the cottonseed meal is all right. We are wintering 50 calves and they are receiving 25 pounds of cottonseed meal daily and this will be kept up until they go to grass.

Sweet Clover Flavors Milk

A PENNSYLVANIA farmer writes me that he has ten acres on which he intended to put 25 tons of lime and sow to oats and sweet clover and now a friend comes along and informs him that the sweet clover will spoil his milk and butter. What a pity! Some years ago some one told me that silage fed to cows would cause them to lose their cud. I did not believe it and I fed a cow silage for two years and sold the cow to a local butcher and he said when he killed the cow he found that she did not have a single tooth in her upper jaw in front. Now that butcher is a very truthful man and I believe what he told me.

I have pastured cows on sweet clover and I believe no good wife can detect an odor in milk or butter as quickly as any one else, and she never complained about the milk having a bad odor. Scores of farmers in Ohio have told me about keeping cows to the pure throughout the season on sweet clover, but I do not propose to tell me that it spoiled the milk.

Our friend is on the right track and I hope he will not let any one switch him off. He should remember that they told Noah that there was not going to be a flood, but old Noah went right along getting his canoe ready just the same. If he had listened to what everybody said I would not have been here today to advise this farmer to grow sweet clover, which is the best soil-builder known to agriculture.

Farmers' Week at Morgantown

WEST VIRGINIA farmers should not forget the date of Farmers' Week. Farmers are entitled to their vacation. Here is a chance to do so and at the same time make the trip pay. A farmer who will attend this meeting and hear these lectures and not be a better and more successful farmer has missed his calling and should go to some other business. The meeting will be held from Feb. 4 to 9 inclusive. If you can be this way, if you go you will see that many good things scheduled and that several at the same period that it will puzzle you to decide which you should miss and which you should hear.

Japan Clover and Canada Field Peas

Please publish through the columns of your paper information in regard to the raising and cultivation of Japan clover. Is it an annual crop? When is the best time to sow it? Is it good stock pasture and will it grow on land without cultivation? Would also like information on Canada field peas.

Allen W. Fyock.

Pennsylvania.

JAPAN clover is an annual and the seed must be sown every year. Unless it is allowed to ripen seed it will not reseed itself. There is a northern boundary beyond which it will not ripen seed. Northern Pennsylvania is in that territory, no doubt, and southern Pennsylvania may be bordering on it. The seed should be sown in January or February. It comes with the bull tongue and should be sown early so this tool will cut off before the growing season. It makes but little growth until about the first of June and the first heavy frost kills it.

It will come nearer growing on poor land than any plant I ever grew. It will grow on thin sour land. I have had it growing on land so thin and sour that weeds will not grow. It requires no cultivation. We scatter it over the fields and it comes on and spreads all over the field. I never sow more than a pound per acre. I have two bushels of the seed ordered now. There are twenty-five pounds of seed in a bushel.

I would suggest to our correspondent that he try only a few pounds the first time he sows it and see if it will suit him before he sows a large amount of the seed.

Canada field peas, like the garden pea, should be sown early and planted four inches deep. It is better to drill the peas in and sow the oats ten days later. Sow one and one-half to two bushels per acre of each. Oats and field peas are both cool weather plants and should be put in the ground in March or the first of April. The combination makes a very fine hay.

Stationary Spray Plants

By R. U. BLASINGAME

BACK in 1906 Mr. Hayward Reed's apple orchard in California was flooded. He knew it was time to spray the trees but how to do it was the question. He hit on the idea of mounting his spray rig on a large oil boat and row through the orchard and do his spraying. This worked all right until the flood subsided, and the barge began to drag the mud.

His next idea was to have his men wear gum-boots and by hitching long lengths of pipe and hose together they could operate from the sprayer located on high ground.

The Real Idea

This gave him the idea of building a central spray pumping plant and running pipe lines from it through the orchard. Every so often he provided risers connected to the laterals and mains. To these risers he attached hose and sprayed the trees in the space near by. Each riser, from the pipe line, was provided with a valve, and the pipe line was so arranged that it could be drained to prevent freezing in winter.

Since Mr. Reed designed and contracted his system, and found it an economical and feasible plan for orchard spraying.

In fact, Bulletin No. 400, issued in 1926, by the University of California, Davis, California, "Stationary Spray Plants in California", states that several hundred fruit growers in the state of Washington have central spray plants. They are not only devoted to the West, but are coming east at a rapid rate. During Horticultural Week, at State College, Pennsylvania, in November, Mr. Carpenter, manager of a large orchard at Floradale, Pa., gave a report on the installation of a new central spray plant in his orchard. He made an extensive trip west to study existing plants and came back convinced of the economy of such a plant. Mr. Carpenter, in his talk, stated that it was his opinion that a central spray plant would be economical in small orchards as well as in large ones.

There are several plants in the East. Mr. A. E. Leatherman, Rada, West Virginia; L. P. Miller, Paw Paw, West Virginia; Howard F. DuCon, Marshantville, New Jersey; Charles F. Repp, Glassboro, New Jersey; Edmund Lee Goldsborough, Shepherdstown, West Virginia, are a few of the orchard men now owning and operating these plants.

The early plants were installed with the pipe lines on the ground, and in other cases, the pipes were buried under the ground. Some of these systems are now being constructed with the pipe lines suspended from the trees.

Feed Mill Speeds

DO not run the feed mill faster than it is supposed to operate. High speed does not increase capacity to any great extent. It only wastes power.

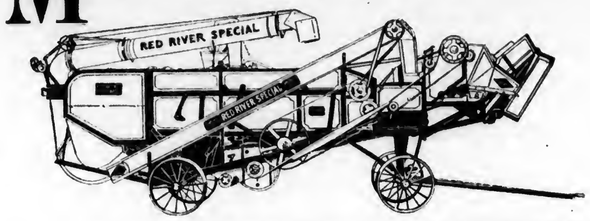
The Nebraska Power Company at Omaha has run a great many tests on feed mills operated with small electric motors and recommend an eight-inch burr mill to run 450 r.p.m. They state that the capacity of this mill is 1,550 pounds of shelled corn per kilowatt hour. They say that at this rate they can grind 100 bushels for a cost of 14 cents for electric current.

If the feed mill does not have the right size pulley on it when it comes the company will usually be glad to change to the correct size for the recommended speed.

The hammer mill, on the other hand, should run fast. The capacity seems to increase with speed up to a certain point.

The manufacturer's recommendations regarding speeds of various types of mills can be followed with profit. The correct speed is right and the wrong speed is expensive in wear, cost of labor, power and machines.

More than ever . . .



The Red River Special Line for 1929

Threshers
22x36
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Nichols & Shepard Corn Picker—Husker

. . . *the* FINEST, FASTEST, CLEANEST THRESHER

More now than ever before the Red River Special is the Finest, Fastest, Cleanest Thresher ever built for Agricultural America

[*F I N E S T*] Finest—because it offers all the latest improvements: Hyatt Roller Bearings, Alemite-Zerk Lubrication, Rockwood Weatherproof Fiber Pulleys, rust-resisting Armco Ingot Iron, Bridge Truss Construction, Hart New Model Feeders, Hart Grain Weighers, French & Hecht Wheels.

[*F A S T E S T*] Fastest—because Double Belt running on Rockwood Fiber Pulleys, driving shafts running in Hyatt Roller Bearings Alemite-Zerk Lubricated keep every part running at the smooth, even pace set by the Big Cylinder to do clean threshing fast, to keep the machine threshing at capacity.

[*C L E A N E S T*] Cleanest—because it is built around the famous 4 Threshermen, the big Cylinder, the Man Behind the Gun, the Steel Winged Beater, and the Beating Shakers, the greatest combination ever devised for getting the grain from the straw with cleaning mills that deliver it clean, bright, merchantable.

Nichols & Shepard Company specializes in building fine threshing machinery. Since 1848, this company has been steadily improving the machinery it builds and sells. You know the great advances that have been made in the last few years. More now than before the Red River Special is the greatest thresher ever built for the farmers and threshermen of America. You will want to know about the 1929 machines — so send the coupon for our new book: "More Than Ever — The Finest, Fastest, Cleanest Thresher" — it will tell you why the machine is all that.



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Price and current rate will be gladly quoted upon request to the nearest Federal Land Bank.

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Springfield, Mass. — New Orleans, La. — Wichita, Kan.
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Scott's Seed Guide For 1929

Contains valuable information on all the Clovers, Soy Beans, Sweet Clover, Alfalfa, Pasture Mixtures, Corn, etc. It's the best Seed Book we have ever offered. Tells how to Avoid Weeds. Directs you in the way of better crops and greater profits. Tells you how to Know Good Seed.



John B. Lieserbach of Pa. writes: "Some time ago we received your Seed Guide and during cold times have read it with interest. You give more information on Field Seeds than any other catalogs published."

Every farmer should write today for FREE COPY of this book.

Plainly written so any one can understand it.

It's worth having.

Our seeds cost no more than ordinary kind, and besides—we pay the freight.

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Green's 1929 Free Catalog in Nature's Colors.

CORTLANDS

Grow Cortlands for profit. Delicously sweet with just a dash of tartness. Rich red color and large firm size makes them bring the highest prices of any apple grown today.

Cortlands keep well, last until late Spring and ship without bruising. No long waits for returns on your investment. They bear the third or fourth year after planting—a money crop the sixth year.

A few of Green-grown Unusual Fruits and Home Garden Specials

Green's Coco Grape—most delicious of all. Deep wine red—very rich in sugar.

Green's Syracuse Red Raspberry—double size and of richest flavor. Very hardy. Abundant basket.

Green's Rose Pear—extra large. Delicious buttery flavor. Vigorous grower.

America's foremost Rose Collection the national rose). Green-grown Large-flowered Mock-orange, English Hybrid Delphiniums, etc.

Buy direct and save one-third to one-half. Growing for over 50 years. Satisfaction guaranteed. Cash discounts for early orders.

Write today for your copy of Green's 1929 Catalog.

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Increase Profits

Increase potato profits by high-pressure spraying with a BEAN Clog-no Potato Sprayer, a big-capacity outfit for large acreage or combination of potatoes and orchard—10 gals. and better per minute at 300 lbs. pressure. Special non-clogging features. BEAN Giant Triplex Pump without stuffing boxes or stuffing-box troubles. 4 h.p. BEAN Engine. Threadless and Troubleless Ball Valves, Dependable Pressure Regulator, Rotary Agitator, Adjustable Boom, many other features.

BEAN Traction Sprayer No. 6000



A perfectly balanced low-slung traction sprayer of big capacity. Maintains even high pressure.

BEAN Traction Duster



A dependable all-around 4-row duster of big capacity, simple design, and dependable operation. Adjustable Timken Roller Bearings throout.

Write for Complete Sprayer Catalog

And about our low-rate time-payment plan.

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When You Plant Maule Seeds You Plant Success

Pedigreed by a 52-year record of Unfailing Quality ✻ ✻ Scientifically Tested for Vigorous, Virile Abundant Life ✻ Guaranteed by a Money-Back Bond ✻ ✻ The Highest Quality Seeds at the Lowest Prices. Maule Seeds are always dependable.

Plan Before You Plant

Plan your garden with our New Seed Book. It shows Hundreds of Fine Flowers and Vegetables, and is a Valuable Guide to Successful Gardening. Write for it today. It is Free! a post card will bring it.

Wm. Henry Maule
Box 68 Philadelphia, Pa.

Plant Quarantines

By. S. W. FLETCHER

THE federal plant quarantine regulations, which restrict the importation of certain plants and seeds and provide for the inspection of others, are the subject of much misunderstanding. They are sometimes condemned as being unnecessary hardship on the industry. An examination of the facts seems to justify these regulations although, at times, they may not have been applied in the most tactful way. About sixty per cent of the worst insect pests now preying on the agriculture of the United States were brought in on plants or seeds imported from foreign countries. These damage our crops to the extent of at least $300,000,000 a year. The list is quite formidable: here are a few of the worst ones:

The Hessian fly was brought here in 1779, in straw, by Hessian troops.

The San Jose scale was introduced from China, in 1892; now we spend $15,000,000 a year fighting it.

The Oriental fruit moth came from Japan on some Japanese cherry trees that were planted on the Potomac Drive in our national capital.

Chestnut blight was discovered in 1904, in Broux, N. Y., on some trees that had been imported in an attempt to assemble all the species of chestnuts in the world.

Our Quarantines Are Mild

The European corn borer came in 1909, on corn imported from Europe.

The Japanese beetle appeared in 1911, on some imported lily bulbs.

The white pine blister rust was introduced with some white pine seedlings from Germany. Then there are the Mexican boll weevil, Gypsy moth and others of lesser importance.

The Federal Plant Quarantine Board was established in 1912, too late to stop these pests at our borders but, we hope, in time to prevent many others that might be some of the scions from gaining entrance. The federal government now spends a million a year for this purpose; the board has a personnel of over 1,000 men. The states spend an additional $1,500,000 yearly for quarantine protection, mainly California and Florida, which are making strenuous efforts to keep out the dreaded Mediterranean fruit fly that might ruin the citrus industry.

Very rarely is it possible to eradicate these pests after they once become established. The experience with Gypsy moth and Japanese beetle illustrates what may be expected with the corn borer and the Oriental fruit moth. They will gradually spread over the country. Local quarantine merely serves to check the spread of the pest, and is justified for that reason.

The Plant Quarantine Board has promulgated twenty-two regulations. Some of these have seemed excessively restrictive, especially to florists and nurserymen; but it is coming to be generally recognized that they protect the public interest. Our quarantine regulations are mild compared with those of Germany, France and other European countries. We should stand back of federal and state efforts in this direction, not seek to hamper them by the injection of private interest.

Standard-Size Baskets

THOSE who have carried over a supply of fruit or vegetable packages should see to it that they are not used in violation of the Federal Standard Container Act of 1928. All types of baskets not sanctioned by that act must be disposed of before November 1, 1929, whether the packages are used for inter-state or local trade. This Act applies to various sizes of hampers, round stave and straight side stave baskets, and to splint or market baskets.

The Solicitor of the U. S. Department of Agriculture has rendered an opinion that no state law fixing the weight of fruits or vegetables in a legal bushel is operative when the produce is sold in these standard containers. Copies of the regulations may be obtained by writing the Bureau of Agricultural Economics, Washington, D. C. S. W. F.

House Plants

Would like to know how to get rid of little flies in the ground of house plants. Mrs. M. D. B.

All insects living in the soil may be destroyed by the application of carbon bisulphide at the rate of one teaspoonful to each six-inch pot. This may be secured from any drug store. One must be careful in using this liquid, for it is volatile and inflammable. The gases are heavier than air and will move downward through the soil. I would suggest, however, that you cover the pots with soil after you apply the mixture. J. J. Wilde.

Pennsylvania State College



Success with Berries

THIS black raspberry patch was planted May, 1926, with 2,500 Plum Farmer one-year-old tip plants, four feet apart in the row, rows six feet apart. The ground was in fair condition with good drainage. Plants were kept well cultivated and free from weeds.

The summer of 1927 we picked 700 quart boxes, cut out the old wood, cultivated and cleaned up the patch thoroughly and applied 400 pounds of bone-meal. We got a good growth of wood for the season of 1928.

We pruned back the laterals to six or eight inches after severe freezing weather was over, then started the cultivator again. On the first of May we applied 100 pounds of nitrate of soda. We picked 3,500 boxes of berries which sold at 22 cents per box in 32-quart crates direct to consumer.

Westmoreland County, Pa. Little Esther Berry Farm.



An Acme Does It A

Let an Acme Coulter Harrow follow your the tool you need for a fine, perfect seed For the sharp, slopin double-curved Heavy shod-cutting units penetrate to the the furrow. Then they slice, chop, crush completely, every bit of soil, cover crop, weed weeds.

And while they're doing it, they fill air pert the subsoil and leave a smooth, level protected with a moisture-holding mulch.

All this, mind you, is done at ONE Wonder farmers say the Acme saves ½ the Wonder the Acme is used and endorsed by colleges by all farmers who want better less work and expense.

Acme Coulter Harrows are built for horse to-3 to 17½ feet wide. There's a size for Clip the coupon for free Acme Catalog about "Bigger Crops from Better Tillage."

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Set out your plants just w are ready, regardless of dry Each plant set, watered and in one operation. Three time as hand setting. Every plants Every year the demand fo Rapid Plant Setter exceeds turing facilities. Many hav appointed and could not ev planting time. Don't wait. Buy dealer NOW. If he hasn't this in stock write us for descriptive
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Offers for Spring 1929, the finest lin to Name Apple, Plum and obtainable. A line of Grap Berry, Blackb Strawberry to exciting the M Madden, Ea Southern. Scarce Trees, Rhododendrons, Azaleas and Roses. Growers of the Famous Bountiful Ridge Strain of Elberta Peaches, the apple Our 52-page catalog free. Write for it today.
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Mastodon! The best MASTODON plants, not runner, but real, parent plant true to name, plants until Winter. Real good
Fruit Trees—best quality, all varieties (Blackberry, Raspberry and Asparagus Plants at lowest prices. FREE BIG CATALOGUE illustrates and describes all guaranteed varieties. Don't delay, write Now!
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STRAWBERRY
Illustrates in natural colors yielding, Big-rooted, Healthy, grown MASTODON and all of Strawberry, Raspberry and Grape Vine, Fruit trees, and Bulbs. Richest quality stock
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FRUIT TRE
Seeds—Berry Plants—Orna
3 ft. Apple 25c; 3 ft. Peach 10c ea grafts. Guaranteed stock. Farm, Flo Garden Seeds. We have 500,000 Fru Evergreens, Shade Trees, etc. In color free 1929 catalog has everything for Garden, Farm and Lawn.
Allen's Nursery & Seed House
Box 9, Geneva, Ohio

EVERBEARI
STRAWBERR
And all the best standard var cious—Healthful—Profitable. to grow them. You should Berry Book. It's free.
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STRAWBERRIES $2.50
100 Early Annual Bargain Book and guaranteed ber fruit trees, ornamentals, and bulbs, including 1 DOX Everbearing Strawberry, all free. Wholesale SPECIAL: 250 Mixed Gladiolus (bulblets) by mail 25c. J. N. Bakely & Son, Box 4, Bridgman, Mich.

Garden and Truck Crops

By GILBERT S. WATTS

ALMOST a month into the New Year! That means it is time to sow cabbage seed in hotbeds or plant houses if the earliest possible crop is to be harvested. An early strain of Copenhagen Market or Golden Acre continues to be standard round for this crop. A limited acreage of Wakefield is grown for markets where pointed heads but this variety seldom produces the returns per acre secured from round varieties.

* * *

HAVE the strawberries been mulched? If not this job demands immediate attention. As the sun grows stronger there will be more alternate freezing and thawing that may result in disastrous heaving. Hard cold winds drying exposed plants when the ground is frozen deep also may produce serious injury.

* * *

DURING the past few weeks, while making cropping plans for the coming season, many notations have been made on my desk calendar pad with its small sheet for each day. A wall calendar with good-sized spaces would serve as well.

April 1—Have spray and dusting materials been ordered?

May 10—Are spraying and dusting materials on hand?

June 1—Berry boxes ready?

June 10—Set the Danish type late cabbage at the first opportunity.

June 20—Has all the Danish cabbage been set?

Numerous similar notations will be brought to light as the leaves of the pad are turned daily. The system is a check against the possibility of overlight when the pressure of the growing season is at its height and the innumerable details of a diversified vegetable farm almost overwhelm.

* * *

There are memoranda for far distant dates. October 1—Get soil in for next spring's plant growing. October 20—Begin storing celery.

* * *

"Condemned without Trial"

UNDER this caption a writer in a current magazine protests the almost universal custom of indiscriminately killing all snakes on first sight. Most snakes, he points out, are absolutely harmless. Many are beneficial and are of real assistance in controlling certain garden pests.

In Pennsylvania there are only two poisonous snakes, the copperhead and the rattlesnake. Both of these are extremely scarce in most localities today. The so-called spreading viper (also called spread-adder, or blow-snake), king snake, black snake, coachwhip snake, "garter" snakes, corn snakes and others need be feared by no one and should be spared. The possible exception is extremely large specimens which may attack young poultry.

* * *

FROM time to time growers report plowing down sweet clover only to have it sprout up through the soil and become a troublesome weed in cultivated crops. My own experience in this connection is that when sweet clover in the first year of its growth is plowed down in fall, in winter or in the spring before the new shoots are well started the trouble referred to is quite likely to follow, though not always to a serious extent. On the other hand, if one waits until the new shoots are several inches high the plant is killed outright by a good job of plowing.

Ordinarily the best time to plow sweet clover for soil improvement is late April or early May. There is absolutely no need to fear that sweet clover will become a weed under farm and garden operations. In these days of decreasing manure supplies this plant deserves greater consideration from gardeners than it is receiving.

Grape Growers' Activities

By J. W. RUEF

THE slogan, "It is hard to keep a good man down", is applicable at this time to a group of growers who have not experienced the greatest financial return for their efforts in the past two years.

Grape growers in the district from Harbor Creek, Pa., to Angola, N. Y., during the past season produced approximately 53,079 tons or 5,308 cars of grapes valued at $1,857,765. Of this total production 655 cars were accepted at North East, Erie county, Pa., by the Nickel Plate, and 108 cars by the New York Central Railroad, while about 2,500 tons or roughly 250 cars were trucked from the district. About a third of the crop was delivered to the grape juice plants of the section.

Believe Grading Pays

The low price received a year ago resulted in the agreement to give the grading and inspection phases of marketing an opportunity to display their influences. Grapes were graded and inspected for the first time during the past season and results are very favorable for continuation, especially when it is recalled that at several times during the harvesting period the properly graded grapes netted from $6 to $8 more per ton than unclassified fruit.

Of course as with all newly-adopted practices there was considerable misunderstanding, but at a meeting called at North East on December 27th, 150 of the leading growers and grape dealers gathered to express their approval or disapproval of a grapes-grading law for Pennsylvania, similar to that enforced by New York state. A great deal of time was spent in discussing results of the past season as well as the various grades that should be embodied as a concluding feature. The vote of the group was recorded with only three individuals opposing the adoption of a state grading law for grapes.

Plan for This Year

Although the better marketing of grapes is thus receiving consideration, for the past season the return per acre at the average of $35 per ton would be only about $50 per acre, which is less than the cost of production. The grower balances these figures and consequently looks around for a solution either in a diversification of his business, increased production, or in a lesser cost per unit. It is with these points in mind that the members of the Erie County Horticultural Society met recently to elect their officers, go through the Union Storage at Erie to observe the quality of fruit in storage, and later to return to the office of the Erie County Agricultural Extension Association to plan their attack of the 1929 program.

The cultural program of 1928 is to be continued during the coming year. The results secured through this program are apparent. The county has at present a larger vineyard a reace sower to cover crops than in previous years and displays greater interest in spraying as indicated by the increased sale of sprayers.

Believing that the production of quality fruit will not alone assure success unless the fruit is properly marketed, the growers are in favor of a trip to the Cleveland or Pittsburgh markets during August in order to examine the produce of their competitors as it reaches its destination for distribution.

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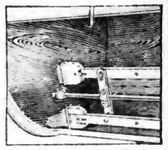
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A group of farmers on the County Horticultural Tour, in Bucks county, Pa., last summer, visiting the roadside market of Dickensheid & Weinberger. The roadside market has a small concrete storage cellar in which fruit is held for the trade. Dickensheid & Weinberger are operating a large farm near the road that leads from Coopersburg to Bethlehem.

The Three Apple Packages

By THOMAS R. BUTTS

THE importance of the package in marketing apples is becoming greater every year. Buyers are more critical and show a willingness to pay more for a pack that suits their trade.

The apple grower in the East has a greater problem in this line than his western competitor. There are a number of packages available each with its particular advantages and disadvantages. Packages for export trade as a rule have to be stronger than those used for domestic trade. Custom has established the use of some packages in certain districts. Use of barrels in the Northwest would likely meet with as little success as use of boxes in the East did when first introduced there.

Any package must be cheap, because being a gift, it would be unwise to spend much money for it. It must be light, because freight rates are high and unnecessary weight adds to the cost of shipping. A package must be strong enough to assure safe arrival at market and must be convenient to handle. It also must be attractive, because a large part of the buying public forms its judgment through its eyes and it is worth while to create a favorable impression by the use of an attractive package.

Status of the Barrel

The use of the barrel in the domestic markets is now rapidly declining, but as a package for the export of eastern apples it still holds first place and will be used by many growers for some years to come.

Barrels are often used as a lug package in the orchard and after the apples have been emptied on the grader or packing table are used as marketing packages. They have the advantage of being a strong package and are not injured by being used as a lug package as easily as most other packages.

The barrel is a favorite in orchards where apples are put in common storage as soon as they are picked and then packed later. The head is put in after the barrel is filled in the orchard and held in place by the top hoops being tightly drawn. In orchards which are located on steep slopes, as many are in West Virginia and western Maryland, a closed package is much more convenient to handle than an open one.

Stands Rough Handling

Apples can be packed in barrels more cheaply than in any other package. In packing barrels, only a small percentage of the apples are placed by hand while in packing boxes all are placed by hand. It takes less time to head one barrel than it does three boxes. A barrel can be moved from the packing table to the heading press or to the loading platform almost as quickly as a box or a basket. The handling of empty packages requires more labor when the packages are small. It takes but one-third as many labels and only about one-third as much time to label a car of apples in barrels as it does for a car in boxes or baskets. The cost of hauling and loading a car of barreled apples is less than for a car of apples in baskets. Rates in cold storage are less for barrels according than for any other package.

With the development and use of shredded oil paper in packing barrels scalding of fruit is being prevented to some extent and the storage period of apples in barrels is being prolonged.

Boxed Apples

Before the beginning of the present century boxed apples constituted but a small percentage of the commercial crop of the United States. The box is the package used in the Northwest almost to the exclusion of all others. It is also being used by some eastern growers. The development of the apple industry in the Northwest has taken place so rapidly that boxed apples now represent almost one-half of the total commercial crop of the United States.

The box is being used by some growers as a lug package and then later used as a marketing package. Many growers, however, both in the Northwest and East, use a special lug package avoiding the use of any packages for marketing that might have been discolored by being used as a lug package.

The box is a strong package and is used extensively for export trade. Boxes for export are wired or strapped just inside the cleats adding additional strength to the package. The elasticity of the top and bottom prevents bruising and insures a tight pack as the fruit shrinks.

The method of packing boxes insures a minimum amount of bruised fruit. The paper wrapper allows the packer to make a tight pack and prevents bruising. The use of oil wrapping paper prevents scalding in storage and any kind of paper prevents germs of rot from being transferred from one apple to another. All of these things add to the keeping quality of the fruit thereby giving certain varieties a wider range of distribution.

Bushel Baskets

Several types of bushel baskets are used in marketing apples. The round bottom bushel basket was the most common type used until recently. A "tub" basket has come into use during the last few years that has all of the good qualities of the round bottom

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…ct and in addition is much stronger … has a flat bottom. This is the one …kage that has strength and light… combined, and in addition is cheap… than the box, and is also an attrac… package.

…acking of bushel baskets has been …atly simplified. The new systems … packing insure a more uniform face … require less time than the old …thod of filling the basket and then …glacing it. The use of cardboard …ers for the baskets prevents bruising … the fruit on the sides of the basket. …Using care not to have the baskets … full and with proper care in lidding …d handling, apples can be packed and …pped to their destination in tub bas… …s with very little bruising.

…Tub baskets are now being used as … export package for apples, the lids …ng fastened more securely than is …ne for domestic markets and in some …tances are strapped to insure addi…nal strength.

Preferred to Barrels

The tub baskets are being demanded … the markets supplied by eastern ap… …s in preference to barrels. Buyers …e generally willing to pay more for … car of fancy apples packed in tub …skets than for a car packed in bar…s. In some markets fancy stock in …skets has sold as readily and for …actically the same price as western …ked stock of the same variety.

Growers are generally beginning to …e the advantage of packing in the tub …sket and approximately 50 per cent … the crop in the Shenandoah Cumber…nd district was packed in baskets this …ar. A shortage of baskets and the …ct that many growers had already …ought a supply of barrels made the …rcentage lower than it otherwise …ould have been.

From the wholesaler and commission …erchants point of view the tub bas… …et has quite an advantage over the …arrel. It requires but little labor to …pen while a barrel requires labor and …are on the top of the apples will be …ruised. Baskets are more easily han…led in the warehouse and on the de…very truck. A better display can be …ade of baskets than of barrels.

The Retailer's Preference

The retailer prefers baskets to bar…els. There is a smaller percentage …f bruised apples in the baskets and …e can buy more varieties without buy…ng such a large quantity. This enables …im to better meet the demands of his …rade and still have a fresh supply of …ruit. Some customers buy an entire …asket while if no small package was …ffered they would buy only a few …ounds. The tub baskets are increas…ng the consumption of eastern apples …ecause they enable consumers to buy … quantity of fruit without getting too …many. People will naturally eat more …pples if they can buy a reasonable …mount rather cheaply than if they had …o buy them at a high price by the …ound.

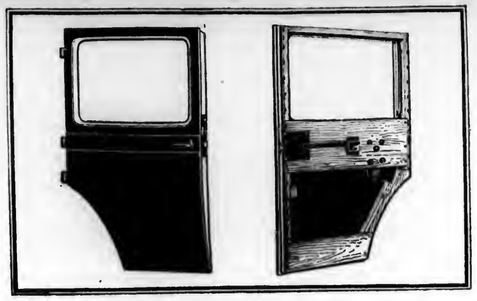
A number of other various types of …ackages have been used in certain lo…alities.

The square Boston bushel box has …been used to some extent in New Eng…land and has proved a satisfactory pack…age for that district.

The ⅝-bushel basket is used quite …extensively in New Jersey especially …for early apples. This package has the …advantage of containing a small quan…tity of fruit.

Other packages such as half barrels, …certain types of split baskets, climax …peach baskets and slat crates have been …used but none of these have come into …general use.

The small package holding from a …few quarts up to a half bushel or more …is used for marketing apples by parcel …post. The grower who grows high…grade fruit and wants to market it di…rect to the consumer will find these …kind of packages quite advantageous.



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Out-Door Roost on Reid's Turkey Farm

Reid's Turkey Farm

By R. L. SCHARRING-HAUSEN

THE turkey article entitled the "Holiday Bird", which appeared in the Thanksgiving issue, disclosed so much interest in turkey raising, judging by the number of letters which came to my desk, that I was glad of an opportunity recently to visit a large and successful turkey farm in another part of our territory and report the somewhat different methods practiced there.

The other farms were in Massachusetts and Maryland; this one was Reid's Turkey Farm, located half-way between Hightstown and Freehold in New Jersey. Employing somewhat different practices than were in use on the other farms, Mr. and Mrs. Reid last season raised 700 fine healthy turkeys, with a mortality of only ten per cent.

A sign on the Reid mailbox said "Visitors Welcome", and as soon as I had introduced myself I found that the sign meant exactly what it said. Mr and Mrs. Reid were very friendly and cordial, and willing to outline and explain the methods they use in raising turkeys. Recently a "Turkey Day" was held at the farm, with several hundred people present, while casual visitors are frequent; in fact over a hundred stopped in to see the turkeys on nice day not long ago.

An Old Strain

In introducing the subject, it was explained that the present strain of Bronze turkeys has been in the Reid family for forty years. Some twenty years ago they started making selections of breeders especially along the lines of disease resistance, until now it is possible for them to advertise "No Blackhead"

Six or seven years ago Mrs. Reid found that she was building up a demand for her stock, and now Mr. Reid has cut down operations on his 100-acre grain and potato farm so as to be able to put in his time on the profitable and expanding turkey business.

For the breeding season pens are made up of one tom and ten hens, and these are confined to lots in order to make it easy to gather the eggs. Last season the eggs were set under hens or sent away to be hatched in incubators. The turkey hens got out a larger percentage of poults, but no difference was noted in mortality during the brooding period. In fact there was very little mortality, as 90 per cent of the poults were raised, a record which would cause even a Leghorn breeder to brag somewhat.

Raised Like Chickens

Mr Reid stated that the poults were raised with coal brooders just like chickens. He went on to explain that the brooder house floors were concrete, and that a small yard with a concrete floor is provided outside. The little turkeys are never let on the ground until they are six or eight weeks old. This is successfully the same method which poultrymen are finding successful with chickens, as after this period the growing birds are less apt to worms and diseases which

to worms and diseases which m present in the soil.

A rather unusual method of is employed. The poults receive known commercial chick mash the first, to which dried butte charcoal and cod-liver oil have added. This is fed for several and then is gradually changed to a growing mash put out by same concern. Mr. Reid stated he thought any good commercial would prove satisfactory, as w good home-mixed mash, but pre the commercial mixture because it ed the time necessary to mix feed help problem there, as elsewher troublesome.

The ration fed is somewhat diff from most in that no grain is fed the birds are several months old, wheat is given. As no stock is for table purposes except birds are not suitable for breeders, tempt is made to fatten the tur although they are kept in good

Plenty of Roosting Space

When the little poults appear to to roost, at the age of a few we hour roost is provided about a foot the floor. When they are let out pens at eight weeks they soon se the outdoor roosts and thereafter go back into the buildings.

The roosting arrangements on Reid farm are of the simplest: r heavy poles supported on posts the buildings, without a roof or sort of shelter. The turkeys use winter and summer, and the o believe that the fresh air and exp give the birds such a hardy co tion that they are able to with disease.

Chickens were kept on the until just recently, but these have sold and the farm given over to keys. Old and young run tog contrary to the usual practice, apparently without harm. During visit the turkeys, which were very quisitive and tame, went through sorts of antics, one even climbing the very peak of the barn for a b view of proceedings, which he repo to his mates on the ground in a energetic gobbles.

Mrs. Reid told me that the d for their breeding stock always exc the supply. They now do busines twenty-five states and, in order to sen the correspondence, have prep a very interesting circular which printed on the back of their le paper, showing cuts of their stock farm and giving important details their business, which is a very method of advertising.

As usual, I shall be very glad to swer any questions which may c up about the Reid method of ra turkeys.

—o—

WHEN hens are laying f they require more grain th other times in order to keep up weight. A little extra grain is appreciated during cold weather.

ofitable chick raising for a Leola. Year year owners raise 90 percent of their flocks these houses — and chickens are bigger healthier. If you raise ks you need a Leola. lder will tell you more t it—write for one!



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Nest Box Notes

EARLY in January we experienced a terrific wind and rain storm. The wind blew from the South, driving the rain into all unprotected places, and the temperature got up to 60 degrees. No sooner had the rain stopped than the wind turned around and all of it blew back again, bringing with it a cold wave with the temperature down to ten degrees. Such extremes are hard on chickens, and are liable to result in a slump in production. Well-built, tight and dry houses help to minimize such extreme variations and help to keep the hens up to production.

* * *

HENS are able to stand a good deal of cold if they are out of drafts and the litter is dry. Cold, drafty and damp litter form a combination which is a sure forerunner of disease. It is very important that the houses be cleaned out whenever the litter becomes damp from any cause, and fresh, dry litter be put in place of the old.

* * *

A FRIEND of mine told me that he stepped into a henhouse the other day where the window openings were covered and no means of ventilation provided. He said the floor was soaking wet while the ammonia fumes made him dizzy in five minutes.

A flock kept under such conditions is wide open to a bad outbreak of roup. No doubt the floor was wet from the dampness in the exhalations of the birds. The water vapor breathed out condenses as soon as it cools off and unless provision is made for drawing off this damp air and replacing it with fresh, the house will soon become wet inside.

Ventilation can be provided by installing a special system, by the use of curtains, or by leaving a small opening under the eaves. Some method of ventilation is absolutely necessary.

* * *

PULLETS are now approaching the heavy laying season, and the old hens which have been molting and resting are about to resume the battle also. Heavy laying requires plenty of shell forming material in the form of shell or limestone grit, and without it the number of eggs will be seriously cut down.

* * *

BIRDS which are laying heavily also require plenty of grain in order to keep them in good condition to withstand the strain of continued production.

* * *

IT is generally recognized that size of egg is an inherited quality, so that pullets hatched from small eggs will probably lay small eggs. In selecting eggs for hatching, it is best to discard those which weigh less than two ounces each. By hatching only from the larger eggs a strain can be built up which will produce large eggs, which of course command a premium when shipped to market.

* * *

IMAGINE that more than one farmer who has become disgusted with trying to raise chicks by the old-fashioned hen method has decided to build a brooder house, buy a brooder, get his chicks from a hatchery and try more up-to-date methods of insuring a good flock of pullets for next fall.

Before starting to build, it is a good plan to write to the state college or state experiment station and ask for plans for such a building, which are usually supplied free to residents. These plans will enable a man to build the proper sort of house, or remodel a small building which may be already on the farm to suit his needs.

Cel-o-glass pullets smash world's record!



George Lowry with Emma Belle, which laid 328 eggs in 364 days—setting a new record at Storr's Contest 1927-28.

The winners—and the champions! Mr. Lowry's world-record-breaking pen, which laid 3,007 eggs in 364 days.

THE new world's record—3,007 eggs in 364 days for a pen of ten birds! The highest record ever obtained at Storr's by over 300 eggs!

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"I never could have done it," says Mr. Lowry, "if my pullets had not been raised well in the first place. I use CEL-O-GLASS in every window of my poultry houses. CEL-O-GLASS assures my chicks and pullets of the health-giving rays of sunlight even in the winter months. It insures a warmer house. It helps prevent the spread of disease. It keeps out drafts and dampness. It stops chick losses from colds, coccidiosis and other forms of chick troubles."

And 1929 is the third successive year that Mr. Lowry has brooded and reared his chicks under CEL-O-GLASS.



Hundreds of thousands of poultrymen and farmers, like Mr. Lowry, now give their chicks and pullets summer sunshine all through the winter and spring months with CEL-O-GLASS. For CEL-O-GLASS lets in the sun's health-giving ultra-violet rays. And these, authorities have proved, kill bacteria, increase egg production. They help your breeders store up energy and vitality—and insure normal bone and body growth in baby chicks.

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Poultry Problems

By H. C. KNANDEL

Colds and Canker

Can you tell me what causes my chickens to die? They have a yellow membrane in the mouth and on tongue. Their eyes become swollen and water before they die. Feed consists of corn wheat and bran mash, also have oyster shell and grit before them all the time. Have free range. J. M. B.

IT would appear as though your fowls were affected with colds and possibly canker. Colds in fowls, the same as in humans, are easily transmitted. Roup is one of the forms of an advanced cold which of course is difficult to control.

Chloride of lime may be used in the drinking water at the rate of two to three teaspoonfuls per gallon. This helps to disinfect the water. Since an infected bird will deposit germs in the drinking water, it is quite desirable to prevent the spread of the disease.

A two per cent solution of mercurochrome may be applied directly to the affected areas whenever roup is observed. An application should be made at least once daily. In the case of congested nostrils, a small amount of this material may be injected with a medicine dropper.

Birds suffering with extremely bad colds and roup should be killed and buried deep or burned.

Green Food

Will ten per cent alfalfa leaf meal produce as good health and as many eggs as sprouted oats? Said alfalfa meal to be mixed in the mash instead of green feed?

I have 350 pullets, S. C. White Leghorns, also 350 yearling hens about half Leghorn, the rest heavy (Rocks and Wyandottes). I was wondering if I could have them blood tested for white diarrhea and coccidiosis, sort them out carefully and hatch a good lot of broilers from them, then if eggs prices are too low sell them.

Mrs. E. C. M.

MOST poultry authorities agree that fowls should be fed green food. During the winter months this is difficult. The supply must, of necessity, be cabbage or sprouted oats.

In recent years alfalfa leaf meal has been added to the ration in the hope that it will provide, in a measure, the essential ingredients found in green food. Some people believe that alfalfa leaf meal will take the place of green food. There is no experimental evidence on this point as far as I know. We do recommend its use, however, since it is valuable from its protein standpoint. Perhaps in a few years some very definite information will be forthcoming relative to the value of feeding alfalfa leaf meal to poultry.

Unquestionably, it would be well for you to have your breeding hens tested for bacillary white diarrhea. I do not know that it is possible to test fowls for coccidiosis. If you are interested in blood testing work, I would suggest that you write to the Bureau of Markets, Department of Agriculture, Harrisburg, Penn'a.

Kindly write to the U. S. Department of Agriculture, Division of Publications, Washington, D. C. for Farmers' Bulletin 1409.

Management Problems

We are building a West Virginia type poultry house and specifications do not call for rounded roosts. Did not you advise against square edged roosts? Our house is 20x26 feet and we have four windows each 12 lights to each, 8x10 inches, on the west side, two on the east and two south ones under the porches on the north. Do we have too much glass? On the south side we have four openings 8x1 feet screened and glass cloth, the glassed frames hinged to open when desired. Would it be practical to cover each side of the ventilator frame (which extends the length of the north side just under the roof) with [illegible] or brown muslin, or would sour[illegible] not be better?

Would it be desirable to have [illegible] with sand and a few ashes for them to wallow in? We expect to keep [illegible] birds penned or is it better to [illegible] them on range in nice weather?

Mrs. A. E. J.

IT is the practice of most [illegible] men to round off the edges [illegible] roost rails on which the birds [illegible] We believe that such a practice [illegible] a tendency to reduce the condition [illegible] bumble foot in fowls.

I believe that the ratio between [illegible] and open space as given in your [illegible] is correct.

The West Virginia type of [illegible] has given exceptionally good [illegible] in that state. I am sure if you [illegible] built the house according to the [illegible] that it will prove very satisfactory.

We have found it desirable to [illegible] the inside of the house so that [illegible] though the rear ventilator does [illegible] not light any air which enters will [illegible] strike directly on the birds. Of course if you do not care to go to the [illegible] pense then I would use burlap or [illegible] other material to pack about the ventilators.

I do not believe it is desirable to have a box of sand or ashes in which the birds may wallow. The only advantage of such an arrangement is to reduce the number of external parasites. This can be done by using [illegible] time sulphate on the roosts or sprinkling [illegible] dioxide on the hens.

If you are interested in getting production, you should by all means keep the birds confined to the house until next spring.

Friendly Talks

By Edgar A. Vincent

THE best cable is the cable made up of the best single strands.

In our times we hear a great deal about the poor farming conditions that prevail in this country. We are told that men are not reaching up as high as they should in their aspirations. That if they succeed in living from hand to mouth that is all they can hope or care for.

It may be true that in every section there are a few farmers who are not doing all they might to make their farms profitable; and here and there whole neighborhoods in which the majority of farmers seem to have lost ambition. Their buildings show it. Their fences and fields are proof of it. But it is my honest conviction that most farmers have just as high ideals as any class of men in the world and take just as broad a view of the future of their calling as anybody.

But that is not saying that we are all aspiring to the best there is in farming. For there are always better methods than are we have sealed. If we would all remember that each one of us is a strand in a beautiful cable, and that the strength and general efficiency of that cable depends on the quality of the individual strands, would it not help us to put still more effort into our part in life for the world?

For that is first what we are here for—serving humanity. The crops we grow, the children we rear, the [illegible] boxes we load all are in the direct line of service for our fellow men. The better farmers we are the happier will be our own lot and that of all those everywhere.

You and I have a great responsibility resting upon us; and our opportunity is far greater than our responsibility. The better farmers we are the more sure will we be to measure up to our opportunity.

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White Leghorns	$3.50	$6.50	$12.00	$22.50	$52.50	$100
Barred Rocks	4.00	7.50	14.00	27.00	67.50	130
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White & Barred Rocks	3.75	7.25	14	28	67.50	135
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Mixed chicks, all breeds	2.75	5.25	10	18	42.50	85

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This beautiful free book should be in the hands of every man and woman interested in making money with poultry which is one of the most fascinating means of increasing your income or of achieving financial independence. The book, which is finely illustrated in four colors, describes my breeds fully; tells of my careful methods of mating and rearing; discusses most profitable sizes for flocks; contains house plans, construction details and concise and easily followed Feeding and Rearing Charts. It is a book that you will find full of suggestions and inspirations and which you will want to keep handy for frequent reference. Some of my customers claim that they owe to it their first steps toward the comfort and peace of mind that come with an assured income.

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Write for booklet giving an illustrated account of the Kerr way of producing livable, profitable chicks. It shows our attractive 1929 prices. Liberal discounts on all orders placed before February 1st.

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Wh., Br., B. C. & S. C. Br. Leghorns, Anconas	$3.75	$7.00	$13	$28	$68	$118
Bd. & Wh. Rocks, B. C. & S. C. R. I. Reds	4.75	8.50	16	31	77	148
Blk Minorcas, Wh. Wyandottes, Bf. & Wh. Orpingtons	5.00	9.00	17	33	80	153
Bf. & Wh. Minorcas, Bf. & Part. Rocks	5.00	9.00	17	34	80	
S. L. Wyandottes, Jersey Giants	5.00	9.00	17	34	80	

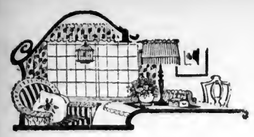
Assorted Heavy Breeds $4.50 per 100 straight. Assorted lights $4.00 per 100 straight.

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The Farm Home



Dread Winter? Well Hardly!

By ALICE MARGARET ASHTON

THE wind howls round our farmhouse piling the snow into such drifts that sometimes even the faithful mailman has to admit defeat. We did not get the central heating plant for which we had hoped and must use stoves for one more year. But do I dread the winter? Well, hardly!

My first reason for looking forward with pleasure to the winter is because I am making the poultry my special project this year. I'm using some new ideas about feeding; I have long been converted to cod-liver oil and milk in the poultry diet; this year I'm adding minerals and cane molasses. I'm making the poultry house a little more comfortable—a straw-loft over the perches, glass-cloth in the windows, and a roll of roofing paper across the back where the construction is not quite so draft-proof as it once was.

I mean to go, well wrapped, to the poultry house at least twice every day, thus delighting my biddies and insuring myself against the ills of becoming "house bound" during the cold months. An enthusiastic interest in the poultry always pays me well—I get eggs when prices are good and I almost never have doctor bills.

Books and Friends

In winter I read those enticing magazines that were merely skimmed over during the busy summer. Mid-winter brings the grand exchange with the friend who plans her magazine subscriptions with mine so that we each get double value.

Each winter I take wonderful journeys to far corners of the globe and the entire cost seldom exceeds five dollars. On each trip to the city I bring back a load of books from the library; the five dollars goes in part for postage for the return of the books. Last winter I specialized on the far north—Alaska, Laborador, Iceland, Norway, Siberia. I even accompanied Byrd to the North Pole! Just what direction my travels may assume this winter I have not yet decided.

Winter is my friendship time. Then it is I write and receive letters from friends far away. It is the time, too, when we enjoy our little series of neighborhood parties where each brings something toward the picnic supper and we cultivate the fellowship we are too busy for at other seasons.

Having enjoyed the radio for several years I think I should feel lonely to face the winter without one. How wonderful to think that a modest family out in a snow-shrouded farmhouse can recognize the voice of President Coolidge as readily as they do one belonging to their own household; and be able to distinguish the works of world-renowned musicians as surely as mother knows which one of her children is "executing" a number on the family piano!

Plenty to Do

What especially appeals to me is the fact that I can keep my hands busy while I listen to these wonders. It is astonishing how much mending and plain sewing can be accomplished if the work is prepared ready to be picked up when the nightly program is tuned in. This year beside the regular sewing and making-over I mean to make a lovely quilt. Several of my favorite farm papers publish quilt patterns and it is going to be hard to choose the loveliest of them.

Five pieces of household furniture are marked for renovation before spring. Here again our farm publications help us by printing directions for such work and by offering inexpensive pamphlets on the subject. At the present prices of furniture, time spent in this way is well worth while.

Ah, no, I do not dread the winter. Spring will be here before I am ready for it, so why should I worry?

* * *

Note.—Pennsylvania Farmer is ready to help the home sewer with patterns for all sorts of clothing. We can furnish you with fifteen lovely quilt and quilting patterns. Pictures will be furnished on request.

Our library has splendid books to help the basket maker and craft worker. "Feeding the Family" and "Cooking for Profit" are invaluable to the homemaker. "Child Training," "Your Child Today and Tomorrow," and "Getting Ready to Be a Mother" help the woman who is busy rearing a family. "The Woman of Forty" has troubles ably diagnosed in that volume by a woman physician. Any one of these books is yours for two weeks if you pay the 14 cents postage. Write to Home Department Library when you send book requests.

We will also help you get in touch with a worth-while home-study course if you write us. Most states offer these splendid courses entirely free. For information send the usual addressed, stamped envelope to Gertrude S. Stewart, Pennsylvania Farmer, 7301 Penn Avenue, Pittsburgh, Pa.



"Among all the gifts you can make a child, there is none more conducive to his present and future happiness and content; none more likely to add richness to his life than—hold on, no not a book, but—the habit of reading."
Hildegarde Hawthorne.

Remember the Birds

By HEPSY NEFF

PERHAPS a snowfall brings its own appeal for help, especially to those of us whose daily thought must include providing shelter and food for the living creatures we have brought under our control. The daily round of chores in zero weather prompts more generous helpings as surely as lower temperatures prompts more wood and more coal indoors.

Having learned the profit in caring for our animal friends the next step must include the birds. One of the great thinkers of our time, when asked, "What does America need most?" answered without a moment's hesitation, "Poets."

Birds are the poets of our daily lives, speaking in a language that all can understand, cheering our dark days with their music and fighting winning battles against our insect enemies wherever we give them a fair chance. It is safe to say that no reader of this page followed the lines of Mr. Van Dyke's poem which appeared in a recent issue without a conscious mental response such as follows a burst of sunshine on a dark day.

Bird lovers who know a bird by its song are never too busy to absorb the joy of its message. All this is common experience to many of our readers. Shall we ever learn half the meaning of the beauty of sky and field and tree, the joy of music, the power of a spirit "In Time with the Infinite"?

But the ground is white with snow and every morsel that a bird could eat is hidden out of sight unless we provide a bit of something. We are told that it is not so much the cold that drives our birds away as the absence of food. Last winter my south porch was the feeding place for a dozen varieties of birds from juncoes to cardinals. The food was merely the common chickfeed which we buy later for our young chicks.

The first snow of the year brought a generous flock of juncoes to that south porch, explain it as you may; and there they appeared daily as long as the snow remained. Now is the time to read up on facts about birds. Get Farmers' Bulletin 1239, "Bird Refuges," and you will have besides a list of more than a dozen valuable books from which you may choose those that best meet your locality and its needs.

Weekly Contest for Readers

SOON it is February. For the country mother, that means getting the sewing machine into fine trim. Why not get busy now studying the long idle attachments? A neighbor told me it was such a bother to learn to use them.

What to such a woman is a "lazy man's load" to another is efficiency and much bother eliminated. The attachments do their work so quickly and so well that to allow them to rust is pitiful.

Among my special saving time tricks are the following:

1. When making a belt lay inside it a piece of tape longer than the belt strip. Fasten it to the end where starting to sew the side seam. Then a pull on this tape quickly turns the belt "right side out".

2. Keep handy a scrap basket to catch odd threads, trimmings, etc.

3. Use 250-yard spools of thread, saving time as well as money.

4. Sharp shears, sharp needles, pins and paper clips are big helps.

5. Razor blades are ideal for opening seams; fine crochet hooks get threads deeply imbedded; good patterns (I use those sold by farm papers) make the sewing work a real pleasure.

Mrs. M. C. Smith.

Note.—This kind of help is greatly appreciated by our readers, and we are inviting you sewers to give suggestions for the sewing room. Each woman has some "pet trick", some original idea that might benefit her neighbors. Let February and March be our period for exchange of threaded needle tips.

We were so much delighted when Mrs. Smith's helps came in that we sent her a sewing kit holding a neat little scissors and all sizes of needles in a four-fold leatherette case. This is an ideal little packet for your visiting basket, holding just what you may need as you chat and sew with your neighbor. Or it would save a good deal of hunting when you are ready to sit by the radio and do the weekly darning of family socks.

For the best ideas that come in each week, we are mailing one of these cases to the kind helpful writer. The race is on. What brand new idea can you offer for next week? Mail your letter to Sewing Contest Editor, Pennsylvania Farmer, 7301 Penn Avenue, Pittsburgh, Pa.

Doing Double Duty

DOES everybody know what to do with Christmas cards—fancy cards in general when they have served their day?

Rather than destroying them, better than hoarding them indefinitely, let us send them to the children's hospitals or to missionaries working with children.

Plain paper may be pasted on the back of post cards or they may be pasted together. Other cards seldom have much writing to be covered. One may prepare the cards at home or let some mission band or other organization do the pasting at a work meeting.

I have sent several such packs to the Children's Hospital in New York City and feel sure similar places in other cities would welcome them as gladly I know, too, that missionaries find the bright pictures very appealing to the little foreigners.

Vida M. Bates.

Sleigh-Bells

By Marguerite Steele McCreary

To-night I hear the sleigh-bells
That rang across the snow
So sweetly through the silence
Of winters long ago.

I listen to their music
A distant, silvery chime
Now nearer, nearer, nearer,
More rythmical than rhyme

Now, up the hill and clearer,
They jingle past our door;
Then softer, fainter, farther
The bells are heard no more.

Those soft, light tones of sleigh-bells
My dreams and memories fill;
So much of life went with them
Beyond the western hill.

My Summer Palace

I WILL try to tell you of my summer house. I built last summer. My front yard is sunny and our shade trees are young and do not give much shade, and our front porch is small, so I was very much in need of some place to sit and chat when friends called to see me. I built an ordinary frame of poles from the woods nearby, making it nine feet long, six feet wide and seven feet high, leaving one end open.

After I had the frame part finished I covered it with some old chicken wire, and I must say at that time I was really dissatisfied with it but I would not give up. So I placed boxes of good soil around two little place and in these boxes I planted canary-bird vine, cardinal climbers and morning-glory seeds very early in the spring. Later on I set out coxcomb, scarlet sage and Impinus plants. By summer I had a wonderful palace out of my rude-looking house.

I had an old settee and two canvas camp-chairs, which I painted red and green and placed them inside my summer house. I still needed a small table, so I took a barrel top and nailed legs on it, painted it to match the other "furniture" and with a few magazines I had finished my "palace."

Today it is snowing, but when I look at my little room down in our front yard I wish for summer, so I can get busy with my little house again.

Mrs. J. N. N.

That Telltale Appearance

WHAT does your appearance say about your temperance in eating, in work, in mental habit? A thinking woman cannot fool herself about habits influencing her face and figure. It is not the trying experiences through which we must pass which ther our looks for the worse.

Suffering and pain have a refining effect on the appearance, when they are borne in the best spirit. It is the results of foolish choice which take away the beauty of youth and substitute no graciousness of the years.

How can one spend a lot of time in thinking about becoming colors, modish clothes, the wave in the hair, without doing some straight thinking about the face and figure? They are the true index to self-indulgence. Lack of exercise, and habits of worry. Appearance is a challenge to the fighting spirit of every woman.

Marion Cossitt Brackin.

The First Six Years of Life

THAT one man in every four examined to find if they were fitted for the great war showed physical defects that existed and should have been corrected in childhood is well known. Most of us have seen the effect of the mental habits of the adults of the family reproduced in the children entering school. These are usually too plain to be mistaken. The old idea that so-called "children's diseases" are inevitable had its basis only in the fact that the child has not yet developed a resistance, in the years of most rapid growth, and so becomes an easy victim.

The newer facts have proved that adults seldom have children's diseases if they escape them in childhood. The rapid increase of weakened hearts among the adult and middle aged is being more and more traced to causes entering into the life of the child in its early years. These facts enlarge the importance of the work of the mother and her fitness for the great task she is undertaking.

Many medical schools are now training physicians as specialists in children's diseases and a new magazine has been established for carrying the best that is now known in medical science directly to the mothers of the world. The name of this new magazine is "The Mothers' Journal" and the price is within reach of every mother

Timely Tips

Always have a bath mat beside the tub. Many painful accidents have occurred by stepping on a slippery floor.

Sprinkle talcum powder into new shoes. They will seem more comfortable when worn the first time.

Wash all uncooked fruit before using.

A paste of borax and water will remove chocolate stains.

The juice of ripe cucumbers will remove the vegetable stains from the hands.

A lump of sugar added to the rinse water will act as a light starch to the organdie collars and cuffs.

Mrs. Lillian Rude.

How to Can Apples

FILL well-sterilized tinut jars with hot pared apples cut in uniform quarters or other sizes. Pour over them boiling hot syrup made from three cupuls of granulated sugar and two cupuls water just brought to a vigorous boil.

Use only brand new rubbers and partially seal the jars at once. Then place them in the boiler in warm water. The jars must be on a rack and the water must completely cover them. Bring to a boil, and keep them boiling slowly and steadily for twenty minutes. Seal at once when removed from boiler.

G. B.

Take a cue from the hotels, which start each day with a clean sheet. That's the best way to smooth out yesterday's wrinkles.



Fashions

What could be more charming than this dainty apron for morning, afternoon or evening? Two yards of percale and six yards of binding will cost you less than one dollar.

Now that pleated skirts are in vogue, one needs several blouses. Pattern 3409 is peculiarly attractive in black and white silk or plain flat crepe. Four years of material is needed for the dress. (Pattern 3150.) An inexpensive wash material or silk broadcloth makes a serviceable gown. This pattern is especially good for large figures.

No. 3450.—Designed in sizes 16, 18 years, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 36 requires 3⅞ yards of 40-inch material with ⅝ yard of 40-inch contrasting and 1⅝ yards of ribbon.

No. 3344.—Smart Apron and Cap. Designed in sizes small, medium and large. The medium size requires 2 yards of 36-inch material with 5¾ yards of binding.

No. 3409.—Modish Blouse. Designed in sizes 16, 18 years, 36, 38, 40, 42 and 44 inches bust measure. Size 36 requires 1¾ yards of 40-inch material.

All patterns 15c for one, or two for 25c. Address Pattern Dept. Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.



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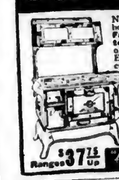
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Books Are to the Soul What Bread Is to the Body

IN a desolate little cove on the rocky shores of Norway, Ole E. Rolvaag, author of "Giants in the Earth," spent his first ten years. He was sent to school for several weeks each year until he reached the age of fourteen. Then his father withdrew the privilege because he believed the boy incapable of learning. It was then that he said to his son, "You are not worth educating," and the lad was set to the eternal task of fishing.

But the Norwegian government supported and maintained at this outpost of the world a good, small library, so that the boy had books to read, and by burying his head and heart in books, he learned more than he himself realized.

He expresses his appreciation of libraries and books in the following tribute: "I could do without banks; I have friends and might learn to make things for butter. I could get along without bakeries; the art of breadmaking is not difficult. So too with shoe shops and clothing stores. I never owned an automobile; hence, I have not felt the need of the repair shop. I might even eliminate the jeweler, because the sun and the moon and the stars and the ebb and flow of the sea tell me time and the seasons.

"My soul I need do without; nutrition I can ignore; pleasure and ease I can do without; but I could miss sensature, else, for as I could miss all these things carefully and I should grieve deeply if I could not have them.

"Not so with books, for they are to the soul what bread is to our body.

"My own lifespan is short and narrow. Yet nothing but life matters to me. To learn about it, I must read not the great interpreters of the poet, the dramatist, and the novelist. For their senses are keener than mine. They have strained their vision; they have laid them at close up to the aching heart of Humanity and listened long and breathlessly. They have seen and heard things unspeakable. And the gods have lined their hands with a rosie filament, the result being a rosie filament. The result being a rosie filament, the result being a rosie filament, even sordidness and vulgar ugliness. So I go to them to get wisdom and understanding and beauty. Every time I am with them my conversation with Humanity grows more instructive."

In Enemy Country

By James Willard Schultz

(Copyright, 1928, by James Willard Schultz)

Synopsis

Many Swans, a Sun medicine man, Lone Woman, his wife and Bear Plume, their son, who tells the story, have left the lodges of their own Blackfeet tribe and after perilous adventures, have joined the enemy tribe, the Crows. Lone Woman and Bear Plume cannot understand the move and Many Swans' only explanation is that he has done some secret wrong and must be punished. A tame wolf has joined the trio and is the constant companion of the boy. At the Crow tribe they find a welcome, much to their surprise, and Bear Plume and Black Elk, son of Chief Dusty Bull, pledge everlasting friendship. Comes a day when Many Swans gives a feast and smoke to Dusty Bull, Long Bow, Low Horn, an aspiring leader, and other chiefs and warriors. After the feast, the guests tell of their war trails and the coups they have made. Low Horn tells a tale of bravery and killing but is exposed as a liar by Many Swans and is severely punished by his own people. Lone Woman is warned that the disgraced chief has sworn revenge. Many Swans leads the Crows in battle against the Assiniboines and in the absence of the warriors, Bear Plume and Black Elk are required to provide meat for the families. Buffalo and antelope become scarce and the boys start out on a secret journey for game. They are surprised and captured by the Spotted People. They learn their captors are seeking a sacred white buffalo. Being unsuccessful, the Spotted People, with their captives return to the Camp. Here the boys are given places of honor but plan to escape at the first opportunity. The tribe is greatly excited over the visit of the Big Bellies and Bear Plume meets an acquaintance.

ONLY two winters back, the whites had asked them to make another treaty of peace, and they had gathered at Sand Creek, in the southern part of their country, for that purpose. Then, one morning, just as day was coming, and for no cause whatever, the white soldiers had attacked their camp and killed five hundred of its members, many of them women and children. Several of those who escaped from the camp had seen a soldier chief kill and scalp three women and five children.† One of their close friends, a Spotted People chief named White Antelope, had refused to run off with them; he ceased fighting, and stood still, singing his death song until a soldier shot him. His song was a short one: "Only the plains and the mountains live long."

After this terrible killing of their people, these chiefs went on to tell me, the whites had asked them to make another treaty with them, and they had done so; never had they refused to make a treaty. In this new one it was agreed that all of the plains from some little mountains, called Black Mountains, west to the Real Mountains, and north to Elk River,* was owned wholly by the Spotted People, South Big Bellies, and Parted Hairs, and that within it the whites were not to settle nor even hunt. And now that treaty had been broken: the whites were not only traveling and hunting in it, but were right then building soldiers' houses up on Sweet Pine Creek,** one of the heads of Powder River, and not two days' ride from us. That, they said, could not be allowed. They had sent messengers to the Parted Hairs, asking them to come and help kill off those soldiers and burn their houses. This just had to be done, else soon they would have no buffalo and no country in which even to lie down and die.

And how many were the people of the Blackfeet tribes? they asked. After some thought, I said that they numbered about nine hundred lodges, and our friends, the North Big Bellies, and the Saksis, about two hundred lodges. And in answer to their further questions, I said, as I had before, that there were no soldiers in our country except a few at the mouth of Elk River. Of other white men, there were, in the far north, on Bow River, some redcoat traders, and on South Big River, the Many Houses of the Big Knives traders. Farther up Big River, at the foot of the Real Mountains, quite a large number of whites were digging out yellow metal that they found there.‡

NOW, when I mentioned the yellow-metal diggers, both chiefs clapped hands to mouths to express their surprise, and Otter Head said to me, through Morning Eagle: "The chiefs of your tribes must be crazy that they allow that digging. More than horses, more than buffalo hides and furs, do the whites love yellow metal. If your tribes do not soon kill off those diggers already there, more and more of them will come, multitudes of whites will come and take from you your whole country."

Said Morning Eagle: "If you should go to the chiefs of your tribes and tell them what the whites have done, and are doing to us, and of their own danger from the yellow-metal diggers, is it not likely that they would join us in one great stand to keep our hunting country to ourselves?"

"You said just now that the Parted Hair tribes are your friends, and that you have sent for them to help you fight the whites."

"Yes. They are our friends; they are one with us."

"Then never will my people come to your aid; of all our enemies, we hate most the Parted Hair tribes. Never, so long as Sun makes his daily journey across the blue, will my people do other than fight them," I replied.

"Too bad! Too bad that they are so fierce against them. Well, we must do the best that we can without their help," said Otter Head.

"Here are the Crows, two tribes of many warriors each; why don't you make peace with them, get them to help fight the whites?" I asked.

Both grimly shook their heads, and Otter Head replied: "As your tribes hate the Parted Hairs, so do we hate the Crows. Never, never shall we do other than fight them whenever we meet."

† This was the massacre of the Cheyennes and Arapahoes on Sand Creek, a tributary of the Arkansas River, November 29, 1864. The officer who murdered the three women and five children was Lieutenant Richmond, of the Third Colorado Cavalry. For a full account of this massacre, see Dr. George Bird Grinnell's interesting volume, The Fighting Cheyennes.

* The Black Hills, Rocky Mountains, and Yellowstone River.

** This was Fort Phil Kearney, built on Piney Creek, a tributary of Powder River, in the summer of 1866.

‡ These places were respectively: Calgary, Province of Alberta, Canada; Fort Benton, Montana; and Helena, Montana, where, at the time, rich placer mines were being extensively worked.

FURTHER talk we had, about many things; and when, at last, Otter Head said that it was time for us to go, Black Elk was reluctant to leave his new Crow acquaintances.

As we followed the chief from the Big Bellies camp up to our own camp, my friend quickly signed to me: "Tonight, we will not leave here. Tomorrow, when we go after the horses, we will talk."

"As you say," I answered.

Very early the next morning, when the women were building a fire, I saw that Otter Head was awake, so signed to him: "My friend and I will not wait for Lone Antelope to come in; we will go now after the horses."

"Yes. Go now," he answered, and by his queer smile and the look in his eyes, I saw that he knew well enough that Black Elk and I wanted to get off by ourselves, where we could sign-talk unobserved.

We hurried up onto the plain, and there, where none could see us, my friend signed to me: "That Crow woman and her son whom we met last night, they are of the same clan as my mother; they are also my relatives; they are of good heart. They want us to remain here for several moons, and then, when Otter Head and his women feel sure that we like them so much that we will return, they want us to take them to their Crow relatives. What do you think about it?"

"I should like to do that. I want to know fully these Spotted People and Big Bellies. I want to see, to know, the Parted Hairs who are coming. Did your Crow friends tell you about them?"

"Yes. Also about the white soldiers that they all are going to fight. Very much I want to see that fight."

"Our fathers, our mothers are mourning for us; they think that we are dead. I feel that we should soon return to them, make glad their hearts."

"Their worst mourning is now over. Great will be their gladness when, in days ahead, we do go to them. Let us remain here one moon, perhaps two moons."

"Your Crow friends, here, will they tell the Big Bellies, the Spotted People about this?"

"No."

"I like Otter Head and his women. I like very much Morning Eagle. Yes. Let us remain here for a time," I decided.

We rounded up the horses, drove them to the river, had a good bath in it, and hurried to our lodge for our morning meal. As we ate the food that the women set before us, I noticed that the women gave us quick, questioning looks; Otter Head also; they were uneasy; fearful that we had decided to leave them.

Signed Good Singer at last to Black Elk: "That Crow woman, [illegible] half-Crow son [illegible] met last night, [illegible] you like them?"

"Yes, very much. They are of [illegible] mother's clan. I [illegible] to see them often. How is it—do you think that Fish Robe will let us hunt with him, he so much older than we are?"

"Yes! Yes! He will be glad to go with you!" both women quickly signed, and Otter Head smiled, nodded his head, and hummed a little song as he prepared to fill a pipe.

"These people really love us. Were all of the different plains tribes friendly with one another, how good it would be!" I thought.

As Otter Head was about to light his pipe, we heard distant singing. He laid aside the pipe and signed to us: "Coming near, a returning Big Bellies war party; we will see them."

We all rushed from the lodge and saw them riding down the west slope of the valley, driving a fine band of horses that they had captured. They came into the bottom between our two camps, still singing their victory song. Twelve they were, dressed all of them in beautiful war clothes; four waving enemy scalps stretched in the forks of willow cuttings. Out came from the Big Bellies camp their relatives and friends to greet them, to praise them for their success against the enemy.

Seeing those scalps made Black Elk very uneasy; they might be Crow scalps, and perhaps of his own relatives. He signed to Otter Head: "You go over there, learn who were the persons that they killed."

"Not now. Later on, when they have finished eating and all the excitement is ended, we will all go over and hear what they have done," he replied.

So was it that we sat down there, outside the lodge, and Lance Woman brought out the pipe to us and we smoked, and watched the shouting, singing Big Bellies escort their warriors into camp.

Signed Otter Head: "None of the women there are crying; the war party has lost none of its number; twelve they were who went, and twelve return."

Black Elk was so uneasy that he couldn't sit still; when the pipe came to him, he took but a quick whiff and passed it on, and Lance Woman and Good Singer, watching him, also became distressed. For his sake, they hoped that the four scalps we had seen were not Crow scalps.

The other camp soon quieted down.

Signed Otter Head, after a time: "One more smoke, then we will go over there."

"Now! let us go now!" signed Black Elk.

"No. Two are coming to us," he answered.

Right he was. They were Morning Eagle and Fish Robe, just entering our camp circle. Black Elk ran and met them, loudly questioned Fish Robe, then turned and signed to us: "Not Crow scalps! Snake People scalps. Snake People horses, those that the war party brought in!"

At that, Otter Head and his women laughed, clapped hands, and had quick talk with one another. Came the others and sat down with us, and Fish Robe talked with Black Elk in his language, Morning Eagle with Otter Head and me in our languages, first in one and then in the other. So was it, that I learned that the Big Bellies war party had discovered a number of Snake People hunters away up at the foot of the Real Mountains, just after they had made a killing of buffalo, and, attacking them, had killed four and taken all of their horses. So was I also pleased, for the Snake People were ever enemies of our Blackfeet tribes. And again, not pleased; ever in my mind now was the knowledge of all that the whites were doing to the tribes of this country. Was it not likely, as Otter Head had said, that the whites would soon try to take also our Blackfeet tribes' country? But if all the tribes of the plains and those of the mountains should make one great peace with one another and together turn upon the whites, why, then we all should live on in peace and plenty.

MORNING EAGLE and Fish Robe had not heard, before coming up to us, all that the returned war party had to tell about their trail to the foot of the Real Mountains; for now came hurrying to us a man of the other camp, and said something to Otter Head that made him and the others cry out with surprise and quickly question him. All sprang to their feet; Otter Head handed his pipe to Lance Woman, and signed to Black Elk and me that we were all to go to the other camp.

"What has happened? Why all the excitement?" I asked Morning Eagle as we hurried off.

"The just-now-returned ones say that they saw the white buffalo cow," he answered shortly.

We all went into Morning Eagle's lodge, followed by leading men of both tribes, and two men of the war party were called in and closely questioned. As Morning Eagle afterward told me, they said that they had seen the white cow near the head of Muddy Creek, a stream running into Rosebud River; but, fearing that they were being pursued by men from the main camp of the Snake People, they had not dared to halt in their flight and try to kill it. One of these two warriors had been the leader of the party. Morning Eagle spoke very bitterly to him. What were a few horses compared with the value of the white cow? Nothing! he said. At the risk of their lives, even though half of their number died in the attempt, they should have tried to kill the long-sought-for animal; well they knew that, if the combined tribes could give Sun its white furred hide, they would surely be the victors in the coming battle with the white soldiers. The man replied that it was not alone fear of being overtaken by the Snake People that had caused them to keep coming without a stop; Crow hunters were in that Rosebud River and Bighorn River country; they had seen many signs of them.

It was likely, said another member of the council, that by this time the Crows had discovered and killed the white one. Well, anyhow, it was now too late to send a party out in quest of the animal; the Parted Hairs were daily expected to arrive to help fight the white soldiers, and for that every gun and every bow was needed.

THERE followed much argument about that, and at last, after Otter Head and Morning Eagle had whispered together, our captor said to the council: "Two here present cannot be expected to help us in this fight, for they, their people, have not yet had any of their country taken from them by the whites—their time for that is coming. So is it that I propose we send the two, my now almost-sons, to try to get the hide of the white one for us."

A man of the Spotted People laughed and said: "They would go, never to return."

"Not so!" Otter Head angrily exclaimed. "I know them, they are not liars. If they agree to do this for us, they surely will do it. You, Morning Eagle, and you, Fish Robe, explain to them what we want; ask if they will do it."

That the two did, and with few words. I felt that I wanted to do it. I looked at Black Elk, he smiled and nodded to me, and I said to Morning Eagle: "Tell Otter Head and the others here that I will try hard to bring in the hide of the white cow."

Black Elk made like reply to Fish Robe, and, when our answers had been interpreted, I saw that Otter Head and Morning Eagle were pleased, while some of the others of the council plainly showed that they thought our promises were but lies.

Said Fish Robe to the gathering: "At least one of us can be spared for this very great undertaking. I am going with the two youths. Should we meet the Crow hunters, I am sure that they would not harm me when they learned from this young Crow that I am half of me of their blood. And should they have killed the white cow, it may be that they will agree to sell its hide to us for some of our horses."

Now, at last, all the members of the circle were pleased with Otter Head's plan to attempt to get the powerful Sun offering. Quickly, eagerly they gave their approval, and told Fish Robe that, should we meet the Crows and find them in the possession of the hide, he was to offer them many horses for it; if necessary, hundreds of horses.

So ended the council, and we hurried back to Otter Head's lodge, Morning Eagle accompanying us and telling me all that had been said and that he knew I would do all that I possibly could to obtain the great Sun offering.

Lance Woman and Good Singer became very much worried when they learned what we were to do; they scolded Otter Head, told him that he was doing wrong to send us out on so dangerous an undertaking; yet, while they scolded, they set about preparing for us the things we should need, ponches filled with dried meat, back fat, and big berries, extra moccasins, an awl, and sinew thread. We thought that we were to start off at once, but no.

I have said that, within the big clear circle formed by the lodges of these Spotted People, there were two sacred red-and-black painted lodges. In one of them, Morning Eagle told me, lived the keeper of the buffalo cap, and in the other, the keeper of the sacred arrows; both the cap and the arrows had been given to the first Spotted People by the one who created the earth and all the life upon it, and both were very powerful medicine. Otter Head and Morning Eagle now escorted Fish Robe, Black Elk and me to the westernmost of the two lodges, the one containing the buffalo cap. An old man was its keeper, and it was enclosed in painted leather wrapping and tied to the lodgepoles above his couch. As soon as we were seated and Otter Head had told him the object of our visit, the old man filled a pipe and smoked to the cap, praying it to preserve us three from all danger and give us success in our quest of the white cow. Also, he painted our faces and hands, purified us with scent of burning sweetgrass, and had us smoke the pipe and pray for success.

Upon returning to our lodge, we found that Lone Antelope had brought in the horses and was holding them for us to select the ones that we wanted. I saddled one of my own fast buffalo horses and Black Elk chose one of Otter Head's swift runners. A boy brought up Fish Robe's horse. We packed an extra horse with our few belongings, I untied Wolf and told him that he was to help us find the white cow, and we got into our saddles and struck out to the west. It was then the middle of the day.

So that our horses might never be too tired for our purpose, we traveled slowly from the time that we left camp, and frequently watered them and let them graze a bit. During the remainder of the day, we saw only three small bands of buffalo. Came night, and we stopped beside a small lake, unsaddled the horses and let them graze, ate some of our dried food, and slept lightly until the middle of the night, when we went on again to the west. Little did we think that trouble was close upon us.

Old Woman, showing all of herself, made the night almost as light as day; and, anyhow, horses can see plainly even in blackest darkness; yet, halfway between midnight and morning, our pack-horse stepped into a prairie-dog hole and his leg broke close below the knee. We dismounted, saw that the animal was done for, and Black Elk shot an arrow into his heart. He fell and died. We unpacked him, and took each of us our few belongings that he had carried, Fish Robe saying to Black Elk and signing to me that ours was no great loss; that, should we kill the white one that we sought, we could, anyhow, get home with the hide.

Our horses, grazing, had moved off a little way, and, as we started toward them with our pouches, we heard a real snake rattle his tail, saw Fish Robe's horse flinch back, snorting. We approached the animal, watching our steps, and Black Elk got hold of the dragging rope and made him come up to us. We all then looked carefully at his nose, his legs, but could see no sign that he had been bitten by the snake; so we all mounted and continued on westward. It was not long, however, before Fish Robe's horse became very uneasy, snorting and wanting frequently to stop and rub his nose against his forelegs; and we soon saw that his nose was swelling, and well knew that he would soon become so sick that he would be unable to travel for many days.

Said and signed Black Elk: "This is very bad. I think it a sign that there is danger for us, somewhere ahead. Let us turn about and go back."

"Yes, let us go back," I signed.

Fish Robe looked at his horse's head, looked back, looked ahead, and, after some thought, said and signed: "We will go on. Not far off is the head of Muddy Creek, where the war party saw the white cow."

So saying, he went on, and Black Elk and I trailed after him. He was our leader, our chief; as he said, so were we obliged to do.

On and on we went; more and more slowly as the snake-bitten horse's sickness increased. Came daylight, and we saw, not very far ahead, the breaks of a stream that was, Fish Robe told us, the one where the white cow had been seen. During the night we had frightened several herds of buffalo, and now three different herds were in sight, to the south, to the north, and the other not far in our front and heading to the creek to drink. A lone cow that was grazing well in the rear of this herd happened to turn and see us, and, running on, gave the alarm to the others. They also looked back and saw us, and then ran and joined the herd to the south, and the one big herd of them went on south, which was well enough, for we had made sure that the white cow was not in any one of the three herds. The herd to the north had been to water and was now running eastward. All this pleased us; any herds that might be down in the valley of the creek remained there unalarmed, and we could have a good chance to approach them in our quest for the white one.

And now, while we were still quite a little way from the creek, the snake-bitten horse gave out; his head had swelled to enormous size; he stepped and groaned and flopped about, and Fish Robe had no little trouble in getting off the saddle. Nor would he be led or driven; so, leaving his saddle, pouch, and ropes there in a clump of sagebrush, Fish Robe got up behind Black Elk on his horse, and we went on. Shrilly the sick one called to his mates, as though asking them not to desert him; they answered and he tried to follow; but his eyes were already swollen shut and he staggered and fell, and was hidden from us by the tall sagebrush. I myself felt very low of heart and terribly uneasy. I wished that I had never started upon this quest of the white cow. I wished that, with my father and mother, I was far in the north in the camp of my own people. I was constantly thinking of those two; wondering how they were getting along there in the camp of the Crows; and not a little uneasy; fearful that that mean Low Horn might in some way have done my father harm. Also, I well knew that I was doing great wrong to them by remaining with my captor, from whom I could at any time easily escape. But, oh, how eager I still was to see more of the Spotted People, the South Big Bellies, and above all, witness their coming fight with the white soldiers. Those white ones, because of what their kind might soon be doing to me, to my own people, I wanted to see them wiped out. I cried out a prayer to Sun.

"What was it that you prayed for?" Black Elk signed.

"THE Above One, I promised to give him of my body.* I asked him to keep my father and mother, and us three here, safe from all danger; to give us all long life and happiness," I replied.

"Good! Your prayer is our prayer," they signed.

Soon thereafter, from the edge of the plain, we looked down into the valley of Muddy Creek: nowhere up and down it, so far as we could see, were there any buffalo. Wide the valley was, and down in our front the stream ran through a long grove of cottonwoods. Above the grove and on the west side of the valley was a small and rocky hill with a few pine trees upon it. It was at the foot of the hill, between it and the creek, Fish Robe signed to me, that the war party had seen the herd of buffalo in which was the white cow.

Signed Black Elk to me, as he spoke to Fish Robe: "Not far from us, maybe out on the plain to the west, is the herd of the white one, if my Crow people have not been hunting here since the par party passed. Let us go down across the valley and learn if they have been here."

"Yes. And then go above the pine trees hill and see if the Snake People came this far upon the trail of the war party. If we find no signs of Crow hunters or Snake pursuers, then, surely, the white cow is somewhere about here and we shall find her," signed Fish Robe.

"Good! Lead on," I answered.

We went slowly down the slope and across the flat bottom of the valley, looking carefully for tracks of horses. As we neared the timber, I saw tracks in the dry and sandy ground that I thought had been made by horses, and turned back to examine them closely; they proved to be not fresh tracks of buffalo. I turned again to overtake Black Elk and Fish Robe, still riding double, and noticed that Wolf was ahead of them and just entering the timber. Suddenly he turned and came running back, and I felt that he had seen or scented the one thing that he feared, strange men. I was right, out came a number of riders, loudly shouting, men of heavy and short build, and bushy, uncombed, and unbraided hair. Snake men, I knew at once, for often had I heard my father and others so describe them.

"Look out!" I cried, and foolishly, for my friends were already fleeing from them, Black Elk quirting their horse, Fish Robe, behind him, pounding the animal with his heels, and powerless to draw his bow and arrows, as he was obliged to hold on to Black Elk's waist in order to retain his slippery seat.

(To be continued.)

* Meaning that the supplant would, during the ceremony of the next Sun lodge of his people at which he should be present, undergo torture of his body.



The Cheerful Plowman

THE OLD FEATHER TICK

THE feather tick was soft and thick that mother gave to me; it billowed high up toward the sky, as high as I could see. It was a chore to ponder o'er to climb into its deeps. Up, up, we dashed, then down we splashed into its yielding heaps, and there we lay all banked away where it was more than warm, while all around it puffed and downed and pushed its bulging form.

In winter time when blizzards chime a tick is not so bad, a fellow can endure the plan, at least when he's a lad; but when it's hot, no broiling pot, however black and thick, can cook raw flesh as can the mesh of that old feather tick. Ah, how I steamed the while I dreamed and how I boiled and sweat; I still am red about the head, I'm cooked in places yet!

But mother thought that feathers hot were good for growing boys, she thought that heat about the feet was one of nature's joys. She thought that cold for young and old was death or worse than that, she thought a kid, whate'er he did should simmer in his fat!

That feather tick, so hot and thick, is made in pillows now. Below my head upon my bed it soothes my tiring brow, and there it serves my bones and nerves in very worthy way, for years to come 'twill be my chum and serve a lengthy day. It has a place below my face where it is good and fine, but 'neath my back, I swear, alack, 'twill be no pal of mine! No, never, NO, while violets grow, while brooks and rivers run, will I seek sleep in such a heap and cook until I'm done! J. E. T.

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Farm Experiences

Battling Bulls

A [illegible] farm sale I heard two men talking. One of the men said his neighbor was afraid of his bull. "Why," said he, "I went over there and led his bull out with a rope in his ring."

The question is: Which of the two men were the wiser, the one who was afraid of his bull or the one who was rash enough to lead him with a rope?

The bull question is like Banquo's ghost—"It will not down."

I shall give some of my own experiences in the hope that it may be of some assistance to Editor Bayard in his efforts to warn people against bull attacks.

On September 28, 1925, I was chasing the cows around to the stable at milking time. A young bull, not a year old, was running with the herd that week. Suddenly and without warning the young bandit attacked me, got me down and broke a rib and shattered my breast bone. It was lucky for me that my son Maitland was near as he drove the bull away.

Bulls are like the animals that walk in two shoes, they do not like to be driven, they like to have their own way in all things and at all times. It is bad practice to let bulls run loose in a herd, for having conquered the herd of cows, they will try to conquer any human. They are like Napoleon, seeking new territory to conquer.

Ellsworth Brown.

The Timothy Question

"ATTACK is the best defense" applies to most farm problems. In our share system of farming timothy hay is likely to pile up on us, however much we may be committed against its sale. We aim for clover, to be sure, but when clover fails to make a fine crop we must decide what to do with the timothy.

Our timothy acreage last summer was not burdensome, but still too much timothy hay. The easy way would have been to put the hay in the barn, bale it on and pocket the money. Instead, we made our own "attack" on this situation—having skirmished with the enemy before on the same line of defense.

The part of the timothy acreage that stood thin on the ground was left standing to rot, the heavier hay was cut to sell. Whenever we sell timothy hay we set aside half of the proceeds for superphosphate to put on the ground the next spring when planting corn. The right landlord may think this is pretty poor rent we are waiting a year for our rent!

The Half Is Returned

Suppose the field is 20 acres. Ten acres of this hay is left intended: ten acres of better timothy is cut and makes around 15 tons of hay. The landlord sells 7½ tons for $80 per ton and tenant feeds his hay on the farm. Half of the selling price of the hay is returned to the field in superphosphate for corn and the other half to the livestock gets our hay returned.

[illegible] penses of the land. You say the ow[illegible] is on the way to the barnyard!

It hasn't worked that way in [illegible] case. The ten acres of thin timot[illegible] hay left to rot on the ground braces t[illegible] less fertile areas of the field for a b[illegible] ter corn crop—year after year t[illegible] works toward an eradication of h[illegible] tiny and guards against that tena[illegible] (erratic) depletion habit to wear [illegible] land to a point where nobody can [illegible] ford to work it on any terms that le[illegible] a future to the farm. By our syst[illegible] half the hay we sold pays for abo[illegible] two tons of superphosphate that g[illegible] on this corn ground, which our l[illegible] and applies (of course).

When our timothy hay is seen [illegible] rot in the field it is not shiftlessne[illegible] but just our individual method of [illegible] tacking the management and the te[illegible] tility problem of a (share) rented far[illegible] When we haul away a few loads [illegible] baled timothy hay it's not a clear ca[illegible] of soil robbery for there is a truc[illegible] load of superphosphate coming ba[illegible]

G. P. Williams

Rats and Cats

ON Marriet Farm a converted ho[illegible] is used as our main poultry hous[illegible] parts of which are used to store ha[illegible] baked straw and grain. After the n[illegible] modeling of a close-by grain mill, ra[illegible] became serious.

When baling some hay we uncover[illegible] and killed sixty-two rats. War w[illegible] started. Traps were used with succes[illegible] at first, but the rats seemed to "wi[illegible] up". Then poison was used. Th[illegible] count increased to ninety rats at t[illegible] end of several months and fifteen ni[illegible] hens.

After a lapse of a few weeks a l[illegible] of little rats made their appearance an[illegible] we considered the cat. Because w[illegible] had caught the two cats we had kill[illegible] chicks we had disposed of them. W[illegible] placed a 30-cent advertisement in [illegible] local paper and got 10 cats for th[illegible] trouble of collecting them. After pe[illegible] ning them in the feed room, feedin[illegible] them well, on the sixth day we l[illegible] them out. In a few hours the phon[illegible] was ringing and reports came in tha[illegible] the cats were home, and wouldn't w[illegible] come and get them? We didn't.

But one of the old cats and several kittens remained. As soon as the latte[illegible] were old enough at night they wer[illegible] put into the various chicken house[illegible] where they soon learned to catch th[illegible] rats and mice which delighted in eat[illegible] ing a high-priced commercial mas[illegible] with cod-liver oil. Now rats and mi[illegible] no longer give us trouble.

Occasionally at night after the cat[illegible] have drunk their fill of milk, I collec[illegible] them and distribute one to a compart[illegible] ment in the barn and one in any othe[illegible] houses I suspect are occupied by th[illegible] rodents. In the morning they seem[illegible] prone to display their luck, one o[illegible] two cats with their heads chewed of[illegible]

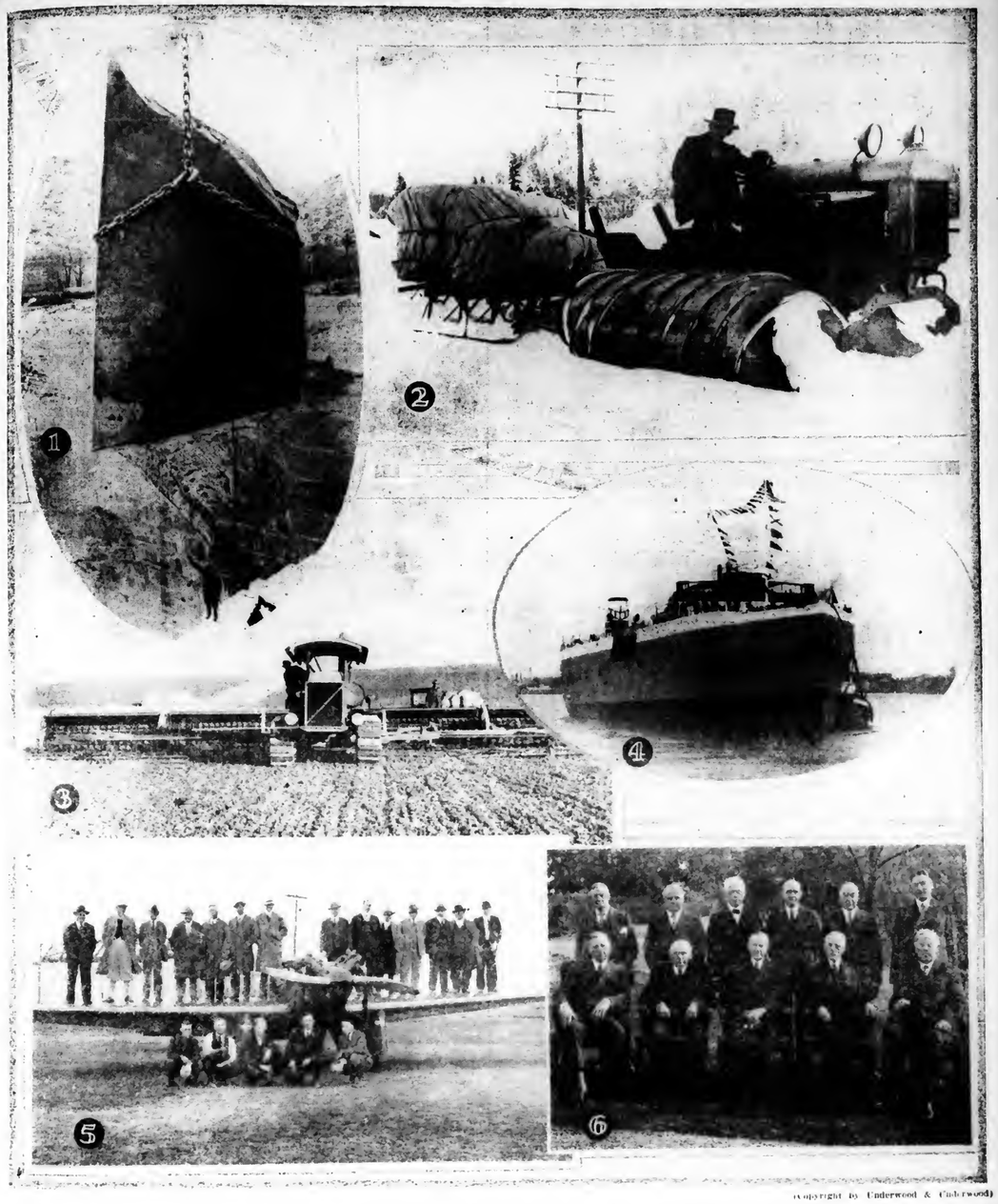
I have frequently noticed the cat[illegible] watching sparrows but have never seen a cat catch one, although I wish they would, for to me the sparrow is as much a pest about a poultry farm [illegible] mice, due to cleanliness, worms and other causes they can carry.

Marcus A. McKnight



Anrelians the Timothy Co. tion

EVENTS CAUGHT BY THE CAMERA



(Copyright by Underwood & Underwood)

1. Stone is cut to size. Photo shows a great block of slate—weighing six tons—being lifted 800 feet from the floor of the quarry at Pen Argyl, Pa. The way a quarrying slate is about 75 per cent, as is shown by the huge piles in the background, and when a chunk is cut into small slates, there will [illegible] enough for about one roof. The Pennsylvania quarries are said to rival the famous Penrhyn quarries in Wales for purity and quality.

2. Uncle Sam delivers mail between Truckee, Cal., and Lake Tahoe in winter—a distance of 13 miles. This sturdy tractor equipped with two spiral "propellers" drags along one ton of mail on a sleigh at the rate of four miles an hour through every kind of weather and the deepest snow drifts. In the past horses and sleighs took several days to make the 15-mile run, and in heaviest weather could not get through at all.

3. A new harrow-drill hook-up as practiced by F. W. Schwandt in Idaho. With this pulling five grain drills for a 55-foot sweep he covers 150 acres in a ten-hour day. Big hoppers make four or five stops for filling all that's necessary.

The use of the peg-tooth harrow ahead of the drill in a single hook-up is unique among grain farmers. Only two men—one on the tractor and one on the drills are needed to operate this labor and money saving hook-up.

4. A view of the giant Seatrain arriving at the Poydras Street wharf, New Orleans, from England after stopping at Havana. The ferry will ply between New Orleans and Havana. On its first trip it carried ninety-five railroad cars. They are unloaded and loaded through the opening on the side. Service started on January 5.

5. Photo shows fourteen men testing the strength of hollow and convex plywood wings of America's first all stream line plane, designed by M. C. Tmulson. It is a low-wing monoplane and has made 200 miles an hour. It is made of plywood, has a wing spread of 35 feet, ascended 1,000 feet the first minute of its initial flight and made a smooth landing at 40 miles per hour. It has no struts. This craft is in the $2,500 class.

6. The latest and what may likely be the last portrait to be made of President Calvin Coolidge and the members of his Cabinet, taken in the south grounds of the Executive Mansion at Washington.

In the front row, left to right: Secretary of War Dwight F. Davis, Secretary of State Frank B. Kellogg, the President, Secretary of the Treasury Andrew W. Mellon and Attorney-General John G. Sargent.

Back row: Postmaster-General Harry S. New, Secretary of Labor James J. Davis, Secretary of Commerce William F. Whiting, Secretary of Agriculture William M. Jardine, Secretary of the Interior Roy O. West and Secretary of the Navy Curtiss D. Wilbur.

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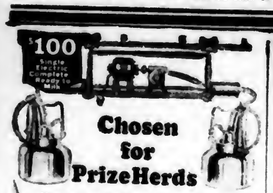
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Farm and Dairy

By L. W. LIGHTY

A VERY common form of inquiry is this: "My best cow did not go dry and since she dropped her calf she gives but a small quantity of milk. What can I do to bring her to her full milk flow?"

The light producer, the poor cow, will look after going dry in plenty of time, often in fact twice as long as is necessary, but the large milker will not go dry unless an effort is made by the manager, and this cow is the one that pays for being looked after carefully. Milking up to calving time is a great drain on a cow's vitality. The calf will not be so vigorous as it should be and the cow often does not give milk enough to nourish the calf. True, the milk flow increases after a time, but often the yield for the period of lactation is greatly decreased by the carelessness of the owner.

Feed and Management

In our herd every cow that is worth keeping should have individual care and attention in preparing her for the next period of lactation. Many will go dry with little effort, but others must be put dry with considerable effort on the part of the milker and feeder. The feed has to be cut down and the milking has to be irregular. These things have to be given consideration almost two months before the cow is due to calve, hence the importance of an accurate record of breeding.

The feeding and management of the cow during the rest period is also important. Exercise in the open air and sunshine are very beneficial and a relaxing feed is important. Where silage is available the feed question is as a rule easily solved, but where this is lacking we must use bran liberally and some oilmeal and possibly a little Glauber salts to produce a general relaxation. This condition holding at parturition, with very rare exceptions our troubles of this period are overcome and the cow will come into heavy milk flow in a normal manner. Here an ounce of forethought is surely worth a ton of afterthought.

A Winning Mental Attitude

"As a man thinketh in his heart so is he" is the way the writer of the oldest Proverbs puts it. "There is no work to be had in this section now so there are no earnings, but husband and I borrowed money and bought eight cows to give us work and a possible living." is the introduction to a letter full of cow management questions written by the ambitions wife who believes God helps those who help themselves. Here is a mental attitude that is a great asset.

My neighbor asked a loafer to help him in several hours chore work and gave him a dollar for it. Said the helper, "Had I known you pay only a dollar I would not have worked."

"It would pay me better not to do the work were I to pay more than a dollar for it." replied the employer. This attitude of demanding more than the labor results bring has been fostered by professionals in many sections so that today tens of thousands are wanting for food and clothing.

Better than Nothing

The ambitions wife above mentioned gave me complete figures of the work and the expenses and the cost of the feed, so I could calculate the cost of the feed and the interest and found they each had just about one dollar a day for their labor and other items. Five of the cows will be fresh in the spring and three in the autumn, and they have five old milking cows and being able to buy only timothy hay for roughage, they have no reason to be discouraged. Besides they have the milk they want to use in the home which is quite a consideration.

I labored and lived through several of the most terrific panics this country ever experienced and when I regret that a dollar a day is better than nothing I am not speaking through my hat.

Silage Spoils

Two years ago I built a stave silo. Thought I made it air tight, but my silage spoils for about eight inches all around it. The center is all right. Can you tell me what would cause it?
C. F. M.

YOUR silo may be air-tight, but still undoubtedly some air is gaining access to the silage just inside the walls of the silo. This situation may be the result of several conditions. Possibly the silage was not evenly distributed and the lighter portions went around the outside. These lighter portions are more likely to retain air than the heavier parts of the corn. Again possibly the silage was not thoroughly compacted around the sides of the silo and this fact allows air to gain entrance to the silo. In the third place possibly the corn fodder was pretty dry when it was cut into the silo and there was not sufficient moisture in the portion just inside the walls of the silo to crowd out the air. In fact, the staves of the silo probably absorbed some moisture thus leaving air spaces in the silage.

It would appear advisable next year in filling the silo to make sure that there is plenty of moisture in the corn and that it is thoroughly compacted and evenly distributed around the walls of the silo.

When the corn is rather dry we have frequently kept a hose running into the silo when it was being filled so that the portion of the corn around the walls of the silo was especially well saturated with water. In this way we have been able to keep practically all kinds of forage crops in the silo including oats and peas, rye, sunflowers, soy beans, red clover and dry corn stover. When dry corn stover was cut into the silo three or four times as much weight of water as of corn stover was added. In this way the air was crowded out and the corn stover kept quite satisfactorily except for a few spots that were not thoroughly saturated.

A. A. Borland.



High Herd for Milk Production in Cumberland County Testing Work During the Past Year Is Owned by Arthur Wingert. His Herd Averaged 10,864 Lbs. Milk and 356.4 Lbs. Fat.

Dairy Topics

By A. G. HUMPHREYS

TAKEN all together it is the little things in life that count. The door that will not open easily the gate that drags on its hinges not bother so much when opened or twice but over years or even ths it counts a great deal. It doesn't long to fix them, but we have a bit of putting things off. It used be that they were called rainy day s, but when the rainy day came we er got to them. Rainy days on e farms mean a chance to do some ing, others a chance to do some ting, or perhaps a time to do someng other than the rainy day job.

We have a lot of good intentions, l after all a good intention is a valble asset, but we fail so often to put m into practice. We fully intend fix that stanchion before long so we ll have room for another cow, and intend to fix that broken window t the chicken smashed when it took near cut out of the barn, but we it off from day to day and it is done yet. The little savers become tle losers after a while. Losers in ne and strength, which is another m of time, and losers in health hich is the worst form of lost time.

Forgetfulness

We are in a big hurry to get through th the things of life all the time. e are in such a big hurry that we get to do the small things that need be done and some one else has to them. Such a small thing as closg a door has to be taken care of tomatically or the door is left unosed.

Closing a door or leaving it open ay not mean much during summer, t when the days get cold it means uch. The same thing applies to farm tes. It looks like most any one ould take time to close a gate which e found closed when he came to it, t it is simply astounding how many eople will walk through a gate and alk right on without thinking to close no difference if it leave an open path r the cows to go into the grain field here they may do damage to themelves or the grain.

To offset this thing of forgetfulness e have spent thousands of dollars as nation for automatic devices that will ct of their own accord or with little ffort on the part of human minds. Machines that start and stop automatially. Furnaces that take on fuel and hut off heat when it gets too hot, and many others. Some of these things we call common conveniences, but in the long run they are machines to save thought at the same time they save steps and effo

Five-Thirty A. M.

What people do with the time that would necessarily be spent in thought we have no idea. Perhaps they pass it in thinking of something else more agreeable. We have wished that there were an inexpensive device on the market that would automatically feed the cows these cold mornings, not that we do not like the idea of thinking about it (we always do), but that it would give us an extra hour in a nice warm bed at a time when we always thought it would be necessary to be up.

Our track team has formed a disagreeable habit of getting here on the dot at seven thirty every morning, sometimes a few minutes earlier. That means that we no longer a few minutes after the cows are milked as he will have to sit on a cold truck while we finish that last cow, and we would hate to have him catch cold—if that is the way colds are caught—while we were neglectful of duty. So for most of us on the early end of the route it is to shake off sleep at five-thirty every morning.



To the Dairyman Whose Herd IS NOT Prize Strain

"*Let's Increase* Your *Profits Too*"

Bugs Hawk Cookie



We hear a lot of talk about the increased milk production and profits from pure-strain cows, but what about you fellows whose herds are *not* prize strain?

Aren't *your* cows worthy of "saving?"

Don't *you* want more profits?

Seems to me you deserve more attention than the well-to-do man who can afford back-to-Adam pure-blood Holstein Guernseys, Ayreshires and other aristocrats. There's nothing I love to see more than a finely blooded cow, but why make such a fuss about it? When it lives up to its name it is doing no more than the job it was bred for.

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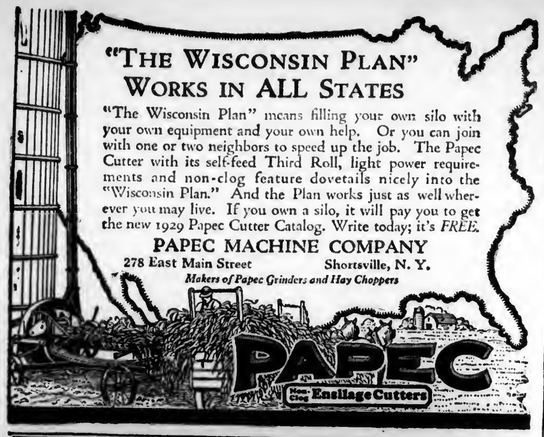


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Cumberland County C. T. A.

Division No. 1

DIVISION No. 1 of the Cumberland County Cow-Testing Association finished its ninth year September 15th with 21 whole-year members. The records show that there were 337 cows in the Association during all or part of the year.

Another very successful association year has been completed. During the past year seven of the members sold their herds. A number of these were high producing herds, and consequently reduced somewhat the averages for the Association for the year.

Many of the members have been in the Association continuously for a number of years. For the last three years only one member discontinued the testing work for any other cause than having sale. The Holstein herd of I. V. Otto has had an average production for the first eight years of 12,852 lbs. milk and 424 lbs. butterfat. This year his herd has again added another high record to its merits.

Mr. Otto's herd also leads in the number of individual cows in the 400-pound butterfat group, having twelve cows qualifying. His herd is followed by the Holstein herd of J. W. Raudabaugh with five cows qualifying in the 400-lb. class. Paul Gibble's Holstein herd and Hugh McCullough's Guernseys each had four cows in the 400-lb. butterfat group.

A Tester's Record

Many of the individual cows in the different herds have had a very good production of both milk and butterfat. The six-year-old registered Holstein cow, "Pansy Segis Aaggie", belonging to Paul C. Gibble, Mechanicsburg, leads the Association in production of butterfat of the individual cows with 616.3 lbs. fat in 15,729 lbs. milk. This cow is closely followed by the seven-year-old grade Guernsey, "Daisy", belonging to Vance McCormick, producing 609.1 lbs. butterfat and 12,144 lbs. milk.

While there never have been phenomenally high records in the Cumberland County Cow-Testing Association each year its operation has clearly demonstrated that the members have gradually increased their production of both milk and butterfat of their herds under ordinary conditions prevailing on the average farm in Pennsylvania.

Mr. A. A. Raudabaugh has been tester in the Association since he started in 1919 and he holds the record of the longest continuous testing in our association in Pennsylvania cow-testing associations. The Association has been reorganized for its tenth year with the same tester.

The results for the nine years' work in the Association are as follows:

Year	Lbs. Milk	Lbs. Fat
1919-1920	7325	244.6
1920-1921	8355	287.4
1921-1922	8578	300.3
1922-1923	8713	312.6
1923-1924	9779	348.4
1924-1925	9390	333.5
1925-1926	9777	349.1
1926-1927	9714	343.2
1927-1928	9517	343.8

The results for the whole year members for the year 1927-28 are as follows:—

Total av. no. of cows in the Ass'n is 299.6
Average per cow:

Pounds of milk	9,2
Pounds of butterfat	3
Per cent of butterfat	
Value of product	$2
Cost of pasture	
Cost of roughage	
Cost of grain	
Total cost of feed	
Value of product above feed cost	1
Returns for $1 expended for feed	
Feed cost per 100 lbs. milk	
Feed cost per pound butterfat	

Individual Herd Records

Eighteen herds with an average five cows or more exceeded an aver of 300 lbs. of butterfat. The five h herds follow:

Owner	Breed	Ave. Lbs. Milk	A
I. V. Otto	R.H.	12,600	
Paul Gibble	R.H.	11,953	
E. R. Sloughart	R.&G.H.	11,750	
J. H. Lear	R.H.	10,729	
E. C. Ludt	R.H.	11,384	

Division No. 2

Division No. 2 of the Cumberla Cow-Testing Association finished first year October 1st, 1928, with whole-year members and six part-y members. The Association was orga ized in April, 1927, and a prelimina report was given out as of April 1 1928, for the first year's work.

This report represented the yea work from October 1st, 1927, to O tober 1st, 1928, using the records f that period.

The records indicate that there w 333 cows in the Association during or part of the year.

Hugh L. McMeen's seven-year-o registered Holstein cow, "Lillie", lea the Association in the list of indivi ual cows in butterfat production. H record is 552.7 lbs. fat and 15,742 l milk. Harry Shultz's eight-year-o registered Holstein cow ranks secon in both milk and butterfat with 15,0 lbs. and 509.3 lbs. respectively.

The results for the initial year's wor ending October 1st, 1928, are as fo lows:

Year	Lbs. Milk	Lbs. F
1927-1928	8834	2

The results for the whole year mem bers for the year 1927-8 are as follow Total av. no. cows in the Ass'n is 22 Ave. per cow:

Pounds milk	8334
Pounds butterfat	285
Per cent of butterfat	3.
Value of product	$288.
Cost of pasture	11.
Cost of roughage	33.
Cost of grain	55.
Total cost of feed	100
Value of produce above fee cost	188.
Returns for $1 expended for feed	2.
Feed cost per cwt. milk	1.
Feed cost per lb. butterfat	.

Individual Herd Records

Ten herds with an average of five cows or more exceeded an average of 300 lbs. of butterfat. The five high herds follow:

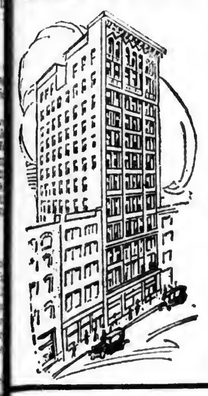
Owner	Breed	Ave. Lbs. Milk	Ave. Lbs. Fat
Harry Shultz	R.&G.H.	10,257	309.
A. G. Wingert	R.H.	10,864	359.
Hugh McMeen	R.&G.H.	9,569	333.
Wm. G. Minnich	R.&G.H.	9,864	347.
Lee F. Hale	R.&G.H.	10,708	341.

Compiled by I. O. Sidelman.

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(b) For loss of either hand or foot or sight of one eye as a result of accident specified in paragraph (a) of this part the company will pay **$4,000.00**

Part II-(a) For loss of life by wrecking of any passenger street car, elevated or underground railroad car or any public omnibus, taxicab, auto stage or passenger elevator; hands, feet or sight (as specified in policy) the company will pay **$3,000.00**

(b) For loss of either hand or foot or sight of one eye under Part II-(a) the company will pay **$1,200.00**

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(b) For loss of either hand, foot or sight of one eye under Part III-(a) the company will pay the sum of **$800.00**

Part IV-(a) For loss of life by being struck, knocked down or run over while on public highway or by being struck by lightning, cyclone or tornado, collapse of outer walls of building, the burning of any church, theatre, library, school or municipal building; hands, feet or sight (as specified in policy) the company will pay **$1000.00**

(b) For loss of either hand, foot or sight of one eye under Part IV-(A) the company will pay the sum of **$400.00**

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Orphans' Court Sale.—Valuable real estate, coal and timberals, at Yatesboro, Armstrong County, Pennsylvania, containing 267 Acres more or less, underlaid with valuable coal, limestone and other minerals in strong distribution. Tillable land, large new barn, two-story frame house, good state of repair, well watered, oil and gas leases and gas well belonging to farm, annual income from gas well and leases approximately $1,000. Purchaser to assume Federal Loan Bank mortgage, balance due thereon approximately $6,500, payable on amortization plan. Good opportunity to buy farm land and income property. Inquiries to be made to

A. E. Fisher, Admr., Rural Valley, Pa. or Charles E. Harrington, Atty., Kittanning, Pa.

STOP!

Do you realize the seriousness of the clover seed shortage? Market firm—Spring prices probably higher. Can supply you at right prices with the best to be had in Domestic Clovers, reclaimed, highest purity and vitality. Delays are costly. Write today—Now!

THE A. C. HOYT COMPANY,
Est. 1895. Box 55, Fostoria, Ohio

Farmer's Business Letter

HERE is a way to figure out a bright prospect for hog producers.

First, sow slaughter. Records kept in some 600 packing plants having federal inspection, show that for month after month, during 1928, with a single exception, sow slaughter ran higher than during the corresponding months of 1927. The figures are available only up to November, 1928. This would indicate reduced breeding, the result of unsatisfactory prices.

Second, provision stocks. The government figures for the United States came out this week. They show that on the first of the year 669,555,000 pounds of pork were in storage, an increase of 208,763,000 pounds over December 1, and 104,593,000 pounds larger than the January 1 five-year average. The lard total on January 1 was 84,557,000 pounds, an increase of 17,300,000 over December 1, and of 33,014,000 over the January 1 five-year average. The stocks are very large. No doubt they indicate liquidation of hogs. We go back to January 1, 1924, for comparable figures, and before that year was out the highest prices had been paid for hogs since the 1920 depression.

Whatever these facts may be worth as a basis for prediction is something for the reader to judge for himself.

Hog Market Gains

The hog market shows an undertone of strength and prices gained a little this week in spite of liberal receipts. The average price for the week was $9.10, against $9 for last week, and $8.30 for the same week last year. Eleven markets had 815,000 hogs this week, compared with 703,000 last week, and 864,000 the same week last year. Average weight for the week was 229 pounds.

To date this year eleven markets have received 2,127,000 hogs, which compares with 2,311,000 on the same date last year, 2,047,000 in 1927, 1,622,000 in 1926, and 2,626,000 during the record year of 1924.

Wholesale pork prices showed a slight gain this week.

Beef Cattle Decline

Trade in the cattle market this week was slow with all kinds except calves lower. Steers were off $1 to $1.25, with tops at $16, against $17.25 last week. Bulk of steers sold at $11.25 to $13.65, against $11.75 to $14.25 last week and $12.25 to $15.50 a year ago. Average price of steers was $12.45, against $13 last week. Stockers and feeders were quoted 25 to 50 cents lower, with offerings light.

The government estimates three per cent more cattle on feed January 1 than a year ago. The report said:

"Available information indicates that there was not much difference in the average weight of cattle on feed January 1 this year from that of a year ago, which was probably the lightest on record up to that time. Reports from cattle feeders as to the kind of cattle on feed and record of shipments of stocker and feeder cattle by kind from four principal markets both indicate some increase in the proportion of cattle over 900 pounds and some increase in heifers and calves, but not much change in other weights.

Lambs Higher

Lambs moved up this week, the gain for the week being 50 to 85 cents, with tops at $17.35, paid for fed westerns. Receipts were moderate, 72,000 here, against 79,000 last week and 69,000 the same week last year. Quite a few Colorado lambs are coming, but evidently lambs are in strong hands, as prices higher than anybody expected have failed to bring out excessive runs.

More lambs are on feed than a year ago, according to a government estimate issued this week. The increase is put at 5½ per cent, or 252,000 head. The number estimated on feed this year was 4,715,000 head, compared to the revised estimates of 4,463,000 January 1, 1928, and 4,250,000 head January 1, 1927.

Corn Keeps Working Up

May corn passed a dollar this week, top reached being $1.02¾, and 90¢ cents was paid for No 3 yellow in the Chicago cash market. Confidence in corn is based mainly on the belief that foreign demand will continue strong for commercial offerings, the European supply of good grains being short, and Argentine crop reports being unfavorable due to dry weather. Corn thus is reaching the critical corn-belt stage. "Should the foreign demand for corn become as large as expected" says the Grain World, "an advance in prices would seem only natural, and the bulls in all probability would result in heavy sales by producers. Write farmers to secure $1 per bushel for corn at country loading stations this winter it would furnish the basis for fairly general prosperity in the Middle West, as the crop was a good average one and the quality was excellent. The coming government report on livestock is expected to show less cattle and hogs on farms than for a number of years."

"The wheat market has become such a matter of fact affair that week to week developments are practically a rehash of what has been known for some time past." That is a typical comment on the wheat market. The only new factor appearing is ice, and nobody knows how much damage it did to the winter wheat, if any. There was danger of smothering, however, over considerable areas. WATSON.

Chicago, January 19, 1929.

MISCELLANEOUS PRODUCE

Philadelphia

Eggs.- Extra firsts, 41c; firsts, 38½c; seconds, 31@32c; storage, 28c; selected and candled fresh eggs, 47@49c; select in cartons, 49@51c.

Butter.- Creamery, tubs, 92 score, 47½c; 88@89 score, 45@45½c.

Poultry. Fowls, 30@32c; Leghorns, 26@30c; springers, 28@33c; broilers, 36@38c; old roosters, 22@24c; ducks, 24@34c; turkeys, 23@35c; geese, 25@27c; rabbits, pr., 18@20c; guineas, per pair, 81c@1.75.

Apples. U. S. No. 1, per bbl., Black Twig, $4.50; Stayman, 84@5.50; bu. bskts., Maryland, U. S. No. 1 Romes, $1.40@1.50; Penn'a Stayman, $1.50; nearby 5s bskts., Delicious, 81@1.15; Romes, 65@90c; Yorks, 65@80c.

Cranberries.- Per ¼ bbl., N. J., 82.50@4.50.

Celery.—N. Y., 2-3 crates, large rough, $1.50@2; Pa. & N. J. bunches, wired, 15@20c.

Potatoes.-Pa. round whites, per $1.40@1.50.

Lancaster

Butter.- Country butter, 54@60c; creamery, 55@60c.

Poultry.- Chickens, dressed, $1; each: springers, 75c@$1.25 each; $1.50@2.75 each; squabs, 25@50c ea.

Eggs. Fresh eggs, 42@45c.

Vegetables.- Beets, 8@10c per bunch; asparagus, 25c bunch; string beans, per ¾ pk.; beans, lima, 45@50c per pk.; cabbage 5@20c per head; carrots, 5@15c per bunch; cauliflower, 5@25c per head; celery, 10@25c per bunch; cucumbers, 10@15c each; endive, per head; lettuce 10@20c per head; mushrooms, 25@30c per pt. box; onions, 20@25c per pk.; green onions, 10c per bunch.

York

Butter and eggs.—Country butter, 50c; separator, 55@60c; creamery, 60c. Eggs, per doz., 40@50c.

Poultry.—Hens, 24@30c.

Vegetables.- Potatoes, 75@90c per bu.; cabbage, 5@20c per bbl.; lettuce, 15@20c per hr.; spinach, 15@20c ¾ pk.; cucumbers, 6@12c each; lima beans, 35@40c qt.; turnips, 15c ¾ pk.; celery, 5@15c stalk.

HAY AND STRAW

Pittsburgh, No. 1 timothy, $22@23; No. 2, 817@19; No. 1 light mixed, $2[illegible] heavy mixed, $24@24.50; No. 1 clover, 26@27; No. 2 clover, 820@21; wheat, No. 1, 813@13.50; oat, $11.50@12; 815@16.

New York.—(Large bales) timothy, light mixed, No. 1, 826@27; No. 2, 25; medium mixed Nos. 1 and 2, [illegible] Rye straw, $22@24.

CASH GRAIN

Chicago, Jan. 21.—The following prices ruled here today: No. 2 hard w, $1.23¾@1.24¾; No. 3 yellow corn, 90½c; No. 2 white oats, 52¾@53c; rye, $1.04¾.

Produce Market Review

PENNSYLVANIA potato growers holding a portion of their crop in storage will be interested in the recent government estimate of the quantity of potatoes sold by growers and local dealers in 35 late-producing states on January 1st. It was estimated that there were 130,935,000 bushels available, compared with 99,746,000 bushels last year. A better indication of conditions is given by the holdings in the nineteen leading late-potato states where 110,729,000 bushels were estimated as against 88,693,000 on January 1, 1928.

The potato markets were unsettled during the past week on account of liberal supplies and a lighter demand in several of the Eastern cities. Early in the week most markets reported slightly higher prices but toward the close the demand was less active, especially in Philadelphia and Baltimore. Pennsylvania round whites brought $1.80@2 per 150 pound sack in Baltimore, $2@2.10 in Pittsburgh and $2.25 in Washington, D. C. Prices ranged from $1.50@1.55 per 120-pound sack in Philadelphia with a few sales of 100-pound sacks quoted at $1.25@1.35.

Re-producing an average yield of 393 bushels of potatoes to the acre on a three-acre field to win the 1928 potato-growing contest, the farm of Theodore K. Bennet and Russel Thomas of Belvidere, was designated as "Chief Spud" at the annual banquet of the New Jersey Potato Association.

Apples

Apples moved slowly in both Philadelphia and New York during the week and prices showed very little change from day to day. Truck receipts of New Jersey Delicious brought $1.25@1.75 per bushel in Philadelphia, Romes 81@1.65, Gano 85@1.25, Winesap 85@1.50 and Staymen 85@1.75. In New York, Pennsylvania Delicious sold at $3.50@5 per barrel with some fancy lots higher, while York Imperial brought $3.50@4.50.

Cold storage stocks of apples on January 1 were 2,350,000 barrels, about 15,328,000 boxes and 1,225,000 bushel baskets. The combined holdings were only eight per cent below the five-year average but were 50 per cent heavier than last year. Selected apples were quoted today below the average but nearly 10 per cent heavier than in 1928. Both boxes and baskets were more abundant than a year ago and tended to abate the average.

Sweet potatoes moved slowly during the week with prices holding about steady. New Jersey yellows sold at $1.25@1.90 per bushel in Philadelphia while reds brought 85c@1.25 per bushel. The sweet potato market was dull in New York with most sales at $1.50@2 per bushel while a few lots brought $2.25. Fancy washed sweets sold at $2.50@2.75.

Nearby stored carrots were in good demand and prices ranged from $1 to $1.25 per 5s basket with some fancy lots higher. The rather high prices of Western carrots has helped the market for home-grown product. Beets were steady and sold at 75c@90c per ¾ bu., while parsnips were firm at $1@1.25. Celery held steady at 10c@25c per bunch.

Prof. A. G. Waller in a talk before the New Jersey Horticultural Association stated that vegetable crop production in Burlington county was 83 per cent higher than in the northern counties of the state.

Poultry and Dairy Products

The butter markets were firm during the early part of the week but as buyers purchased for immediate needs only the demand declined. Speculative interest was also entirely lacking. Receivers of butter were willing sellers and did not hold for high prices. The recent storms in the middle West caused some delay in the arrivals of butter at all markets but in spite of this there appeared to be sufficient butter to satisfy the light demand.

The egg market in Philadelphia was steady toward the close of the week as receipts of fresh eggs were fully ample for trade needs. Extra firsts were quoted at 46c per dozen, firsts in new cases at 38c, firsts in old cases at 38c and seconds at 34@35c. Some lots of fancy New Jersey and Pennsylvania eggs brought a substantial premium.

There was a good demand for the best fresh eggs in New York toward the close of the week. Nearby closely selected extras brought 48@49c per dozen, average extras 45@47c, and other grades of white eggs 33@44c. The best brown eggs sold at 44@47c and mixed colors at 36@45c.

Light live fowl met a better demand in New York during the week with better trading from the heavier fowl. Some sorts of roasters and broilers still reached 35c but most business was being done at 32c. Receipts of all classes of live fowl were liberal and dealers were unable to get a clean cut price. In Philadelphia the live poultry market was quiet. White Leghorn fowl ranged from 26c to 29c and fowl other than Leghorns brought 30@35c.

Receipts of fresh killed poultry were light in New York near the end of the week. Most receipts of chickens were irregular in quality and prices showed a wide range. Small fowl were in light supply and firm but large fowl sold slowly. Storage holdings of creamery butter on January 1, were reported at 43,786,000 pounds as compared with 36,289,000 pounds a year ago, cases 1,447,000 cases against 882,000 and poultry 108,986,000 pounds compared with 74,855,000 pounds

W. R. W.

Livestock Markets

PITTSBURGH

Cattle

The 50 carloads which made up Monday's supply of cattle at this market was more than enough to meet the demand, and trade was generally slow at lower prices. A large part of the supply was steers, and they sold generally 25@50c lower. One load of 1,393 lb. steers brought $11.75 and several lots averaging around 1,150 to 1,160 lbs. brought $13. A few fairly good weighty steers went at 812@12.50, but not much of choice quality was on hand. The bulk consisted of fair to good butcher cattle, which sold within a range of $10@12. Common to fair butcher steers brought $10@11 and medium light steers 10@10.50. Heifers, although not numerous, shared in the decline. A few choice heifers sold at $11, while fair to good kind brought $9@10. Bulk of fat cows brought $8@9.50, with an occasional one good enough to command a little more. Canners and cutters were steady and sold mostly at $5@6. Bulls were in light supply and quoted about steady. Choice heavy bulls brought $10.25, with good handy kind generally around $10, and fair sort $9.25@10.50.

Choice grain-fed steers, 1,200 lbs. or over	$13 50@13 75
Good to choice	13 00@13 25
Fair to good, do.	12 00@13 00
Plain heavy steers	10 00@12 00
Choice handyweight steers	12 50@13 00
Good butcher steers, 1,000 to 1,150 lbs.	12 00@12 50
Fair to good, do.	11 25@12 00
Ordinary to fair, do.	10 75@11 25
Common, do.	10 00@10 75
Good light butcher steers	11 75@12 25
Fair to good light steers	10 75@11 75
Common to medium, do.	9 75@10 75
Inferior light steers	9 00@ 9 50
Feeders	Nominal
Stockers	Nominal
Choice heavy bulls	10 00@10 25
Choice handy butcher bulls	9 75@10 00
Good handy bulls	9 25@ 9 75
Fair to good bulls	8 50@ 9 25
Common to fair bulls	8 00@ 8 50
Inferior bulls	10 75@11 25
Choice fat heifers	10 00@10 75
Good to choice heifers	9 50@10 00
Fair to good heifers	8 50@ 9 50
Common to fair heifers	7 00@ 8 00
Thin light heifers	9 50@10 00
Choice fat cows	8 75@ 9 50
Good to choice fat cows	8 00@ 8 75
Fair to good cows	6 00@ 7 50
Common to fair cows	5 00@ 6 00
Canners and cutters	50 00@150 00
Fresh cows, calf at side	

Monday's Representative Sales

Steers

No.	Wt.	Pr.	No.	Wt.	Pr.	No.	Wt.	Pr.
20	1303	13.50	4	1127	13.00	7	1117	13.00
23	1088	13.00	2	1070	13.00	15	1173	12.75
13	903	12.75	9	1103	12.65	4	1240	12.50
16	1274	12.25	23	998	12.25	8	1244	12.00
9	1103	12.00	10	1021	12.00	11	904	12.00
11	1086	11.75	9	988	11.75	21	1130	11.60
2	1040	11.50	5	1024	11.50	12	832	11.50
5	1068	11.00	22	996	11.00	5	1004	10.85
1	755	10.75	6	937	10.50	4	928	10.50
5	884	10.50	23	883	10.50	25	907	10.40
25	836	10.25	3	800	10.25	8	790	10.00
2	670	10.00				3	723	9.25

Hogs

Receipts were 35 carloads, and although Chicago reported the heavy supply of around 90,000 head, the market here was only about a nickel lower. All good grades except lights and pigs sold at $9.60@9.75. Lights went mostly at $8.75@9, with pigs at $7.50@8.25 and sows $7.50@8.

Heavy wts., 250 lbs. or over	$ 9 60@ 9 75
Heavy mixed	9 60@ 9 75
Medium wts., 180-200 lbs.	9 60@ 9 75
Heavy Yorkers, 165-180 lbs.	9 60@ 9 75
Light Yorkers, 125-150 lbs.	8 75@ 9 00
Pigs, 100-110 lbs.	7 50@ 8 25
Roughs	7 50@ 8 00
Stags	5 00@ 6 50

Sheep and Lambs

The 11 carloads which made up Monday's supply contained a fair proportion of mixed stuff. Sheep were quoted steady on the basis of $11 for choice wethers and $7@9 for the majority of ewes. Lambs were weak to 25c lower, most good handy weights under 90 lbs. going at $16@17, with a few at $17.25.

Cull to best wethers	$10 50@11 00
Fair to good wethers	9 50@10 50
Good mixed	10 00@10 50
Fair to good, do.	8 50@10 00
Common to fair	6 00@ 8 00
Inferior sheep	4 00@ 6 00
Good to best spring lambs	16 75@17 00
Medium lambs	14 75@15 75
Culls and throwouts	12 50@14 50

Calves

Five hundred calves were on sale. Good to choice calves were quoted at $16@18.50; heavy and thin calves $7@14.50.

LANCASTER

Cattle

Lancaster, Jan. 21.—Receipts totaled 575 head. Beef steers weak to 25c lower; bulls and she-stock about steady; stockers and feeders nominal. With 150 calves on sale the market was steady, best vealers bringing $19.

Good steers	$12 00@13 50
Medium to good	10 75@12 00
Common to medium	9 00@10 75
Good to choice heifers	10 25@11 75
Medium and common	7 50@10 25
Good to choice cows	7 25@10 00
Common and medium	6 00@ 7 25
Good to choice beef bulls	10 25@11 50
Cutter, common and medium	7 50@10 25
Feeder and stocker cattle	Nominal
Good to choice calves	16 50@19 00
Medium	14 00@16 50
Culls and common	8 00@14 00

Hogs

The supply consisted of 925 head. Market slow at steady prices.

Heavyweights, 250-350 lbs.	$10 25@10 75
Medium weights, 200-250 lbs.	10 25@10 75
Light weights, 160-200 lbs.	10 00@10 50
Packing sows (rough and smooth)	7 50@ 9 75

CHICAGO

Cattle

Chicago, Jan. 21.—Twenty thousand head of cattle made up the supply. Market steady to 25c lower.

Common to fair yearlings	$9 75@11 25
Fair to good yearlings	11 25@12 25
Good to choice yearlings	12 25@14 00
Choice to prime yearlings	14 00@16 00
Common to fair steers	9 75@11 25
Fair to good corn-feds	11 25@12 25
Good to choice corn-feds	12 25@13 50
Choice to prime corn-feds	13 50@15 25
Common to good cows	6 75@ 8 50
Good to prime cows	8 50@10 50
Heifers, common to good	7 50@ 9 50
Heifers, good to prime	9 50@12 50
Canners and cutters	5 00@ 6 25
Inferior light bulls	7 75@ 8 75
Bologna bulls	8 75@10 00
Fair to choice butcher bulls	9 50@11 00
Stockers, common to fair	8 25@ 9 25
Stockers, fair to good	9 25@10 50
Stockers, good to choice	10 50@11 25
Fancy yearling stockers	11 25@12 00
Stockers and feeder heifers, common to choice	7 25@ 8 25
Stocker and feeder cows	6 75@ 7 50
Feeders, common to fair	8 75@10 00
Feeders, fair to good	10 00@11 00
Feeders, good to choice	11 00@11 50
Fancy selected feeders	11 50@12 00
Milkers and springers	90 00@125 00
Common to best vealers	14 00@18 00

Hogs

Hog receipts very heavy, about 90,000 head being on sale. Market 10@15c lower.

Heavy butchers, 270 lbs. up	88 85@ 9 00
Mediums, 225 to 265 lbs.	8 95@ 9 00
Lights, 190 to 225 lbs.	8 95@ 9 00
Selected, 190 to 190 lbs.	8 95@ 9 00
Mixed packing, 270 to 350 lbs.	8 85@ 8 70
Heavy packing, 350 to 550 lbs.	8 00@ 8 50
Roughs, 300 to 500 lbs.	8 00@ 8 20
Stags, subject 70 lbs. dockage	7 50@ 8 50
Pigs, best grades	7 75@ 8 05

Sheep

With 25,000 head on sale the market was steady.

Wethers, all ages	80 25@12 00
Yearlings	12 00@14 75
Western ewes	7 25@11 00
Native ewes	6 75@11 00
Fed western lambs	15 00@17 35
Native lambs	11 75@17 35
Feeding and shearing lambs	14 00@15 85

Stock Movement

	Cattle	Hogs	Sheep
Receipts for week	53,041	262,430	68,706
For previous week	51,401	250,014	70,062
Same week last year	47,226	256,901	68,774
Shipments for week	14,537	73,746	24,743
For previous week	15,214	72,278	22,992
Same week last year	12,135	70,993	21,182

Shipping Fever

An important statement on the causes and prevention of shipping fever was issued from Washington this week. It summarized past experience, and pointed the way to prevention of the disease, so far as preventive measures are now known. An important point is that "animals of normal vigor usually resist the infection." The question, apparently, is not so much one of exposure to infection as of proper handling, for the infection "is commonly harbored in the system of animals." Keeping up the vigor of animals through proper feeding and rest periods in transit is recommended, also vaccination, where possible, ten days before shipment from producing areas.

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West Washington Market, New York City

The MARKET PLACE

By W. R. WHITACRE

THIS winter, following the largest potato crop on record and generally unsatisfactory prices, growers in all sections of the country are meeting to discuss methods of bettering conditions next season.

About 200 farmers attended the meeting held in Freehold, N. J., last Saturday. Dr. J. G. Lipman, director of the New Jersey Experiment Station, William B. Duryee, Secretary of Agriculture of New Jersey, Dr. W. H. Martin, Prof. A. G. Waller, Charles Probasco and T. McCampbell were the chief speakers. The discussion was principally on conditions affecting New Jersey growers, but many points were brought up of interest to growers in both early and late producing sections.

Reduction of acreage received considerable consideration. Dr. Lipman advocated a reduction in acreage but illustrated his plan in this way: A dairyman with fifty cows faced with a need for reduced production on account of very low prices would sell off some of his cows, but he would not sell his best producers, or most profitable animals. He would sell those that were the poorest and which gave the poorest returns on the money invested in their care and feed.

Would Eliminate the Unprofitable

Dr. Lipman stated that the potato grower should work on this principle and in reducing his acreage should eliminate those acres which are not able to show a profit under present price conditions. For instance, when potato prices are high a piece of land producing less than 100 bushels of potatoes to the acre might be profitable, but when prices are low this land is no longer able to show a profit and should be planted in some other crop that is less expensive to grow.

Dr. Lipman advocated a study of the possibilities of potato by-products. One mentioned was potato silage, which has been found satisfactory in the feeding of steers. In experiments one ton of this silage has been worth about $10.

Some of the other topics brought forth by various speakers were reduction in acreage through the elimination of speculation. That is, that growers should not expand their acreage to a point that they pledge a large portion of their crop for fertilizers, seed and other materials. They should plant only on their best land and then only as many acres as they can finance themselves or through their bank.

The reduction of production costs by growing larger yields of better quality was offered as one of the best methods of increasing profits. Dr. Martin stated that it is practical and possible for many New Jersey growers to grow two bushels of potatoes at the cost that it now requires to grow one. This has been done by the use of better seed, seed disinfection and economical use of sprays and fertilizers.

New Jersey Advantages

Secretary Duryee stressed the advantages that New Jersey potato growers enjoy. Briefly these are: nearness to markets, the indicated decrease in acreage in the competing states this coming season and the growth of the inspection service in the state, which guarantees a more uniform and desirable product. Some of the disadvantages are a shorter marketing period on account of the overlapping of shipping season in the early producing section.

The fact that while some New Jersey growers have shown a willingness to standardize their product, it is true generally the case and the section connecting with New Jersey have progressed further in this line. Lack of coordination by dealers, growers, and all others concerned in the marketing of the crop. Another unfavorable factor which affects all potato growers is the reduced consumption of potatoes. The belief that potatoes are fattening is believed to be responsible for this.

The use of highly concentrated fertilizers such as a 15-30-15 was discussed. These new high-test fertilizers have been used to some extent in Monmouth county and the results have been favorable. This type of fertilizer when properly applied has given as high and even a higher yield than the less concentrated kinds and has shown a lower cost per acre.

An Eastern Shore Marketing Plan

AFTER nearly three years surveying the marketing situation as it applies to principal crops grown on the Del-Mar-Va Peninsula and experimenting in means of improving marketing conditions, the Del-Mar-Va Eastern Shore Association has launched what its officials believe will prove to be a practical solution to at least some of their marketing problems.

The Del-Mar-Va Association, representing the three counties in Delaware, the nine Eastern Shore counties of Maryland, and the two Eastern Shore counties of Virginia, which comprise 6,090 square miles of an almost entirely agricultural section, has expended a material sum in the past to stimulate cooperative interest and to further educational programs toward better marketing.

With a number of vitally important truck crops, including in their regular order, broccoli, strawberries, cucumbers, asparagus, cantaloupes, watermelons, apples and peaches and white and sweet potatoes, and with additional smaller commercial crops and also a heavy production of canned goods, the Association is now making direct endeavor toward securing improvement in grading and packing, to be insured by use of its insignia.

In the 1929 program, approved by the official board, the following plan is to be carried out:

The Plan in Brief

The Association will grant the right to its members to use the Del-Mar-Va insignia, free of charge, on all Del-Mar-Va products graded and packed in accordance with the Association's stipulations.

The Association has appropriated a material sum toward advertising all products bearing this insignia, in the principal markets reached by its shippers.

The Association further provides, without cost to grower or shipper, services of inspectors during the respective growing and shipping seasons, who will require that all goods shipped under the Del-Mar-Va insignia measure up or be superior to U. S. Standard No. 1.

The inspection furnished by the Association will be in an advisory capacity for the purpose of placing not only the highest quality products in the markets, but offering them in the most attractive manner.

There is no restriction in the use of individual labels, the Association merely adding its insignia as a guarantee that the commodity under it is of the best quality.

Mr. J. A. Burroughs of Pocomoke, Maryland, who has served the government as inspector in charge of numerous governmental inspection deals, has been appointed supervising inspector for the Association, and is arranging a definite program of inspection daily open with shippers at Boxwood, the first cooperative Points 5.



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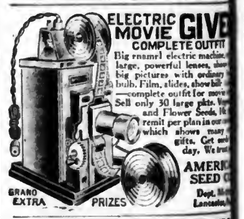
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Farm Conditions

Juniata Co., Central Pa.

Jan. 15: Clear and cold, first zero weather. Two more barns burned, origin of fires undetermined. Eggs 34c, butter 40c, pork 15c. "Flu" abating. M. M.

Lackawanna Co., N. E. Pa.

Jan. 14 Weather much colder, zero at present. Light fall of snow. Water low throughout the county. Farm Bureau's annual meeting held in Clark Summit on Jan. 10, over 200 farmers and their wives present. Every year shows a gain in interest and a larger attendance. S. R. Zug, county agent, outlined plans for the ensuing year. Miss Buttorfs showed work with six groupts of women which meet twice each month. A few farm sales. Hay low in price. Potatoes same as last month. Eggs lower. A. A. K.

Somerset Co., S. E. Md.

Jan. 14: Coldest morning of the winter, 10 above zero. Snow on Dec. 20-21 was biggest in several years, about 12 to 14 inches. Wheat and rye look fair, winter oats fine where they follow soy beans. Corn a fine crop. Soy beans a good crop. Tomatoes and wheat fair crops. Eggs 35 to 40c, hogs 12c dressed, 80 per cwt. on foot. Cows high, $75 to $150 per head. Soy beans $2 per bu. J. E. Hartman.

Wirt Co., N. W. West Va.

Jan. 14: Weather cold and blustery with the heaviest snow of the season. Cream 50c, butter 50c, eggs 34c, hens 20c, corn 75c, oats 70c. Hogs beginning to come up in price. Roads in bad shape. E. N. B.

Pendleton Co., N. E. W. Va.

Jan. 10: Sleet last night, ground is frozen, this morning a dense fog. December was ideal. Stock of all kinds wintering well but none changing hands now. Rough feed plentiful and not much demand for it.

Wheat and rye are looking only moderately well, owing to thawing and freezing and no snow to protect it. Fat hogs and beeves about all butchered. Hens laying fairly well and eggs are coming down in price also.

Jesse C. Mitchell had 13 ewes which raised 26 lambs averaging 98 pounds each and sold to David Eye last November for 11½c per pound, which aggregated him $303.02. At the same time Mr. Eye contracted with Mr. Mitchell for his lambs next year at the same price.

Black walnut kernels are still 25c a lb. The crop was small in this county and not all marketed yet. Laundering in fall ewe is said [illegible] and [illegible] A few horses being sold, but [illegible] stand that every horse sold for a moderate price.

Corn $1.00 to $1.25, buckwheat $1.25, potatoes 75c to $1, Many farmers claim that W. D. Zinn's articles alone are worth more to them than the price of the paper. Adam Dalmouth.

Mifflin Co., Central Pa.

Jan. 16: Weather has been unsettled and general so far this winter, no snow and very little rain. Hard to say how much hay crops are short because of shortage. Farmers had a good chance to get in their year's wood supply and laid it in note. A few have a hog here and there they are buying. At a public sale held today most things sold at a high figure; good cows sold $150 a cow; stock $30 to $40, one span of 12-year-old mules $300. Farmers have plenty of rough feed and not stock enough to use it up. Hay is cheap, doesn't pay to sell it. Wheat $1.25, corn 90c, oats 45c, butter 45c, eggs 35c, lard 15c, chickens 25c, potatoes 50c, apples $1. A. H. Byler.

Record Cranberry Prices

CRANBERRY growers have realized record prices for their crop this year, with an average of $16 per barrel which exceeds the price received in the light crop year of 1927. The crop is now about marketed and relatively little stock is left unsold. The bogs have been flooded and will be kept under water until danger of frost in the spring has passed. There has been a rapid expansion in the bogs in the past few years, and it is estimated that Cape May county, N. J., has doubled its acreage in the past six years. Constantly growing markets and satisfactory prices are largely responsible.

Fire Threatens Potato Storage

FIRE threatened the Edward Black sweet potato storage at Swedesboro, New Jersey, recently but was extinguished before any serious damage occurred. Three years ago this storage was burned with a loss of $50,000. The building was filled with sweet potatoes awaiting a later market.

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Hay for Hogs

MOST of us have read that we ought to supply the hogs with alfalfa hay in racks for winter supplement. I have never got to it. A hay feeding rack never seemed to fit so very well inside any hog quarters we use. Then, carrying a forkful of clover hay to the hogs didn't seem the easiest way to do it. The whole world also is sure to be aware that straight clover or straight alfalfa is not to be found on half our farms half of the time.

We have never fed cured clover hay to any hogs except brood sows and a few shotes. In feeding clover to brood sows we prefer to scoop up the clover leaves and chaff from the floor and pack them into three-gallon buckets and scald with hot water, preferably permitting the ration to stand over night—a little oilmeal added in the morning and this mixture will go down "slick and clean" and the sows will be licking the troughs around an hour later. If there is considerable timothy chaff in the mash, let it go at that and the sows will agree with your ideas along that line.

Shotes and pigs will eat clover chaff from their trough dry or if you have a clean sweet floor they will spend a long time appreciatively partaking of this sensible meal. The floors of many barns become matted with this or hay scatterings in winter—scatter them on clean frozen ground for the shotes or for the brood sows and the animals will tell you by their actions that they approve of your thrift and swine-mindedness.

Hiram Dobbin

Winter Ration for Ewes

THE winter ration that ewes receive has a definite and direct effect on their lamb producing ability, the length of their productive life, and on their condition during the summer grazing season, according to D. S. Bell, in charge of sheep investigations at the Ohio Experiment Station.

In 1924 Mr. Bell started two groups of C-type Merino ewes on a test to study the effect of rations on flock maintenance and production. The groups were of the same age and of similar breeding and producing ability.

The ewes of one lot were well fed on a basal ration of hay, corn silage, some stover and flake salt. During the last six to eight weeks of pregnancy they had in addition to this basal ration one-half pound of a grain mixture of three parts corn, three oats and one of linseed meal daily per head. After lambing and until pasture the grain allowance was increased to one pound or a little more per head daily.

The Second Group

The ration for the second group consisted of hay, some stover, winter pasture and flake salt. The ewe lambs weaned by the ewes in each group were kept for replacement and were fed similarly to their respective dams.

The ewes fed the poorer ration of hay, stover and winter pasture have deteriorated during the four years of the test until they are light in weight and scrubby. The percentage of lambs born has been low and the mortality among the lambs high. In fact it has been difficult to keep up the number of breeding females by adding only the young ewes raised by this group.

On the other hand, the ewes fed grain, hay, stover and silage have usually reared and raised a 100 per cent lamb crop. They are in fine condition and fully one-third larger than the poorly fed ewes.

The well-fed ewes continue to produce lambs and good fleeces of wool and retain their teeth until they are ten or eleven years old. The well-fed ewes are old in appearance and show broken and broken mouths as early as seven years of age.

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for any case of Rupture that cannot be held with my Appliance. Sent on trial. Write for free booklet and measure blank. Brooks Appliance Co., 182 State St., Marshall, Mich.

Rupture Stop wearing trusses. Use Cluthe Self-Adjusting Appliance. Sent on trial. Write for free booklet. Cluthe Appliance Co., 1 State St., Marshall, Mich.

Rupture Stop wearing trusses. Use Cluthe Self-Adjusting Appliance. Sent on trial. Write for free booklet. Cluthe Appliance Co., 1 State St., Marshall, Mich.

Classified Department

WANTS—For Sale or Exchange

12c a Word Minimum 10 words; 10c per word per insertion if four or more consecutive insertions of same advertisement are used. Count as a word each abbreviation, initial or number and your name and address as part of the advertisement. No display type or illustrations. Remit with order.

FARM LAND PENNSYLVANIA

ACRE TRACTOR FARM.—Easy Terms; 7 cows, tractor, machinery, tools included to settle affairs quickly; markets, cantagres near; milk collected; 90 acres broad fertile fields, spring watered pasture, sugar bush, fruit; good 7-room painted home, large sheltering trees; good barn, 2nd barn, large silo; under $5,000 complete. Big, cheap, easy terms. 35 big illustrated catalog. Free. Strout Agency, 1422-BE, Land Title Building, Philadelphia, Pa.

STOCK FARM FOR SALE.—150 acres lower Lancaster County, concrete road; main highway between north and south. 1250 acres plowed; 150 acres permanent pasture. Well watered and shaded; two houses, frame and stone, one 2 story; suitable for cattle feeding; two Two large barns, one 36 ft. bubble diameter. Possession after corn 70x12 ft. bubble diameter. Possession given April 1st. Inquire of Tyler Pechter, 436 W. Chestnut Street, Lancaster, Penna.

FOR SALE.—Farm of 131 acres lying between two state highways. Near city. Good soil and excellent buildings. Soft spring water piped to house and barn. Price $15,000. Easy terms. Write or see D. B. Fisher, Greensburg, Pa.

FARMS FOR SALE.—Anywhere in Pennsylvania. Tell me the kind you want. Real Estate Specialist, 15 N 15th, Harrisburg, Pa.

MISCELLANEOUS LANDS

IN THE SAN JOAQUIN VALLEY of California general farming is a paying business, feeding millions of people in towns and cities. Alfalfa combined with dairying, hogs and poultry, yields a good income. A small one-family farm, with little hired labor, means success. You can work outdoors all the year. Newcomers welcome. The Santa Fe Railway has no land to sell, but offers a free service of helping you get right location. Write for illustrated San Joaquin Valley folder and get—our farm paper—"The Earth" free for six months. C. L. Seagraves, General Colonization Agent, Santa Fe Railway, 818 Railway Exchange, Chicago.

DEL-MAR-VA THE PENINSULA OF PLENTY. Three to ten hours by motor truck to markets supplying twenty millions of people. Pennsylvania Railroad permeates entire Peninsula. Low-priced farms, tough and waterproof roads. Very little snow and freezing. Finest concrete highways. Good Schools, low taxes. Handsome descriptive booklet, FREE. Address 162 Del-Mar-Va Building, Salisbury, Md.

FARMS FOR SALE.—"Better Farms for less Money" list on request. W. D. Simmons, 1345 So 3rd St., Newark, Ohio.

FOR THE HOME

BUY PEANUTS DIRECT from growers. Roast them yourself. 10 pounds, $1.50; 25 lbs., $3.50; 100 lbs., $12.00; 500 lbs., $50.00; 2,000 lbs., $80.00. Now booking orders for "Grossed-proof" Cabbage Plants. J. P. Council Company, Franklin, Va.

100 ASSORTED dishes packed as first quality consisting of cups, saucers, plates, bowls, oatmeals, platters, etc. All useful. Slightly imperfect, $2.50, prepaid. Send money to us for immediate shipment. Homer China Co., Millth, Mass.

YARN.—Virgin wool; for sale by manufacturer at bargain. Samples Free. H. A. Bartett, Dept. F1, Harmony, Maine.

MALE HELP

WANTED, Married or single man to wo poultry and general farm. Must be experienced and habits. Send references and wages expected. Adress J, Pennsylvania Farmer, Pittsburgh, Pa.

WANTED, About March 1st, one or two ried men with small family, to work on farm. Capable of operating farm mach Tranquility Farms, Allamuchy, N. J.

PET STOCK

PEAFOWL, Pheasants, Bantams, Pigeons, Rabbits. Free Circular. John Hass, Bellevue, Iowa.

GOATS

VITALITY STRAIN Saanens, Toggenburgs, Nubians, Beatleaf, Healthleaf milkers for sale. Invalids, Goldsborough's Gustery, Mosherville, Pa.

DOGS

PEDIGREED COLLIE PUPS.—Males, $15; $20.00; Females, $10.00. Plummer Wickersham, Mercer, Pa.

SHEPHERD PUPS. Black with white mark Natural heel drivers, farm raised. Chas Souther, Markleton, Pa.

ENGLISH SHEPHERD PUPS. Males, Females, $5.00. Elmer Phillippi, Ursina, Pa.

PURE OLD ENGLISH SHEPHERD PUPS, and broken. Excellent stock and watch H. G. Loucks, Vermilion, Ohio.

SCOTCH COLLIES from natural drivers. Beef Farms, Tiffin, Ohio.

SITUATION

POSITIONS WANTED by Farm School graduate, 20 years of age, having had three years practical and theoretical training on the School farms. Some of these graduates are now on as dairymen; herdsmen; tractor men; vegetable gardeners; poultrymen; gamekeepers; landscape men; and general farm assistant. Only interested in good farms. Ready for employment April 1st. Communicate with C. Goodling Dean, Farm School Farms.

MARRIED MAN with small family, dealer sition on farm. Experienced can give reference P. Hines, R. 2, Oakland, Md.

MISCELLANEOUS

ONE 12 H.P. FAIRBS DAIRY BOILER, new with or without oil burner at a bargain Joseph A. Ellis, New Washington, Ohio.

WANT—MISCELLANEOUS

OLD STAMPS and ENVELOPES issued prior 1861 and 1861 War envelopes. Big prices for letters; postpaid. Box 1, 2032 Ave., Lancaster, Pa.

ALWAYS mention Pennsylvania Farmer when writing to our advertisers. Thus insure you prompt attention and

MISCELLANEOUS

WHY BLAME THE BULL when your cow does not breed? Use Cow Catch 1 hour before service. Results or your money back; 85 cents for one cow, $2.00 for five cows, postpaid. Woodstock Farm, Route 2, Box 59-C, Renton, Washington.

ROOFING PAPER.—3-ply, $1.35 per roll, 100 square feet. Prepaid. Asphalt shingles, roof coating, paint. Send for price list. Winiker Bros., Millis, Mass.

WATER PUMPS WATER night and day with Rife's Hydraulic Ram. No attention, no expense. Write for free catalog. Sold only by H. T. Olson, 15 Park Row, New York.

FEED WATSON'S TANKAGE.—It is safe and clean. 45% protein. $3.00 per hundred pounds. Mail orders filled promptly. Watson's Rendering Plant, Attewood, Pa.

A FEW "SUCCESSFUL" DEMONSTRATOR Incubators for quick sale at great reduction. 60 to 300 eggs capacity. Good as new. Des Moines Incubator Co., Box 734, Des Moines, Iowa.

WHY NOT HAVE AN EXPERT examine your farm for oil and gas, cost reasonable. C. L. Williams, 1829 B, Union Trust Bldg., Pittsburgh, Pa.

STATIONERY printed to suit your farm, name or business. Free samples. Eaglewood Printing Co., Englewood, Ohio.

$.01 LIST, VEGETABLES, FLOWERS. Package bulb stock, poppy, aster, cosmos, $.25 coin. A. Folsom, Plymouth, N. H.

FOR SALE.—Chestnut post and rail fencing made to your order. Write for prices. P. O. Box 486, Buckhannon, West Va.

FOR SALE.—Two 10x30 second hand silos. Bargains. Ben Chamberlain, Cuttawissa, Allegany County, New York.

TOBACCO

HOMESPUN TOBACCO.—Chewing: 5 lbs., $1.50; ten, $2.50. Smoking: 10 lbs., $2.00. Pay when received. Farmers' Association, West Paducah, Kentucky.

TOBACCO.—Sweetleaf Smoking, 12 pounds, $1.40. Chewing, $4.00, 50 Cigars, $2.50. Twist, Plugs, Sack Smoking, 20 either kind $4.50. Farmers' League, Watervalley, Kentucky.

GUARANTEED HOMESPUN TOBACCO.—Chewing, 5 pounds, $1.50; 10, $2.50. Smoking, 10, $1.75. Pipe free. Pay Postman. United Farmers, Bardwell, Kentucky.

LEAF TOBACCO.—Good, sweet, Chewing, 5 lbs., $1.25; 10, $2. Smoking, 5 lbs., $1.00; 10, $1.50. United Farmers, Maxwell, Ky.

SALESMEN

EVERY HOME A PROSPECT.—Make big money; employ crew; sell dependable trees, shrubbery; all or part time; landscape service experience not essential; full cooperation; commission paid weekly. We deliver, collect. Write Willetts Sons' Nurseries, Desk F, Rochester, N. Y.

SELL OUR FULL LINE OF STORE, OFFICE and garage brushes. All sizes and kinds. Cover regular route and make $5 to $15 on single call. Also sales easy. Line is flashy and prices well under competition. Write The Brush Works, 812 4th St., Fairfield, Iowa.

WANTED.—Farmer or farmer's son or man to travel in country. Steady work, good profits. McCannon & Company, Dept. PA-2701, Winona, Minn.

COLD FEET, CALLOUSES.—"Comfo" Hair Insoles—instant relief. Sample free. Agents wanted. $1.40. Bteus Fur Co., New Brunswick, New Jersey.

ALFALFA

ALFALFA.—First and second cuttings, and mixed hay. Deal direct with a farmer and save money. Write for prices. The Cross Farm, R. D., Fayetteville, N. Y.

HAY.—All kinds, alfalfa, clover, timothy and mixed. Delivered prices. Harry D. Gates Company, Jackson, Michigan.

ALFALFA HAY.—Car lots for sale. Chas. B. Wing, Box 22, Mechanicsburg, Ohio.

AVIATION

AVIATION.—Salary while learning, $18 to $35 per week. While under instruction in our factory, and at our airport. Call or write for information without obligation. Weeks Aircraft Corporation, Department 1, Plankinton Building, Milwaukee, Wisconsin.

BABY CHICKS

POTENCY that rare quality, is bred into our Tancred chix, carrying blood of Tancred's best bird. Every chick produced on our own farm. Positively no birds farmed out. Best S. C. White Leghorn Pen, 1928 Penna. State Standard Production Show, State College. No pullets used as breeders. All breeders trapnested, blales pedigreed. Illustrated booklet. Peden's White Leghorn Farm, Dept. B, Millerstown, Pa.

REAL PROFITS from quality chicks. We cull our flocks rigidly, set only large eggs. Use large, vigorous males from pedigreed flocks of from 180 to 250 egg record, which assures you the utmost in quality and livability. White, Buff, Barred Rocks and R. I. Reds, $13. Leghorns, $12. Heavy Assorted, $11 per 100. 5% discount on orders received three weeks in advance. Circular. Fairview Heights Hatchery, Blanchester, Ohio.

KWALITEED BLOOD TESTED ROCKS, REDS, Leghorns. Bred for color, egg production, and blood-tested Lasr years for Bacillary White Diarrhoea by the Virginia State Department of Agriculture. All Chicks shipped under State Label. Catalog and price list free. Order early, so we can supply your wants. Harrisonburg Hatchery, Inc., Box 222, Harrisonburg, Va.

MT. AIRY CHICKS.—Strong and Sturdy. Rocks, Reds, Leghorns, Wyandottes. Healthy and of exceptional quality. Carefully selected, rigidly culled and mated for color and high egg production. Reasonably priced. Prompt, 100% deliveries guaranteed. Write for catalog and early order discount. Mt. Airy Poultry Farm, Dept. K, Mt. Airy, Md. Phone 57.

WHITE LEGHORN EGGS AND CHICKS.—Big discount if ordered now for spring shipment. Sired by 200 to 303 egg males. Eggs bred 29 years. Winners at 20 egg contests. Shipped on approval. Special price bulletin free. Thousands of pullets, hens, cockerels at low prices. George B. Ferris, 980 Union, Grand Rapids, Michigan

BROOKSIDE QUALITY CHICKS.—If you want Big, Strong, Fluffy Chicks at honest prices that will make you money, try our Wonder Strain Big Boned White Leghorns and Superb Barred Rocks. Shipped C.O.D. Postpaid on our 100 per cent guarantee and Special Offer. Circular Free. Established 1905. Brookside Poultry Farm, R. 1, Chambersburg, Pa.

CLEAR SPRING CHICKS.—White Leghorns, Wyckoff and Barron strains, $12.00 per 100; Barred Rocks, $14.00; R. I. Reds, $14.00. Special prices on larger lots. 100% live delivery, postpaid. Circular free giving full details of all breeds. Clear Spring Hatchery, Box 49, McMinnville, Pa.

HIGHER SUPER-QUALITY CHICKS from inspected, free range, money-making stock. Reds, White Wyandottes, White, Barred Rocks, Giants, Black Minorcas, Anconas, White and Brown Leghorns. Booklet Free. Low Prices. Pure bred. Bucher Bros. Hatchery, Dept. F, Bucyrus, Ohio

ALL CHICKS from breeders B. W. D. tested or New England Accredited. Leghorns, Reds, Barred Rocks, White Wyandottes, for quick delivery. Special prices Now on Reds and Rocks for winter broilers. Free circular. Hall Bros., Box 61, Wallingford, Conn.

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HUSKI-HATCHED BARRED ROCKS, Reds and White Leghorn breeders are State Certified and Blood Tested. Strong, hardy, healthy, livable chicks ready for delivery at date to suit your convenience. Write for catalog. Huski-Hatched Chick Farms, Box PA-6, Mt. Solon, Virginia.

PETRISIME Electrically hatched pure-bred Barred Rocks, "Business Tancred" White Leghorns, Breeders rigidly culled and specially fed for highest vitality. Disease free. Get catalog. attractive prices stating number. Garber Hatchery, Harrisonburg, Va.

FAMOUS TANCRED STRAIN S. C. White Leghorns Baby Chicks and Hatching Eggs. Pennsylvania State Certified. Officially Blood Tested. Only males from trapnested 260 to 314-egg dams head our matings. Free booklet. North Poultry Farm, McAllisterville, Pa.

QUALITY CHICKS.—WHITE LEGHORNS, 10c, Barred Rocks, Reds, White Wyandottes, Black Minorcas, 12c. Buff Rocks, Hamburgs, 14c. Heavy mixed, 11c. Light mixed, 9c. 5% discount on cash orders received before February 15. Plum Creek Poultry Farm, Sunbury, Pa.

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TANCRED WHITE LEGHORN CHICKS.—Individual trapnest records back of every hen on our farm. Every male pedigreed, every egg set produced on our farm. Prices you can afford. Renniman Poultry Farm, Arthurs, Pa.

SUNNYFIELD EXTRA LARGE Single Comb Black Minorcas, exclusively. Chicks, Eggs, Stock. Extraordinary layers. Lay exceptionally large white eggs, two matings. Low prices. Catalogue. Sunnyfield Minorca Farms, Grampian, Pa.

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REGAL BORCAS WHITE WYANDOTTES. Eggs, Chicks, Stock. 289-Egg Record Ledger. North American contest. Winter layers. Excellent type. Fine matings. Low prices. Catalogue. Keiser's White Acres, Grampian, Pa.

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GET YOUR CHIX from Shenandoah Valley Hatcheries. All free range birds. Rocks, Reds and White Leghorns. Free catalogue and prices. Shenandoah Valley Hatcheries, Timberville, Va.

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CERRIS STRAIN WHITE LEGHORN CHICKS, $12.00 per 100; $57.50 per 500; $110.00 per 1,000. Juniata Poultry Farm, Richfield, Pa.

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LEGHORN CHICKS, 10c. Anconas, Rocks, 12c. Continental Hatchery, York, Pa.

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SOME OF AMERICA'S BEST MAMMOTH Bronze Turkeys, original Gold Coin strain. Excellent yearlings and young stock bred from prize-winners Mrs. S Owen, Scrite, Ohio.

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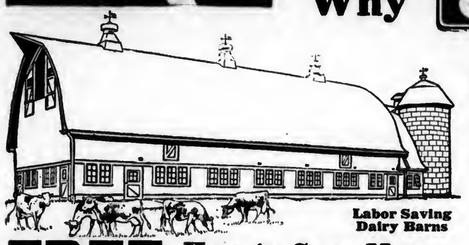


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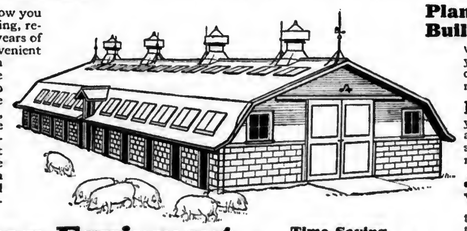
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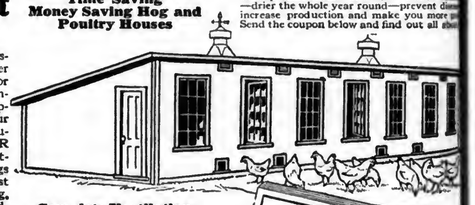
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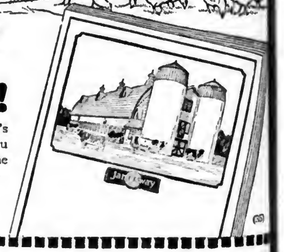
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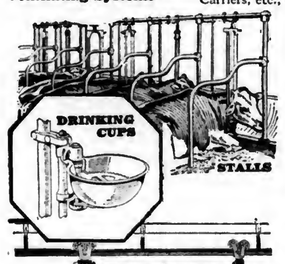
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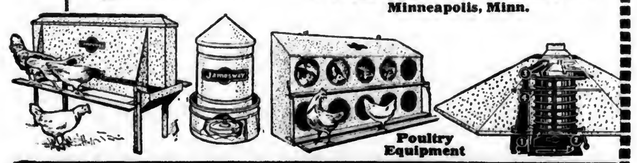


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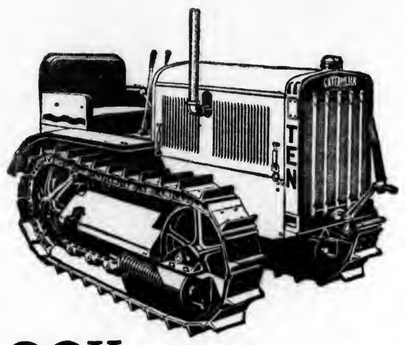
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Disk Harrow (standard weight)	8 ft. double	2 1/3
Disk Harrow (heavy cover crop)	5 ft. double	1 1/2
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Land rollers, light weeders, Rotary hoes	12-17 1/2 ft.	5-9
Grain drills	One 12-14 ft.	3 1/2-4
Mowers	Two 7 ft.	4 (second speed) 5 1/2 (third speed)
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Farm Facts and Fancies

By ALVA AGEE

MR. T. B. TERRY, who seems to me to have been the most helpful farm writer Ohio ever produced, used the expression, "hossing the weather", to center attention on the possibility of controlling soil moisture in a high degree through drainage, organic matter and right tillage.

Probably W. D. Zinn stands on the same plane of helpfulness, reaching an even greater number than was possible to the earlier writer and speaker. All of us read his notes from Woodbine Farm with interest, and his latest reports shows only what we know to be the impossibility of controlling the effects of weather conditions when they become bad as possible. There may be drains to carry off water, and there may be plenty of organic matter in the soil to keep it in as good physical condition as possible, but when rains continue to fall we can only stand by.

A strictly good farmer, such as our friend, can come nearer having his own way in a year of deficient rainfall than in one of excess. The condition of drained land makes it possible to hold moisture during dronth, and right methods of tillage count big. So does the store of decayed vegetable matter that has been mixed with the soil during years of good farming.

One usually can pull through a dry year with considerable satisfaction when the farm and farming are good, but soaking rains when crops need planting or cultivating or harvesting can reduce the best of farmers to a state of helplessness for the time being. A year of that sort will come now and then, but likewise it always goes, and conditions come back to normal where some "hossing" is a fact. Generally speaking, it is better to have too little rainfall than too much.

Expecting too Much

It is easy to expect too much from whatever plan Mr. Hoover may have to propose to the special session of the Congress. His ability is great, and his record of performance in the interest of industry encourages us, but there are substantial difficulties that may not be overcome. Some things are written about farm relief because they make pleasant reading, but the practical man wants facts. There appears no limit to expansion of production even on the present low level of profit, and added profit will hurry up production. Better farming methods, more fertilizer, more labor-saving machinery, are increasing output, and there is room for a vastly greater expansion. We have the land, the skill, the disposition to get more from the soil, and any chance of greater returns would stir to more activity.

If, through any device, we were sufficiently penalized for producing a surplus to reduce present net income, we should be worse off; if we were not penalized sufficiently for that, production would increase. The probable failure to make methods work in agriculture that do serve in manufacturing and some kinds of mining is due to individual control of land by millions of people, each one intent on getting the most profit from his own farm and taking a near view of his own situation. I have faith that Mr. Hoover can accomplish more for agriculture than I can foresee, and am looking forward eagerly to the legislation that is promised, but am stating some obstacles that we do well to keep in mind so that we may not be expecting whatever is impossible.

A Market Influence

Here is a curious situation. A great chain-store system is able to eliminate some of the charges ordinarily lying between the potato grower and the retailer, and it is able to distribute potatoes more cheaply than ordinary stores. As in the case of many other articles it attracts customers by making low prices. This efficiency in doing the work of the middleman—this cutting down of the spread between producers and consumers' prices—compels competitors to seek lower-priced supplies. They cannot afford to pay as much as they could if the most efficient method of selling had not been employed by another. I understand that this is a fact, and have been turning it around in my mind to see where the trouble lies.

We know that the spread between the producer and the consumer is too great, and we blame the middleman. We put the blame on the right party, I am sure, and yet a reduction in the cost of distribution in this instance depresses the price the ordinary retailer can afford to pay. Of course there is a catch in it—and the farmer, as usual, is the one caught.

"Another House Next Door"

I took a seat in the street-car directly behind a young man who had an electric cleaner by his side. He was a bright-faced fellow whose home had been in Brooklyn, N. Y., and who had been in San Diego three months. He had seen so many agents turned from doors of residences that I wondered whether the business was not pretty disheartening at times; and I asked him how he felt about it.

When he knocked at any door the probability of making a sale was slight, but as he turned away he kept in mind the fact that "there is always another house next door". He has hold of a truth all of us need, and there would be fewer failures in life if every one had that young man's optimism. There is a brand new chance for most people, it may be, if they did not handicap themselves with the memory of failure in the past.

Possibly I never too much to the game of roque on this page, but believing that I have worked hard enough to justify some play I go at it in earnest, and this young man's philosophy hits into it. When one makes a few poor strokes, or the breaks are against him, the average player loses nerve. I know a player who is seemingly unaffected, and instead of accepting the idea of defeat he treats every new chance to play as an opportunity to get hold of the roque hair and control the game from that time on. He never is beaten till the game is over. I heartily wished that Brooklyn boy good luck, and learned more from him than I could have taught him. "There is always another house next door."

THE active part the New Jersey State Chamber of Commerce is taking in the effort to assist farmers is revealed in "New Jersey", a book recently published by the State Chamber and which deals at length with the large part agriculture is playing in the development of that Commonwealth.

An interesting discussion in this book is that concerning the use of electricity on New Jersey farms. The power companies employ experts who study new methods of electrifying farm processes. Power trans-mission lines, particularly in South Jersey, cover a wide territory. In South Jersey more than 2,300 of the 10,000 farms are either partially or wholly electrified.

"Overhead electric irrigation," the book states, "is being developed and the pumping equipment for this is now equivalent to the pumping for a city of 40,000. The farmers are using electricity for illumination, for pumping water, feed grinding, ensilage cutting, hoisting hay and other materials, fruit grading, milking, clipping, running separators, churning, refrigeration, ventilation, incubation, brooding, and stimulating egg production."

You can lick a SORE THROAT

—if you start early



INDOORS one minute outdoors the next—it's easy to develop a sore throat or a cold—around a farm.

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That is because Listerine is a powerful germicide when used full strength. And sore throat, like a cold, is usually caused by germs.

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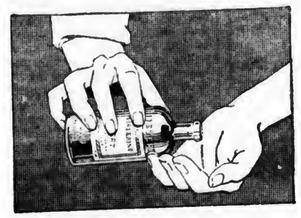
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The Safe Antiseptic

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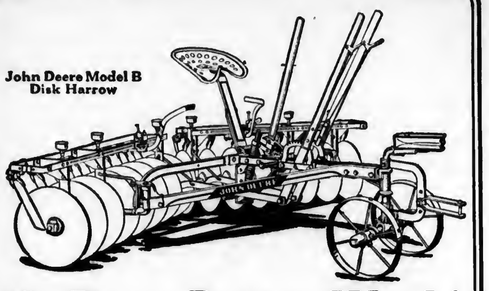
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Don't let a cold get started

Physicians tell us that hands carry cold germs to the mouth where they lodge in the throat and nose and irritate the membrane. Why not attack them before they reach the mouth? Millions prevent colds by rinsing their hands with a little full strength Listerine before every meal. This is a particularly good suggestion for mothers preparing food for children.



John Deere Model B Disk Harrow

'It Does Better Work'

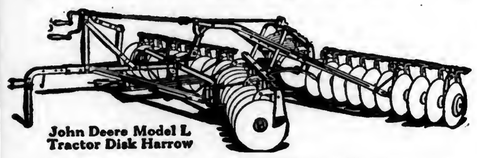
Any Model B owner will tell you that this John Deere Disk Harrow does better work. Better performance is the quality that has kept the Model B at the very top among horse-drawn disk harrows for nearly half a century.

You need the Model B for the better work which its unusual flexibility and enormous strength insures.



The Model B has been strengthened throughout. Distinctive features responsible for its widespread popularity have been retained. It's the same flexible, good-working harrow that your grandfather knew, but with tractor-harrow strength.

[All John Deere Disk Harrows Are Equipped with Heat-Treated Alloy Steel Disk Blades]



John Deere Model L Tractor Disk Harrow

Two Good Diskings



The Model L has strength to spare. Main frame braces are heavy angle steel, and every other part is built up to resist wear and stress. It's flexible, too, the front section having the same pivoted yoke construction as the flexible Model B.

If you want to be sure that all of your soil will be disked twice every round, use the John Deere Model L Tractor Disk Harrow.

The automatic yielding lock coupling between sections aids the rear disks in cutting out ridges left by the front disks—no part of the field is left undisked.

Here's a valuable feature: The disks can be angled or straightened without stopping or backing the outfit.

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NESHAMINY GARDENS

By R. P. KESTER

I WRITE this on my birthday and I find my thoughts mainly personal. I do not dwell on the number of birthdays I have had, nor on the accomplishments (or lack of them) in the years agone. One trouble about having a birthday so near to the season of many holidays is that people are sort of fed up on festivities and present giving so that a birthday close to New Year's is in the nature of an anti-climax. But I find myself in distinguished company by being born in January. Note the list: Daniel Webster, Alexander Hamilton, Benjamin Franklin, Robert Morris, John Hancock, Thomas Paine, Edgar Allen Poe, Stephen Foster and Robert E. Lee. Besides this the horoscope for the 18th of January, as worked out by the astrologer, is most flattering and favorable, hence, of course, I fully believe in its authenticity.

* * *

But I fared well. The good wife is inclined to make every family birthday an occasion for a festival. The whole family, roots and branches, assembled to do me honor, and incidentally to eat the dinner. She made me one of my favorite cakes and put candles on it—not the full number, because there was not enough—and I had the inalienable right to cut it.

In checking up my assets, as is customary when one wants to estimate the degree of success in this life, I find that I am a multi-millionaire. I have a few acres of ground with some trees on it, a house to live in, some good books, unnumbered friends, two worthy children and an equal number of worthy children-in-law, an unmatchable wife—the value of these assets, of course, cannot be indicated by mere figures. Then, in addition, there are the three little folks—two boys and a girl—and I count them worth (modestly estimated) three million dollars. Now, honestly, don't you think I have done pretty well?

* * *

While I have had several birthdays, and have had them with reasonable regularity, there are only a few that stand out in relief in memory. I do not know why they should, except that they seemed then to mark the attainment of certain imaginary stations in life. When I celebrated my twelfth birthday I was sure that I had reached real boyhood and would have privileges which a little boy did not have. Then on my sixteenth birthday I was sure I was entering into young manhood, a period full of imagination and opportunity. I felt that I was old enough to go to parties and join in the social activites of other young people. But the crowning achievement was in reaching twenty-one. I was a man, full of wisdom and ripe experience! I belonged to a new age. The whole world lay prostrate before me, and I had it by the tail. But above all, I was my own boss! Alas, the young mind is full of vain imaginings.

* * *

Several times I was sure I knew what my life's work would be. Each time I could see myself especially fitted by Nature for that calling. My first inspiration came when I was twelve years old. Our local paper editor ran a little advertisement for a boy to fill the position of "printer's devil" in a country newspaper office. I was sure that was my field, not my opportunity. But father and mother, with the blindness of most parents thought I was too young to leave home and it was a good many years before I really entered the journalistic field.

In the meantime other visions came before me, and filled my mind with Great Expectations. In succession I would be a bookkeeper, a telegraph operator, a stenographer, an ornamental penman, a physician, and, except the latter, I studied and qualified in all these things. But during all these wanderings the last thing I thought of being, in fact the one thing I was sure I did not want to be, was a farmer. But, happily, I never got so far away from the soil that I could not turn back it when the real light came.

* * *

I suppose most of us think in looking back over our lives that we would do differently if we had them to live over. But unless we had the knowledge which only experience can give it is doubtful whether we would do any better, and we might do infinitely worse. Some theorists believe that by conducting a proper educational system we will be able to start each new generation just where the previous one left off, thus enabling them to avoid the mistakes of their fathers. It is a vain hope. One generation may offer its advice and knowledge to another, but it will not be accepted. Each generation, each individual, must personally grow its own body, train its own mind and get its own wisdom.

* * *

But enough of personalities and personal recollections. This is a holiday for me and I refuse to be serious, or to treat serious subjects even if I fall short of filling my allotted space. Anyway, why should a millionaire feel obliged to work? Wishing that all our readers may be able to enjoy their birthdays in the same spirit, look into the future with the same hopes and assurances that I feel, and have the same confidence in the future of agriculture that my optimistic nature gives me, I shall call it the end of a perfect day.

Friendly Talks

By Edgar L. Vincent

"DON'T push so hard! Lift up a little bit!"

Winter time. A rough dirt road in the country. Deep ruts and big hard-frozen humps in the wheel track. A farmer with a heavy load, stuck in the deepest rut of all. The neighbors turn out, as we always do, to help our fellow farmer out of his difficulty. And we lift and we tug and we wonder if we will have to get another team to put on ahead to pull the load out. Then somebody, probably the oldest man of us all, with a lifetime of experience back of him, sings out:

"Don't push so hard! Lift up a little bit."

The command seems sensible—wonder we had not thought of it before! We put our strength in the right place and lift. The wheels roll over the hard-frozen pieces of earth which had blocked them. The driver calls out to his team, "Get up!" and the trouble is over.

"Don't push so hard! Lift up a little bit!"

There are a thousand places in life where that advice is just as good as it was in boosting that heavy load out of the rut. Why is it, I wonder, that it seems so much easier to push than it is to lift? Is it because we have been brought up to think that push is the thing that wins in this world?

And yet, what most of us need when we are sore pressed is not to be pushed, but to have some kindly hand put under our elbow in a good, hearty lift upward. I believe what the world needs most of all today is not a push but a lift upward. Nothing like it to raise the wheels of our life-wagon out of the frozen furrow and place it once more on good smooth footing!

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Presque Means "Almost", and Presque Isle Is Surrounded by Lakes and Is Almost an "Isle"

Aroostook County—Pennsylvania's Competitor

By W. R. WHITACRE

AROOSTOOK county, in northern Maine, is the center of the potato industry in that state with Presque Isle and Caribou its chief shipping sections. In normal years this county is probably Pennsylvania's greatest competitor in the eastern markets. This season fewer Maine potatoes are coming into competition with Pennsylvania stock on account of the low prices prevailing and the high cost of transportation. Dealers found that they were unable to pay the cost of Maine potatoes and ship them to the market at a profit. This is particularly noticeable in Philadelphia, situated reasonably close to the leading potato sections of Pennsylvania. For instance during December of this past year Maine supplied but two of the 319 carloads of potatoes unloaded in Philadelphia, while Pennsylvania supplied 296. In 1927 Maine supplied Philadelphia with 164 carloads during the same month.

Good soil and a knowledge of up-to-date cultural methods enable the Maine growers to produce excellent potatoes which generally outsell those from Pennsylvania and New York State. The Green Mountain is the leading variety shipped to the eastern markets and their attractive appearance and good cooking qualities make them popular with consumers. The grading and packing is generally good and the dealers like to handle them.

The potato is not a sideline in Aroostook county but is the chief source of revenue. Factories located in this section turn the off-grade and cull stock into starch and other products.

The farmer in Pennsylvania and other eastern sections may wonder how Maine potatoes are handled when the temperature drops around the zero mark. A temperature of ten or fifteen degrees will bring the market to a standstill in Philadelphia or New York, but it makes but little difference in Maine.

A friend who has worked several winters in Presque Isle tells me that most of the potatoes loaded during extremely cold weather are in warehouses located along the railroad sidings. Stoves are placed in the cars to be loaded and lighted. The cars are lined with heavy paper and around noon when the sun has warmed things up a bit the car is placed at the warehouse door. A canopy and framework extend from the warehouse to the car door and the potatoes are trucked into the warm car.

When the temperature drops in the city market the potatoes are likely to be in an open wagon or truck for several hours before they reach the store. Frozen potatoes are a poor risk and this is the reason that trading in the city slows up during an extremely cold snap. A cold snap that is not too severe has a tendency to increase the demand on the terminal market. There are a number of reasons for this condition. The dealers state that people eat more potatoes when the temperature drops and while it does not seem that this increase would make any material difference it does have a definite effect. Receipts are likely to fall off, especially in a market that receives a large quantity of potatoes by motor truck.

In a normal year a cold snap brings a speculative interest to the market as dealers see a chance to make larger profits and will buy in hopes of an advance.

Pennsylvania Agriculture

A COMPARISON of the agricultural statistics of Pennsylvania over a period of 80 years reveals many interesting trends.

First of all, the total population of the state has been doubling every 40 years so that the number of people in 1925 was approximately four times the number 80 years before.

During the first 40-year period, that is from about 1844 to 1884, the expansion of agriculture practically kept pace with this increase in population, but since 1884 the trend has been more toward intensification and specialization with emphasis on dairying, poultry raising, potato production, market gardening and commercial orcharding. In all of these enterprises, expansion is running a close race with population increase, while in many other phases of the state's agriculture there has been decided retrenchment. The economist will immediately describe this change as a readjustment from a more or less self-sufficing to a nation-wide economy insofar as the production and consumption of agricultural products are concerned.

A detailed study of the statistics reveals many significant readjustments. The pessimist would point to the 12,000 farms abandoned during the last 40 years, to the decrease of 3,200,000 in number of improved acres in farms, to the decrease of 170,000 in number of horses on farms, to the drop of 1,250,000 in number of sheep, to a decrease of 350,000 in number of cattle other than milk cows, and finally to a slump of 500,000 in number of swine.

But there is another side to the story. Pennsylvania farmers have only 1,500,000 more acres of improved land in farms than their fathers and grandfathers had 80 years ago and yet the farmers today are producing approximately 4,000,000 more bushels of wheat, 30,000,000 more bushels of corn, 11,000,000 more bushels of oats, 15,000,000 more bushels of potatoes, and 2,150,000 more tons of hay than was produced 80 years ago. Compared to 40 years ago, production today is fully as great with 3,000,000 less acres of land being cultivated.

The one who declares that the decrease of 170,000 in number of horses in 40 years spells the doom of the horse and along with it the passing of a market for oats and hay, should first consider this fact: There is exactly the same number of acres of improved land per farm horse in Pennsylvania today as 40 years ago. This does not mean that power farming has not been adopted in Pennsylvania. But it

(Continued on page 36.)



Potato Storage House, Presque Isle, Maine



Potato Storage House on a Maine Farm
Storage Is Always a Problem.

PENNSYLVANIA FARMER

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ESTABLISHED 1850 PUBLISHED WEEKLY

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Volume 100, Issue No. 5 Established 1877

IN WEST VIRGINIA

NEXT week, February 4-9, the farmers of West Virginia will gather at Morgantown for their annual Farmers' Week. We hope that the attendance will be in consonance with the merits of the program, which is always good. This year W. D. Zinn will be among his home folks again, after long absence due to his institute work in Ohio, and he will get a warm welcome.

A READY SERVICE

THE Bureau of Animal Industry should be thanked for its promptness in handling the outbreak of foot-and-mouth disease in California. The Bureau's officials were alert in detecting the trouble and immediate in suppressing it. The economy of a service which can so act may no longer be questioned. Without it we might have had a long campaign of eradication, with its enormous costs, its trade-killing quarantines, its destruction of livestock and other losses.

TWO FATAL BULLS

WILLIAM CUMMINGS of West Grove, Pa., died in a Philadelphia hospital last week, where he had been operated on in the hope of saving his life following injuries inflicted by a vicious bull. On the same day the funeral of Charles Austin Fox, Farmington, Md., was held. Mr. Fox was fatally injured by a bull when he entered his barnyard to do the milking. No other details are given in the reports of these tragedies, but the bare facts are eloquent in their warning to distrust all bulls, gentle or otherwise.

THEY REDUCED TAXES

THE farmers of Champaign county, Ill., have succeeded in securing a reduction of ten per cent in the taxation of farm real estate. They did it by organized effort and in the face of some local opposition. Local taxation is one of the most difficult problems before the farmers of Pennsylvania. They can get results only by organizing to study their problem and then acting on it. Probably a tax payers' league or committee, formed by the cooperation of all existing organizations, is the easiest and best foundation for such a movement in most places.

CONFLICTING INTERESTS

THE complexities of tariff legislation were illustrated by several things at the hearings which began last week. In the tobacco schedule, for example, representatives of Florida and Georgia growers asked for a higher tariff on cigar wrappers while representatives of Pennsylvania and Ohio growers asked for a lower tariff on wrappers. Representatives of manufacturers were divided as were those of growers, some for a higher and some for a lower duty on wrappers. But such instances reveal only the minor complexities. The major ones are not likely to receive the study they deserve in revision accomplished as this probably will be.

AN ADEQUATE APPROPRIATION

FOR the first time in the long history of Pennsylvania State College the Governor of the State has recommended an adequate appropriation for the institution. Two years ago Governor Fisher promoted and approved an appropriation as large as the condition of the treasury appeared to justify. But this year he recommends more—and enough. The total of his State College budget is $6,211,000 for the biennium beginning next June. Of this $2,250,000 is for buildings, $2,300,000 for maintenance, $300,000 for research in agriculture, $650,000 for extension in agriculture and home economics and $711,000 to pay the debt accumulated over many years because of inadequate appropriations of the past. The Governor has done his part to redeem the pledges made in the recent campaign for a bond issue for State College, and we confidently expect that our legislators will follow his example.

A BUILDING FOR THE SHOW

THE thirteenth Farm Products Show, with the annual meetings of a score of state associations, brought to Harrisburg thousands of farmers last week. The Show was bigger and better than any of its predecessors and easier to see. But the throng was so great that a proper study of the exhibits was difficult and sometimes impossible. During the week Governor Fisher submitted to the legislature the state's biennial budget. In it he recommended an appropriation of $1,290,000 for a building to house the Show, which is now scattered about in five rented buildings. The legislature should not hesitate to vote this appropriation, for the Show is not merely a state institution but one of its most valuable educational enterprises. The appropriation is for a building only, the state now owning the land on which it is to be located. Let us all see that our legislators do not overlook this opportunity to spend money wisely.

RECLAMATION AND RELIEF

REPRESENTATIVE Louis T. McFadden deserves credit for calling the attention of the country to the absurdity of legislating for relief from agricultural surpluses and at the same time legislating for the creation of such surpluses by reclamation projects. He properly holds that when Congress deals with the problem of farm relief it must consider the policy of reclamation as one of the factors involved. Twenty-four government reclamation projects are now in operation and production, more are under way and still others are proposed. The operations of some if not all of them are financed by public funds, constituting as Secretary Jardine says "an extensive subsidy to agricultural expansion" at a time when agricultural surpluses are considered a national problem justifying a special session of Congress. Mr. McFadden said much in little time when he declared: "Either we are to bury farming deep and for decades to come under these huge contemplated land reclamation projects like Boulder Dam and Columbia River, or we will, statesmenlike, hold these vast competitive resources in reserve and undeveloped until such time as, stimulated by assured profits from farm production, settlers seek these lands at prices and on terms which will justify the employment of private capital to construct the necessary works. A not unimportant feature of any program of farm relief must be the forsaking by the government all thought of additional land reclamation

A NECESSARY PART

LAST week J. M. Mehl of the Grain ... tures Administration made a report ... which he showed that the total volume ... trading had not been diminished by gov... ment supervision. Of even greater inte... to us is his declaration that "the futures m... ket has become firmly established as an in... gral part of our grain marketing system. ... may be used for gambling as well as for le... imate trading. There is hardly anything t... cannot be put to improper use. It is com... to be widely understood, however, that leg... mate dealing in grain futures is a desira... and necessary part of the present system ... grain marketing." That is essentially w... we have been saying for many years wi... well-meaning but uninformed critics have ... nounced us as unfriendly to the cause of g... growers. Mr. Mehl might have gone farth... and said that even speculative trading is he... ful in the best grain marketing system m... ern commerce has devised, but he has d... pretty well for a government employe.

GAME LEGISLATION

NINE or ten bills relating to game ... the Board of Game Commissioners ... already before the Pennsylvania legislat... Some of them are of interest to the farm... of the state and some are not. The w... issue is raised by Senate Bill No. 47, wh... would deprive the Board of Game Com... sioners of the essential authority it now h... This bill is bad from every standpoint ex... that of legislators who do not relish the d... gation of authority to any commission. I... destructive of the system under which Pe... sylvania has become the greatest game-p... ducing state in the country and is there... contrary to the interests of sportsmen. ... would virtually destroy, by abolishing ... authority, the only state agency with wi... farmers can deal in the protection of th... industry and their property. The farmers ... Pennsylvania therefore are opposed to ... legislation or any like it. It is a step ba... ward, toward the time when sportsmen ... little game and when farmers had little ... tection. If any change is made in respect ... the powers of the Board of Game Com... sioners we favor increasing rather than ... tailing such powers.

THE FARMERS' HOROSCOPE

THE annual farm outlook, which was ... sued by the Bureau of Agricultural E... nomics, U. S. Department of Agriculture, ... Monday of this week, is less gloomy in t... and more restrained in pure prophecy t... any of its predecessors. It warns against ... pansion in most lines of farming and rec... mends reduction of several crops, particul... potatoes and feed crops. "Some expans... in beef cattle may be warranted," says t... Bureau, "but farmers are cautioned agai... too rapid expansion of sheep, dairy ca... hogs and fruits." The domestic demand ... farm products is expected to be maintai... during the early part of this year, with ... eign demand continuing about the same ... during 1928, according to the outlook. Al... forty farm products are covered in a com... hensive but cautious manner, the gist ... which is that farmers should continue t... efforts to adjust production to demand ... refrain from increasing production of thi... which are now in ample supply. The o... lookers may not have the ability of see... into the future, but they should be gi... credit for skill in presenting their views ... ample qualifications to clear them in case ... unexpected happens.

Pennsylvania's Thirteenth Annual State Farm Products Show

PENNSYLVANIA'S Farm Products Show, which has grown from a little state corn show to a great mid-winter fair, brought out again a host of farmers to crowd the streets of Harrisburg and more than fill the five buildings devoted to the exhibits. Last year the crowd was so great that it was hard for anybody to see the show. This year the throng was even greater—estimated at 40,000 on Thursday and not much less on Wednesday, a total of 100,000 for the week. The visitors were good natured, lining up in single file or by twos to gain entrance to some of the buildings.

Never before was the attendance at the many meetings of the many state organizations so great. Never before were so many denied the privilege of attending the banquets these organizations held. Again actual conditions proved the need of an adequate building to house the show, and the wisdom of Governor Fisher in making liberal provision in the State's biennial budget for such a building.

In a state of so many agricultural interests many changes are seen from year to year, but the general tendency is forward and not backward. Potato growers have been hit by abundant production and consequent low prices, but their enthusiasm appears to be greater than ever. They overflowed their meeting hall. They put up a magnificent show, augmented by the pile of 696 bushels grown on a single acre by H. J. Walton and Son of Chester county and sent to the show by the bankers of that county.

Farm Conditions

Fruit growers are recovering from the effects of excessive production and hoping for better things. Vegetable and small fruit production is developing rapidly and roadside markets are becoming more stable as well as more numerous. The poultry industry goes ahead in the face of outside competition and in defiance of troubles of other kinds.

The dairy industry is not only progressive but fairly prosperous, with nearly all its production going to market in the form of milk. Sheep and wool continue to reward those who have been faithful to the golden hoof. The swine industry is not so gay as it was a few years ago but there is little evidence of any great change in the volume of production.

Cattle feeders did well last year but are uncertain about this year's markets. They will finish a few more cattle than they did in 1928. There is some evidence of a revival of interest in horse breeding but it could not be called general. Horse power is not gaining visibly in use on farms while it is clearly waning in the city. Mechanical power is gaining rapidly on farms, particularly the use of electric and gasoline power. New and improved machinery, to meet demands created by labor costs and the problem of insect and disease control, attracts an interest which would not have been thought possible a few years ago. Its value in reducing production costs is being recognized more each year. The minor products, such as honey, mushrooms, flowers and nuts, all appear to be enlisting more interest.

Plenty of Problems

Prices of land show little change, but more investors in it are reported from a few sections. The state needs, however, a movement to bring about a new development of agriculture in certain regions where farmers are too few and land is too cheap.

There are plenty of problems. Production offers a lot of them as it becomes more intensive whether with plants or with animals. Local taxation is a big and complicated one, as the two local necessities, schools and roads, are bound up with it. That taxes are too high is universally admitted but few definite plans are in sight to reduce them. Taxpayers are organizing in one or two counties to study this problem in the hope of reduction, but little real progress can be reported thus far. More local organizations, by a combination of existing bodies perhaps, should be formed for the study of this problem.

Boys and Girls

A thousand or more boys and girls attended the Show and many of them took part in it by exhibits or by demonstrations. They came from the vocational schools where they are studying agriculture and from the clubs which are carrying on many projects. These future farmers were the most interesting feature of the Show to those who are concerned about the future of Pennsylvania's agriculture. Medals and other prizes were awarded in thirteen projects, and scholarships were given to the successful ones in demonstration contests.

The steers shown by the club boys and girls of Lebanon, Dauphin and Cumberland counties averaged better in finish than in any preceding show. They were sold at auction as usual on Thursday and again the slaughterers of the state cooperated in the best possible way—by paying liberal prices for the cattle. Ninety-four club steers averaged $19.20 per cwt., which is away above the market price. Arbogast and Bastian of Allentown, always liberal supporters of the boys and girls, secured the champion steer at 55c per pound after competition with Swift & Co. The Pennsylvania Railroad bought 15 steers for its dining cars, its Agricultural Agent Russell East making its selections. Arbogast & Bastian bought the champion pen of lambs also at 40c per pound. All slaughterers, big and little, in Eastern Pennsylvania contributed to the success of the sale and deserve the highest credit for their cooperation. Last year the champion steer went at 43c and the champion pen of lambs at 20½c a pound.

The steer exhibit is a cooperative affair, the club agents, the county agents, the local chambers of commerce and service clubs, the local banks all helping to promote and finance it, while the Reading Railroad furnished the prize money. All the steers were Herefords. Other breeds should get busy and get in.

The grand champion steer was fed by a girl, Martha Hess of Cumberland county, and was a credit to any feeder. He weighed, after 12 hours off feed and water, 1,042 pounds and brought prize feeder $75.10.

The grand champion pen of lambs was fed by a girl, Alice Frost of Centre county. They were Southdowns, averaging 90 pounds, and defeated 20 pens fed by the boys and girls of Centre and Washington counties.

The best bushel of apples in the Show was exhibited by C. P. Barnard of Chester county, while the first prize for county exhibits of apples went to the Chester-Delaware County Association. Grand championship on potatoes was won by Leonard Jones of Erie county who showed Russets. In the corn show award for best ten ears went to C. N. Myers of York county on his exhibit of Golden Queen Yellow Dent. Greene county won on county exhibit of fine wool, while Lawrence county was first in medium wool. The champion fine wool fleece was shown by R. Patterson & Son of Greene county. In county exhibits of bee products the beekeepers' organization of Allegheny county took first place.

Master Farmers

More than three hundred men and women prominent in eastern agriculture assembled in the Ballroom of the Penn-Harris Hotel in Harrisburg on Thursday evening of Farm Products Show week to honor the Master Farmers whose names and life stories appeared in the latest issue of Pennsylvania Farmer. Guests at the Master Farmer dinner, which was followed by the presentation of the awards for 1928, included State College and Department of Agriculture officials from several states, scores of county agents, extension specialists, farm organization and business leaders.

The program was in charge of E. S. Bayard who explained the purpose of the Master Farmer movement as sponsored by Pennsylvania Farmer—to honor outstanding farmers and their wives and to direct attention to the progressive and prosperous class of farmers who are truly representative of the agricultural East.

The speaker of the evening was Arthur Capper, United States Senator from Kansas and several times governor of that state. Senator Capper paid high tribute to the Master Farmers he had met in many states of the Central West. Touching on affairs in Washington, he predicted that Mr. Hoover will call an extra session of Congress to enact legislation intended to bring the purchasing power of the farmers' dollar up to the level of other industries.

Awarded Medals

Following the Senator's speech the Pennsylvania Farmer gold medal was presented to each of the Master Farmers of 1928. Before the introduction of the Master Farmers lantern slides were exhibited illustrating the various lines of farm work conducted by each man and showing their homes, stock and buildings. In accepting the awards, which were presented by C. L. White to the Master Farmers from Pennsylvania, and by G. W. Harris to the men from New Jersey, Delaware and Maryland, several of the men responded, giving credit for many of their achievements to their wives and families and to helpful and inspiring friends.

All of the Master Farmers of 1928 were present to receive the award in person. They are: Ray F. Brown, William J. Clayton, L. Otis Corkran, E. S. Ferry, Edison M. Hay, Amandus Larson, S. S. Lehman, William G. Mendenhall, O. A. Newton and Son, Harrison S. Nolt, Clarence H. Smith, C. B. Snyder, Clifford E. Snyder and F. P. Willits and Son.

Master Farmers of 1927

Mr. Bayard introduced the Master Farmers of 1927 who were honored at a similar dinner during last year's State Farm Products Show. The 1927 group, of whom nearly all were present with their wives, follows: H. H. Snavely, Eugene Stapler, J. R. Ziesenheim, J. Clayton Brubaker, Robert F. Brinton, James E. Eastman, Frank C. Bancroft, Frederick Taylor, Fred E. Hess, John Schrope, Charles B. Probasco and Jacob L. Pittenger.

Among the other distinguished guests introduced by the toastmaster were the members of the Pennsylvania Board of Judges: Dean R. L. Watts of State College, Pennsylvania Secretary of Agriculture C. G. Jordan, John Light, Secretary of the Pennsylvania State Grange, Deputy Secretary of Agriculture R. G. Bressler. Others were: Major Lynn G. Adams, Superintendent of the Pennsylvania State Police; H. J. Baker, Director of Agricultural Extension in New Jersey; C. A. McCue, Delaware Extension Director.

The concluding feature of the program was the introduction of the wives of the new group of Master Farmers by Mrs. Gertrude S. Stewart, Household Editor of Pennsylvania Farmer. All but four of the "better halves" were present.

Farmers' Meetings

Agricultural Council

TUESDAY afternoon the presidents and secretaries of all but two of the farm organizations holding annual meetings at Harrisburg, together with the Master and the Secretary of the State Grange, Dean R. L. Watts of State College and Secretary C. G. Jordan of the Department of Agriculture met under the auspices of the Agricultural Council of Farm Organizations of Pennsylvania.

Only topics of state-wide interest were discussed at this meeting. A progress report was made by the Rural Electrification Committee, and action taken to continue joint relations with the utilities of the state in working out the details of bringing electricity to rural communities. It was the unanimous opinion of the body that agriculture should have a program of taxation and should be in a position to express itself in legislative circles when suitable occasions arise.

The budget of the School of Agriculture and Experiment Station at State College was presented and discussed, also the budget of the Pennsylvania Department of Agriculture. Committees were appointed to study these budgets and report their conclusions back to the Council for further action. The body unanimously endorsed the plans of the Farm Products Show Commission presented to the legislature calling for an appropriation of $1,340,000 for the purpose of erecting permanent building to house the Winter Farm Shows at Harrisburg. The request of the Commission for an appropriation of $56,000 for the payment of premiums offered by the Show was also endorsed. The seriousness of the present cattle situation in Pennsylvania came up for discussion and the matter referred back to the Grain Committee.

The officers elected by this body to serve the coming year are: President, H. D. Vaeth, now president of the Inter-State Milk Producers Association; vice-president, John H. Light, secretary of the Pennsylvania State Grange; secretary, Miles Horst, field editor of the Pennsylvania Farmer. These three men together with F. P. Willits, former Secretary of Agriculture, and C. J. Tyson, representing the Horticultural Association, were designated as the Executive Committee of the body.

Rural Electrification

THE hundreds of folks who crowded around the electrical display sponsored by the Joint Committee on Rural Electrification indicated two things. First, that the 25,000 farmers who now have electricity are interested in learning more about its economical uses. Second, that at least 25,000 more farmers who do not have electricity are anxious to get it.

The exhibits were in two sections. The larger one in the Emerson Building, attended by 12 to 15 rural service men and home demonstrators, displayed utility farm motors of the five-hp. type grinding feed, cutting wood and running a silo filler. Here was also displayed a new type electric refrigerator adapted to the cooling of milk as well as to take care of the housewife's food products. The setting of this display portrayed a farm house and barn showing in outline the wiring system of both, while flashing lights throughout the buildings emphasized what a complete installation and lighting job should look like.

The second part of the exhibit showed the complete operation of electric cooking, featuring the cooking of farm dinners. Beef, heating steel together with all other items of the dinner

Farm Women

THE attendance at the meetings of the Farm Women of Pennsylvania has been increasing from year to year and this year was no exception. This Association now has more than 800 members in the state.

(Continued on page 8)

SEVEN APPLE GROWERS
average $267.69
NET GAIN *per acre*

HERE are reports from seven apple growers in seven states from New York to Kansas. These growers all used Sulphate of Ammonia on part of their orchards and checked the gain on the fertilized trees. The results show a net gain of $267.69—over and above the cost of the fertilizer. Proof enough that fertilizing apple orchards with Arcadian Sulphate of Ammonia pays.

Grower	Variety	YIELD PER ACRE IN BUSHELS Without Sulphate of Ammonia	With Sulphate of Ammonia	Increase	Net Gain Due to Sulphate
O. C. Olsen, Geneva, N. Y.	Baldwin	460	652	192	$ 56.40
Peter Sperow, N. Mountain, W. Va.	York	330	550	220	124.00
Edgar Hurley, Sabina, Ohio	35 year old Mixed	100	160	60	114.00
John Humphries, Monticello, Ind.	22 year old Maiden Blush	120	240	120	294.00
Ed. Strickfaden, Pekin, Ill.	18 year old Grimes	500	805	305	750.84
O. C. Webster, LaCrescent, Minn.	20 year old N. W. Greening	296	472	176	285.20
Walter E. Braun, Atchison, Kan.	Jonathan	204	346	142	249.36
Average 7 Growers		287	461	174	$267.69

Note: Tests Peter Sperow made by Joseph B. Prettyman, Vocational Agricultural Teacher, as cooperator; Edgar Hurley by Levi Lukens, Lee's Creek High School, as cooperator.

SAMPLE and BOOKLET FREE



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Sulphate of Ammonia

The Barrett Company
AMMONIA-BENZOL DEPARTMENT
Agricultural Bureau
Atlanta, Ga. Memphis, Tenn. Norfolk, Va. New York, N. Y. Cleveland, Ohio. San Francisco, Cal. Toronto, Ont.

The Barrett Company (address nearest office) N-4-29 NG
Please send me free copy of "*Sulphate of Ammonia in the Apple Orchard.*" Also send me free sample of Arcadian Sulphate of Ammonia.

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KINDLY PRINT NAME AND ADDRESS

Avoid Milk Losses

Many quarts of milk can be quickly lost through the "little" hurts such as chaps, cuts, cracks and inflammation that cause discomfort. Milk is held back and the milking made hard.

Bag Balm is the accepted guardian of these delicate tissues. It brings about swift healing because of the vigorous penetration set up by a remarkable antiseptic oil made and compounded with the medicated ointment by our own exclusive process.





For such stubborn and troublesome disorders as Caked Bag, Bunches, Cow Pox, etc., Bag Balm is the reliable remedy. Be sure to keep it on hand. Clean, pleasant to use. Will not taint the milk. A dependable healer for any farm use. Sold by feed, drug, hardware and general stores. Mailed postpaid if your dealer is not supplied. Booklet, "Dairy Wrinkles," mailed free. Send for your copy today.

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SILOS Special Direct from Factory Prices
FAMOUS AUTOMATIC-TAKE-UP-HOOPS
Buy the Best and Pay Less. Order Now and Save Money.
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FRUIT TREES
Seeds—Berry Plants—Ornamentals
2-4 ft. Apple 25c; 3 ft. Peach 16c each postpaid. Guaranteed stock. Farm, Flower and Garden Seeds. We have 500,000 Fruit Trees, Evergreens, Shade Trees, etc., in fact our free 1929 catalog has every thing for Garden, Farm and Lawn
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FREE CATALOG

BERRY BASKETS

The Berlin Quart
Save Money on Berry Baskets and Crates. Buy at factory prices and WINTER DISCOUNTS. Write for free catalog NOW.
The BERLIN FRUIT BOX CO.
Berlin Heights, Ohio

There are 12 women's clubs in Lancaster county, four in Cambria county, four in Washington county, two in Somerset county, two in Greene county and a scattered membership in other counties of the state.

Their program covering three half-day sessions and a banquet included addresses by R. G. Bressler, Deputy Secretary of Agriculture, Mrs. John M. Phillips of the State Federation of Women's Clubs, Prof. Schlosser of the Elizabethtown College and Miss Margaret Brown, clothing specialist of the Pennsylvania State College.

In the business session of this body, action was taken to request the Pennsylvania Highway Department to take further action in beautifying state highways. Action was also taken endorsing further research in Indian lore throughout Pennsylvania communities, and the work of the Pennsylvania Joint Committee on Rural Electrification was heartily endorsed. Officers for the coming year include Mrs. J. R. Casel, president; Mrs. Reis, vice-president, and Mrs. Wengert, secretary.

Pootato Growers' Assn.

THE meetings of the Pennsylvania Potato Growers' this year were pronounced by those in attendance as the most interesting and most enthusiastic held in recent years. The spirit was not pessimistic as

Vegetable Growers' Associatio

DR. E. L. NIXON of the Pennsylvania State College emphasized four things that are essential to produce vegetables successfully:

Good seed—nothing less than the best.

Abundant humus—a soil bang full of organic matter.

Adequate leaf protection—to control insects and disease.

Vision—to plan ahead and to see details in proper relative importance.

Dr. Nixon pointed out that thorough spraying is the only kind of spraying worth while. That means a pressure of at least 250 pounds, better yet 300 or even 400 pounds. Five-five-fifty Bordeaux mixture applied weekly at high pressure, three nozzles to the row, positively will control celery blight. Experience has proved time and again that blight is responsible for much of the loss of stored celery. This crop must be clean to keep.

* * *

Prof. J. W. White, State College, stated that extensive cultivation speeds up soil processes and leads to rapid depletion of fertility unless vigorous measures are taken. Diminishing supplies of stable manure have intensified the problem. On the other hand the experiences of more and more growers indicate that profitable vegetable crops can be produced with the aid of commercial fertilizer and a systematic practice of growing green manures to conserve soluble nitrogen (that is to take up and hold available plant foods) and to replenish organic matter.

Prof. White presented figures showing the total loss of nitrogen per acre in growing several vegetable crops. Part of this is accounted for in the crop itself. The remainder is lost by leaching or draining down through the soil. Practically all of this may be conserved by planting a cover crop immediately after the cash crop has been removed. Rye, wheat, oats and buckwheat who nused in this way and producing six tons of green material per acre (equivalent to about one and a quarter tons of hay) have saved from 80 to 100 pounds of nitrogen per acre. That is equivalent to 500 or more pounds of nitrate of soda. Sweet clover makes even a higher showing where there is time to grow it.

* * *

Prof. A. S. Colby of the Illinois Agricultural Experiment Station named several fundamental factors in strawberry growing. Without a variety suited to local growing conditions and to the market success is impossible. The site should slope enough to provide air drainage as precaution against frost pockets. The soil should be characterized by good drainage, a fair degree of fertility and moisture holding capacity. With the strawberry, as we are finding with the potato, apple and all vegetables, an abundant supply of organic matter, lots of humus in the soil, is essential to maximum returns.

Only vigorous young plants that have never borne fruit should be set. The roots of these will be light colored or white and plump; not dark in color and stringy. In his remarks on raspberry growing Prof. Colby recommended that the reds and blacks be kept at least 500 feet apart to prevent spread of mosaic from the reds. To insure success one should begin with certified plants from plantations that have been inspected and tagged a number of times. It is a distinct advantage to set the plants as nearly as possible in the fall that they may be set soon after lifting.

* * *

In a session devoted to market [illegible] Mr. H. A. Hamneman of the Bureau of Markets, Pennsylvania Department of Agriculture, called attention to the increasing consumption of vegetables. He also showed that competing sections in near-by states and canned products are offering serious competition. Pennsylvania growers must produce high quality products economically, must grade closely and must market their vegetables in the fullest possible condition "to hold their own."

Several growers discussed changes taking place on their local markets. A few were discouraged, but most were optimistic. All agreed that competition has been much more severe by good roads which permit growers who are scores, even hundreds of miles distant to reach markets [illegible] before unavailable to them. But as one speaker stated, "We are here on the ground floor next to the markets. We have a big opportunity, bigger than ever before. Let's get to go after it."

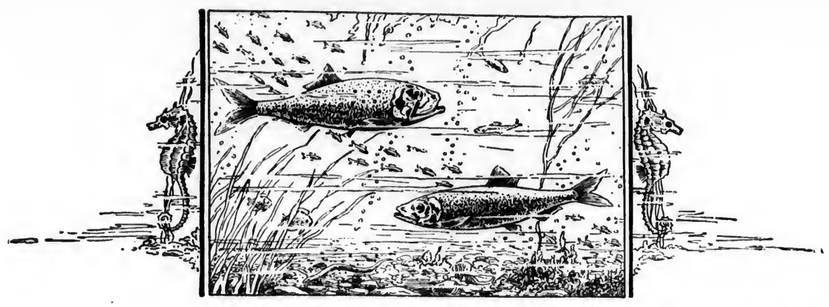
* * *

Mr. Harry S. Brackbill, an enthusiastic and successful roadside market operator told how his market had moved the [illegible] corn from 25 acres this past summer. Other good things were sold in proportionate quantities. Mr. Brackbill believes many growers are overlooking great opportunities for roadside marketing right at their doors. He attributed his success to several things. Only absolutely fresh, home-grown products are sold. Products from neighboring farms are sometimes offered but never anything from city dealers. Everything is guaranteed and in case of complaint adjustment is made to the customer's satisfaction and without question. In the operation of his market Mr. Brackbill has aimed for (1) freshness, (2) cleanliness, (3) courtesy and (4) dependable supply. Those have built a clientelle of repeat customers which is the backbone of the business. Local newspaper advertising has proved profitable.

* * *

Prof. R. A. Dutcher of State College [illegible] explaining the several benefits derived from an abundance of vegetables in the diet presented vegetable growers with some real selling points. It seems many of the things we eat tend to develop an acid residue in the system. Acidosis, etc., and what not may follow. Vegetables on the other hand are peculiarly valuable for the basic mineral salts which they contain. These counteract the effect of acid-forming foods. Leafy and stemy vegetables are particularly beneficial. For example in lettuce and some others there is a trace of copper which helps get lots of iron into the blood, producing an abundance of the rich red life fluid. In addition to iron, calcium and other valuable elements many vegetables, particularly the colored ones green, red and yellow, contain quantities of vitamins. Deficiency of vitamins in the diet is likely to result in impairment of vision, loss of weight or weakening of the

(Continued on page 101)



FISH
that make money for DAIRYMEN

THEY are the fish that go into the making of Iodol. Iodol, when included in dairy feeds, makes cattle grow quicker, heavier, with stronger bones and maintains them in good health. It also makes cows yield more milk of better quality.

Iodol is an essential for the complete ration. This is not an unconsidered statement. The researches and tests conducted by The Park and Pollard Company have been too exhaustive, too successful, to admit of any doubt.

These experiments have proven that Iodol is replete with the minerals necessary for balance—calcium, phosphorus, sodium, iron and iodine. It is also rich in certain valuable proteins.

But proteins, minerals and other elements can be supplied in other ways. Why then is it necessary to add them to the ration in the shape of "Iodol"?

In the first place, the kind of proteins supplied by Iodol Fish Meal are of a type not found among the vegetable proteins, and they increase the nutritive value of all of the other proteins found in the feed. The calcium, phosphorus and other mineral materials found in abundance in Iodol are not only in correct proportion for maximum efficiency, but their form is such that they are more easily soluble, easily digested and easily assimilated by the animal. Then too, there are definite deficiencies in the usual grains and grain products which Iodol supplies. Of these, Iodine is of extreme importance, and we have found this method of administering it to livestock the most efficient and effective yet discovered. It is not the quantity of these various elements which is important so much as the quality, or the form, in which they are consumed. That is the reason for the inclusion of Iodol in Park and Pollard dairy feeds.

An interesting booklet, presenting the facts about Iodol learned by The Park and Pollard Company in its long investigations of the subject, is free to those who ask. A coupon is provided for your convenience.

What is IODOL FISH MEAL?

Iodol is specially prepared from algae-eating fish. These fish are rich in iodine, which they get from their food and also absorb from the sea. That is why Iodol has such a high iodine content—so high that it stimulates growth and increases production.

Only Park and Pollard can mix Iodol Fish Meal in their feeds. Its use is protected by patent.

To be sure of profit-making feeds—look for a Park & Pollard dealer

The Park & Pollard Co
Boston, Mass. Buffalo, N. Y.

POULTRY FEEDS
Lay or Bust Dry Mash
Red Ribbon Scratch
Growing Feed
Intermediate Chick Feed
P & P Chick Scratch
P & P Chick Starter

DAIRY RATIONS
Overall 24%
Milk-Maid 24%

Bet-R-Milk 20%
Herd-Helth 16%
Milkade Calf Meal

OTHER FEEDS
P & P Stock Feed
Bison Stock Feed
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Pigeon Feed
P & P Horse Feed
Pocahontas Table Corn Meal

Gentlemen:
I would like to know how dairy feeds containing Iodol can make more money for me. Kindly send me your free book on the subject.

Name .....

Address .....



AT LEFT: Fruit sprayed *without* KAYSO; note uneven coating. —BELOW: Note even coating on fruit sprayed *with* KAYSO in the mixture.

Better fruit—better prices

with KAYSO in the spray!

What good are rich soil and pedigreed trees if the orchard pests get in their damaging work? And what good are expensive spray materials and labor if your fruit isn't *fully* protected against those pests?

A spotty spray can never be full protection. It exposes fruit and foliage to attack, or burns blotches and lowers the market value of the crop.

Then why take a double loss—on fruit and on spray materials? Use Kayso.

Twofold value of Kayso

Kayso is a calcium caseinate preparation which spreads the spray in a heavy mist that covers the surfaces evenly and completely. You're not only assured of thorough coverage, but Kayso, through its adhesive properties, makes your spray stick. Heavy dews, or even rainstorms, will not wash off Kayso-treated sprays.

And Kayso pays for itself many times-over by avoiding repeat sprayings and losses in low grade fruit. Hundreds of successful orchardists all over the country who are getting top prices for fancy fruit have found that Kayso costs them just 2% of their total spraying expense.

Give Kayso a trial the next time you spray. It will pay its way, and pay you a profit. Ask your dealer or write to us direct for full particulars.

GOLDEN STATE SALES CORPORATION
175 Franklin Street, New York

KAYSO
SPRAY SPREADER & ADHESIVE

SPREADS THE SPRAY AND MAKES IT STAY

BE SURE TO SAY "I saw your advertisement in Pennsylvania Farmer" when writing advertisers.

DIBBLE'S Clover and Timothy Seed

99.50% *Pure or Better*

The Cream of the Crop

Every lot tested in our own Laboratory for purity and germination and sold direct to you under our famous "10-day-money-back-if-you-want-it-guarantee," subject to any test you wish to make.

Dibble's Medium and Mammoth Clover.
Dibble's Fancy Alsike, highest grade obtainable.
Dibble's Alfalfa, northern dry land grown and genuine Grimm.
Dibble's D. B. Timothy, our test, 99.70 at $3.50 per bushel.
Dibble's Recleaned Timothy and Alsike Natural Mixture, average 20% Alsike, less than 1% weed seeds, the seeding bargain of the year.

$5.75 per bushel

A full line of Grasses, Millets, Field Peas, Soy Beans, etc. Barley, Oats, Corn and Seed Potatoes at prices you can afford to pay. Samples, Dibble's Farm Seed Catalog and complete Price List Free.

Address **Edward F. Dibble Seedgrower, Box P, Honeoye Falls, N. Y. Headquarters for Farm Seeds.**

EVERY BAG has a TAG showing PURITY and GERMINATION TEST

(Continued from page 8)

system in a number of ways. Finally vegetables are extremely valuable in furnishing roughage or bulk without which healthy intestinal activity is impossible.

Several quotations from the address of Prof. F. W. Geise of the University of Maryland:

"In ordering seed beans demand stock produced at high altitudes in the West if you would minimize danger of anthracnose or pod spot.

"Plant Alaska peas just as early in the spring as possible to secure highest yields.

"No other spinach has proved as good for late summer and fall planting as Virginia Blight Resistant Savoy. This seems to be more hardy than ordinary Bloomsdale Savoy.

"The Mary Washington strain of asparagus is proving most popular.

"One grower who had 50 acres of tomatoes grew the crop with motor power alone, no horses being used."

* * *

In addition to those reported a number of other State College people and growers presented lively talks on various phases of vegetable growing. The Vegetable Growers banquet at the Penn-Harris hotel was a real success. The vegetable exhibit, a new thing, included a number of very creditable entries. At the business meeting the following officers were elected for 1929: President, Gilbert S. Watts, Bellwood; vice-president, J. M. Huffington, State College; secretary-treasurer, Walter B. Nissley, State College; directors, H. N. Dudley, Bustleton, W. H. Evans, Plainsville, Wm. H. Brinton, Parksburg; C. L. Meyer, Pittsburgh; C. M. Smith, Lewistown; R. K. Garrahan, Forty Fort and H. G. Ardrey, Jersey Shore.

Dues were set permanently at one dollar per year. Any one who wishes to join and receive the quarterly Pennsylvania Vegetable Growers' News may send check to Walter B. Nissley, Secretary Pennsylvania Vegetable Growers' Association, State College, Pa.

Horticultural Association

THE seventieth annual meeting of the State Horticultural Association of Pennsylvania was unusually well attended; over 400 were present at several of the sessions. The secretary's report showed a paid membership for 1928 of 711, of whom 364 are members of affiliated county horticultural societies. The treasurer's report showed a balance of $1,058, of which $700 is the life membership fund. The officers for 1929 are: President, J. S. Rittenhouse, Lorance; vice-president, C. H. Hayes, North East; secretary, S. W. Fletcher, State College; treasurer, C. B. Snyder, Ephrata.

The exhibit was no larger than that of last year, but much better in quality. The improvement in this respect during the past ten years has been marked. The judge, and several others, remarked that the Pennsylvania fruit on exhibition was much superior to the exhibit of New York apples at the recent meeting of the New York State Horticultural Society. The exhibit hall, however, continues to be dark, crowded and evil smelling, making an unattractive setting for what might have been a beautiful display. The exhibit comprised 13 barrels, 27 boxes, 137 bushels, 67 trays, 116 apple displays and 388 plates.

There were three county horticultural society exhibits—Chester-Delaware, Bucks and Luzerne, which were placed in the order named. The county societies winning the largest number of premiums, by their individual members, were Franklin and Chester-Delaware, which were tied; the premium was split between them and the banner awarded to each for six months. The Gabriel Hiester cup, awarded to the exhibitor taking the largest number of premiums, was won again by S. L. Smedley, Jr., of Newton Square. C. P. Barnard, of Unionville, exhibited the sweepstakes bushel. There were only two entries in the "commercial pack" exhibits; which is of barrels drawn at random from storage. The Association voted to buy next year a quantity of commercial packs in storage in different parts of the state, both barrels and baskets, and exhibit them under number (without the name of the grower) as an educational feature, to call attention to the need of improving the commercial pack generally.

Sesolutions

The Association passed resolutions favoring the erection of a Farm Products Show Building in Harrisburg and urged that this be not merely an Exhibition Hall, but also contain rooms for holding

(Continued on page 18)



WOOD'S SEEDS
For Fifty Years the Choice of Successful Farmers and Gardeners
Golden Anniversary Catalog Mailed Free
Send Post Card or Letter
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32 S. 14th St., Richmond, Va.
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Dempwolf's Fertilizers
20% SUPERPHOSPHATE
Dry---Drillable
SAVE FREIGHT, HAULING, STORAGE SPACE, LABOR OF HANDLING
Figure your cost on the delivered per unit basis and you will see the saving. 1,600 lbs. 20% Superphosphate contains the same quantity of phosphoric acid as 2,000 lbs. of the 16% grade.
No business-farmer will overlook these savings.
York Chemical Works
York, Pa.
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—grown from
Selected Stock
New crop, tested seeds sure to produce. Sold for 59 years to satisfied customers. Prices reasonable.
FREE extra packages with every order.
FREE—Large catalog with hundreds of pictures of vegetables and flowers. Send your own and neighbors' addresses TODAY.
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Reading Bone Fertilizer
Quality Service Satisfaction
HIGH GRADE FERTILIZERS
READING PLANT FOOD
(For Lawns and Gardens)
READING MEAT MEAL
(This trade mark means quality)
Ask your dealer for Reading Bone Fertilizer.
We will mail a 5 lb. package, postage paid, upon receipt of $1.00.
Reading Bone Fertilizer Co., Reading, Pa.

It will **PAY YOU TO INOCULATE** your Legumes with **SCOTT'S BACTERIA.** Ask about our introductory offer guaranteed. Our **New Seed Guide is FREE** for the asking.
O. M. SCOTT & SONS CO.
Desk 7 *We Pay the Freight* Marysville, Ohio

National Farm Equipment Week

By R. U. BLASINGAME

FARM Equipment Week is scheduled to be observed February 18th through the 23rd. The idea of the observation of this week is to bring the attention of equipment dealers throughout the country to their responsibility to agriculture. Also to bring the attention of farmers to the great contribution which equipment manufacturers have brought to the science and art of agriculture.

Before 1850 most of the farm work was done by hand labor. The date 1850 marks the beginning, or we might call it a revolution, in the application of machinery to the agricultural industry. Since that time our nation has progressed in all other lines very rapidly. This, I think, is due largely to the fact that through the use of equipment many people were released from the burden of gaining a livelihood through hand methods to the development of such things as transportation, art, literature, and the development of such conveniences and necessities as the telephone, telegraph, automobile, railroad, air transportation, radio, power farming, and other lines of activity.

The equipment dealer, wherever he may be located, owes it to the farmers in his community during Farm Equipment Week to show all of the modern developments in farm equipment. In many sections of the country farm equipment dealers are holding schools and demonstrations for the purpose of acquainting their customers with the newest devices in farm equipment.

Order Repairs Early

On the other hand, farmers owe it to themselves and their families to know about and adopt new equipment with which they can do their farm work cheaper and better.

It is a good idea also for farmers to look over their machinery in ample time to place orders for repairs. The farm equipment industries prepare, during the winter, for furnishing repair parts, and they can serve agriculture to good advantage if the repair parts orders are sent in early. One cannot wait until the day he begins to use a machine and expect the implement industry to always be in position to supply him with repair parts. Very often expensive delays are brought about due to late orders for repairs.

It is evident that within the next few years the general-purpose tractor will come into common use. Farm teams in Pennsylvania are becoming older each year and fewer young horses are being produced. Several of the leading manufacturers have developed quite satisfactory general-purpose tractors. These tractors will plant, cultivate and spray. National Farm Equipment Week will be observed, and the equipment dealer or the farmer who does not avail himself of the opportunities may not succeed in 1929 as well as his neighbor.

Shingles for Covering

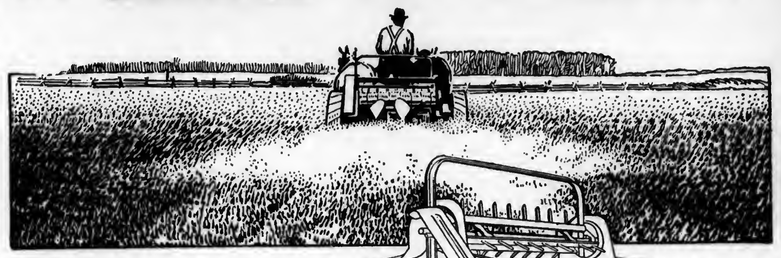
H. S. H. writes: "Is it practical to cover the sides of old houses to make them warmer and save painting costs?"

If heavy waterproof paper or half ply roofing is first tacked on top of the old siding, then a good grade of wooden shingles put on, it adds very much indeed to the warmth of the wall and makes an attractive finish which will stay in good condition for a great many years. Most people use the standard type of shingles; but the larger size or puncheon type is coming into use rapidly and many prefer the appearance these make.

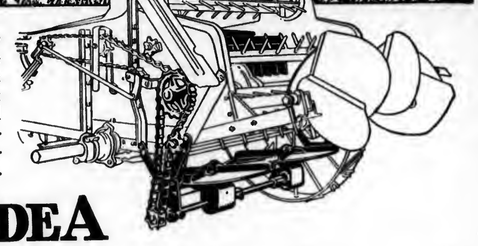
In some cases no treatment whatever is given these wall shingles, while others oil them or varnish them. Very attractive effects can be secured by using colored creosote dips, and an occasional recoating helps to keep up the appearance.

I. W. D.

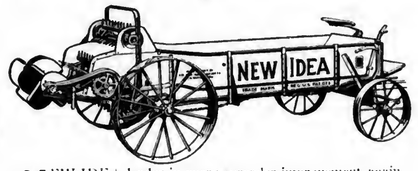
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MANURE, the great fertility *restorer* — and LIME, the great fertility *releaser!* Naturally the inventors of the first and most famous manure spreader again lead in making their machine convertible into the finest one-man, wide-spread lime sower on the market.



The NEW IDEA *Lime Spreading* Attachment



A simple, strong, low-cost device that attaches to any New Idea Model 8 Spreader in thirty minutes or less and makes of it an absolutely practical, perfect-acting lime sower. Load the box, set the feed (1½ to 5 tons per acre) and spread—no shoveling back of load, no dusty labor. Handles lime, marl—anything that is finely pulverized. Large capacity. Spreads 15 to 20 feet wide. Built the New Idea way, furnished only for the New Idea Spreader.

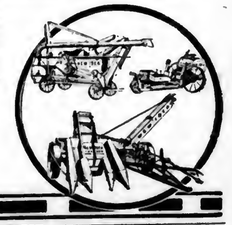
NEW IDEA, leader in every spreader improvement, again shows the way with this remarkable Lime Spreading Attachment. Easy to put on and off; perfect in performance. When you buy a spreader, you certainly want the famous New Idea Model 8—light running, easy loading, flawless working—the lowest **cost-per-year** spreader ever built. And now—since you can get this lime attachment—you want the NEW IDEA more than ever.



Special Non-Wrap Upper Cylinder
For use where unusually tough and stringy manure prevails. Completely overcomes wrapping and choking of cylinder. Furnished as an extra.

Present owners of a New Idea Model 8 should write at once for description of the new attachment.

Manufacturers of Spreaders, Lime Sowing Attachments, Husker-Shredders, Transplanters and Two Row Corn Pickers. Ask for full descriptions on any of these machines.



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SELECT SELL THE NEW IDEA SERVICE
Factory at Coldwater, Ohio, U. S. A.

A FRAME $10 AS LOW AS
Buy Direct, Lowest Factory Prices Do Your Own Sawing. Make Money
HERTZLER and ZOOK PORTABLE WOOD
SAWS
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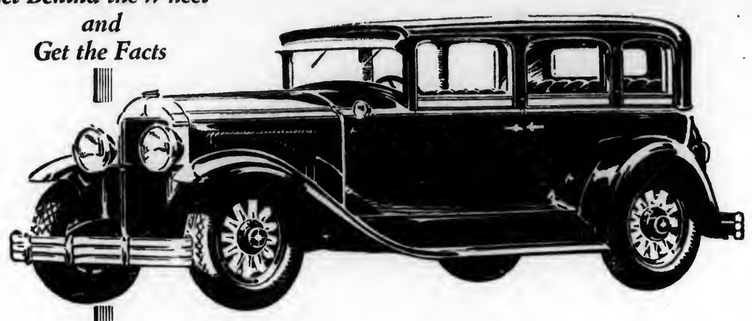
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The Universal Plant—Grows Anywhere
Builds up worn-out pastures and meadows. Adapted to any climate; resistant to weeds; will furnish five times more pasture than the ordinary mixed grasses; thrives well during the hot, dry summer months. **Now one-third the price of Red Clover.**
Write for free copy of our new **Seed Guide**, the best book we have ever offered. Tells how to avoid weeds.
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WIN THIS NEW FORD and $500.00 CASH!
OR $1,000.00 CASH
FREE! A little pleasant pastime may bring you this latest FORD SEDAN, worth $495 plus freight and tax, and $500 besides. Many other valuable prizes in my new advertising offer. I have already awarded thousands of dollars. Myrtle Marsh of Minnesota, used prize money to pay hospital bill; Phyllis Limback, Ohio, entered contest to while away time and was greatly surprised to win check; Marion Repp, Md., had lots of fun working puzzle and didn't even expect her prize. Many others. YOUR TIME TO WIN NOW.
NEW DESIGN
4-Wheel Brakes 60 Miles an Hour
The new Ford car is taking the country by storm. Greater beauty, more room, more power, 60 m. hour speed, new gear shift, 4-wheel brakes, economy of operation, larger tires, riding comfort—Win it now without cost to you.

"Crime & D 3000 LBS. XT NO" **Can You Solve it?**
The PICTURES ABOVE when changed into words, represent a famous saying. Can you figure it out? If so, write the answer on the coupon and **mail at once.** 95 Points toward the Ford Sedan given for correct answer. Only 150 more points will positively WIN. Only 1 prize to a family.
$500.00 For Promptness
Extra Prize of $500.00 Cash will be given to First Prize Winner who qualifies promptly. Here's your chance to win a fortune of $1,000. Send your answer to the above puzzle TODAY.
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Nowhere an engine.....
nowhere a chassis.....
nowhere Bodies so Advanced and so Admirable as Buick's

Coupes . $1195 to $1875
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These prices f.o.b. Buick Factory. Convenient terms can be arranged on the liberal G. M. A. C. Time Payment Plan.

Nowhere in the world is there an engine more highly developed than Buick's six-cylinder Valve-in-Head power plant. Greater piston displacement—improved carburetion.

Nowhere is there a chassis more sturdy or more modern than Buick's. And nowhere are there bodies more fashionable and luxurious than Buick's new Masterpiece Bodies by Fisher. Graceful new lines—radiant new colors—magnificent upholsteries.

See the new Buick . . . *drive* it . . . compare it point by point with other cars . . . prove to your own satisfaction that it sets the standard of performance, appearance and value for 1929!

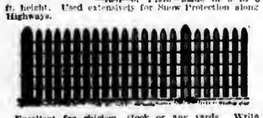
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NATURAL SOIL SWEETENER
Not Ground—Natural Precipitate
Fine as flour.
Granulated for easy sowing.
Highest Analysis. Quick Acting.
Will not burn anything.
LOW COST.
Write for guaranteed delivered prices to
ALBA MARL LIME COMPANY
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FENCING We manufacture a ready made Cedar Picket and Galvanized Wire Fence—interwoven—Painted Green—Red—or Plain—made in 3 to 6 ft. height. Used extensively for Snow Protection along Highways.



Excellent for chicken, Stock or any yards. Write for prices and catalog. Agents wanted.
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Hyatt Roller Bearing equipped. 14 bar 5 tooth track cylinder. Three distinct motions in straw. Double eccentric driven Two cleaning fans. Double belted. Reasonably priced and generous terms. The purchase price of a Baker is not an indebtedness—only an investment. Visit our factory. You are welcome. Complete tractor and thresher catalogs free.
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Hydrated
Ground Burned
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Our lime, burned from Western Pennsylvania high-calcium grey limestone and sold in these three forms for the past 18 years, represents the standard, unfailing and economical method of sweetening the soil. The wonderful results enjoyed by our many customers over this period of time prove these facts. Can anyone afford to waste both time and money by using substitutes? If your dealer cannot furnish our Agricultural Lime write to us for prices.
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Production Talks

By W. D. ZINN

A PREVALENT idea in the mi of many institute speakers a extension workers is that farmers longer want production talks. Th ple, is that we are already produc more than we have a good market and we admit that point is well ma Their contention is that what the fa ers need now is to know how to mak their products in a better way. Ag we say that argument is good.

Some of these reformers say that institute speakers should spend time discussing such questions as fa relief, Mussel Shoals, prohibition, ta ation, community betterment and thousand and one other things t have to do with the lives of the pe We again admit that these are i questions, but they have been discus by the most able statesmen of t country and yet we are about as m up in the air as to their solution as were ten years ago. The air is charged with these very able dis sions and all we need to do is tune and get them.

We do not need to grow more m for if we did we surely would sel at a less price, but while we are av aging in this country only about bushels of corn and 15 bushels of wh and one ton of hay per acre wh double those yields are easily possib is not the discussion of better meth very important? Would not the far ers of this country be benefited if th could produce all they are now produ ing on half the acreage?

What Do Farmers Want?

Half the farmers of the country producing farm crops at an actual l Should they be permitted to go ou this business or should they not induced to go into other businesses improve on their methods?

The writer claims to have had l ear close enough to the ground to h from these farmers who are interest in production talks. During the mo of May he received and answered l letters and ninety per cent of th letters contained questions of produ tion. If these farmers had been sa fied with their present yields th would not have gone to the trouble asking questions about them.

I have spent 45 years studying t questions of soil fertility, legumes t tation of crops, manures, livestock c I claim to have a message for the far ers of the country on these subjec though I know comparatively lit about them. Shall I quit discussi these subjects and take up the disc sion of those more popular topics which the most expert economists this country after a life-time study the same have not been able to agre

If farmers want to be entertain they certainly would not hire a farm to do it. If they want information national matters I believe they will go to those whose business has led th to make a life study of the same.

The men are all dead who could g expert advice on all subjects. We l in a day of specialties and specialis If I am puzzled on a theological qu tion I go to my pastor. If my dig tive organs fail to function I call on t family physician. If my livestock i sick I call the veterinarian. If an ag tries to sell me stocks or bonds I t a banker before I make a trade wi him. If a candidate asks me to vo for him I ask him what he has don for his country to merit my support.

To Maintain Fertility

After making comparison of returns from both cows and chickens for the year of 1928 we found in our particular case that chickens paid the better. As our farm consists of but 40 tillable acres it seems that we should specialize in one or the other. Inasmuch as our poultry account showed the bigger profits it is natural that we would rather discontinue the cows, but the maintenance of soil fertility puzzles us. Can we keep up the soil by plowing the hay crop under and using commercial fertilizer at seeding time? Also by liming. With the regular crop rotation which one practices, will the chicken manure do best? Lewis Brown.

FIRST I want to compliment our correspondent for keeping accounts. Many a farmer would have gone on for ten years not knowing whether the cows or the poultry were paying the better. Farmers are more derelict in keeping accounts than in almost any other one thing.

Some time ago I had something to say about taking an inventory and the type made me say that not more than 50 per cent of the farmers took an annual inventory. What I meant to say was that not more than five per cent made an inventory. This estimate was made after asking thousands of farmers the question.

I suppose our correspondent has in mind increasing the number of poultry kept. Here is a question for him to consider before he sells the cows. Will I make as much per hen by keeping 2,000 chickens as I am making on 1,000? I have made more money keeping sheep than by keeping cattle and many years ago I decided to double the number of sheep and cut down on the number of cattle. The result was that I did not make much more money on the flock than I had made on half the number. It might turn out that way with the poultry. But that is not the question in which our correspondent seems to be interested. His question is: Can he maintain the fertility of his land without manure? Undoubtedly he can do so; and it can be done by the plan he suggests.

Plant Food Returned

What is the manure but the ground-up crop that he grew on his land and the animal took out twenty-five per cent, or about that as toll for grinding? Suppose he turns down a legume crop, he is turning back to the soil not only all the plant food taken out of the land but he has drawn from the air a lot of nitrogen which he is giving to the land.

Manure is composed of organic matter plus plant food and the crop he turns down is composed of organic matter plus a lot more plant food. The manure has but one advantage over the crop turned down and that is it is a little quicker and easier digested. Now if he adds commercial fertilizer he will, by his plan, not only maintain the fertility but will increase it rapidly.

We have been stressing for years the importance of turning down green crops or organic matter; but we have not been careful to say that green crop should be a legume. Farmers have felt that they could not afford to buy lime for their land, which they would have to do if they grew cowpeas or lespedeza. Now let us see if their reasoning is right.

Almost any kind of well drained land will produce a ton of clover if well limed. This ton of clover will take from the air about forty pounds of nitrogen. This nitrogen will cost around twenty cents per pound if bought commercially—that means that we are putting into the land about $8 worth of nitrogen on every acre. But we are doing more than that; we are bringing a ton of plant food up from below the plow depth. We, in the past, have not laid enough stress on the importance of growing deep-feeding plants. This is one great advantage in growing sweet clover.

Harrow the Pasture

In a recent issue I published an article by W. H. Zinn on Improving Our Pastures. He states that he built up some old pasture land by applying limestone and superphosphate, harrowing and sowing a mixture of seed.

I would like to know if the harrowing was done on the old sod, or was it plowed and harrowed? I have some pasture land which I am planning on handling in this manner and I am anxious to know if the seeding on the old sod and harrowing without breaking the sod was the way he handled it.
Clarence Kohn.

The sod was simply harrowed with a cutaway harrow, a disk harrow will do.

POWER



THE MOST POWER, THE LOWEST COST, THE LONGEST LIFE—these three essentials of farm tractor service have made the Powerful Hart-Parrs the sensation of the power farming world. The exclusive Hart-Parr force-feed, fresh-oil lubrication system, and the exclusive Hart-Parr shunt system of burning low-grade fuels has made tremendous power at low cost possible for the life of the tractor. That Hart-Parr tractors are cutting crop production costs is attested to from every quarter. Reuben F. Anderson, Chief Farmer of the North Dakota State Prison Farm, Bismarck, N. D., proffers the following convincing proof of the low cost of the Hart-Parr power:

"On April 28, 1928, we made a fuel economy and speed test on the Hart-Parr 18-36 owned here at the North Dakota State Prison Farm. Tank was filled with distillate, pump with oil, radiator with water. Plowing was started at 10:40 a.m. *with a four-14-in. bottom plow and a two-14-in. bottom plow,* (*6-14-inch plows*) hitched tandem. Plows were set at 5¾ inches and were never used at less than 5½ inches during the entire test. Made one stop from 1:10 to 1:20 p.m. to add 8 quarts of water to the radiator. Shut off the engine at 3:50 p.m. and checked on fuel, oil and water. 25 gallons of distillate, 3 quarts of oil and 4 quarts of water were needed to fill the tractor.

Land was measured from where plows entered to where they left the ground.
Length of land plowed. . . 148.96 rods
Width of land plowed . . . 16.84 rods
Total acres plowed in 5 hours . . 15.67

25 gallons distillate at .097 . . **$2.42**
3 quarts oil at .72 per gallon . **.54**
Cost of Fuel and Oil 2.96
$2.96÷15.67 = .189
Fuel and oil cost was but 18.9 cents per acre."

A new feature you will appreciate is a third speed of 4¼ miles per hour in Hart-Parr 12-24 and 18-36 tractors which speeds up hauling and field work.

Ask the nearest Hart-Parr dealer for a demonstration and be sure to send coupon today for the free booklet "Profits Thru Power."

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Charles City, Iowa, Dept. O-1
Please send me, free, your booklet "Profits Thru Power."
Name . . . . . .
Address . . . . . .
R. F. D. . . . . .

HART-PARR COMPANY CHARLES CITY IOWA
FOUNDERS OF THE TRACTOR INDUSTRY



More and more farmers are turning to
CAMBRIA FENCE

To anyone who knows Cambria Fence, it is easy to see why more and more farmers are using it.

Cambria Fence is a hinge-joint, cut-stay standard field fence. It is made from a grade of Bethlehem Steel that Bethlehem Metallurgists have selected as the best for the purpose. The zinc coating, applied by a special process, does not crack, flake or peel. And the Flexo-Joint and the Tension-Curve enable Cambria Fence to be tightly stretched so as to retain its strength and serviceability.

All in all, Cambria Fence is a high quality product—honest, dependable. Set up Cambria Fence, and you won't have to think about fence again for a long time. That's why so many farmers are using it—more of them every year.

BETHLEHEM STEEL COMPANY
General Offices: Bethlehem, Pa.

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Fire and Lightning Proof
ARMCO INGOT IRON Resists Rust
It does not pay to buy cheap painted steel roofing when you can get a guaranteed pure iron roofing that lasts five to ten times longer than the ordinary steel roof. Armco Ingot Iron Roofing is your most economical buy. *It will pay you to send for our free illustrated catalog. Write today.*
American Iron Roofing Co., Sta. 43 Middletown, O.
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Trucks—Wagons
ELECTRIC Steel or Wood Wheels are built to fit *any* skein or axle. ELECTRIC Low Wheel Handy Farm Trucks save high lifts.
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Poultry Doings at New Jersey Agricultural Week

By. R. L. SCHARRING-HAUSEN

MEMBERS of the New Jersey State Poultry Association and interested poultrymen in numbers turned out to the meeting of the State Poultry Association held in conjunction with Agricultural Week at Trenton, attended the luncheon under the auspices of the R. O. P. Association and inspected the Baby Chick Show and commercial exhibits in the Armory during the third week in January. A varied and interesting program of addresses on subjects of an intensely practical nature held the attention of the New Jersey poultrymen and visitors from outside the state who attended the meeting.

First on the program was L. M. Black, N. J. state extension specialist in poultry, who chose as his topic "What Did We Learn from New Jersey's Better Pullet Campaign?"

In developing his topic, Mr. Black explained that last season the Extension Department interested 230 breeders rearing about 300,000 chicks in methods for rearing better pullets on the standpoints of better sanitation and management methods. Among the points emphasized were early hatching; clean range, rotated range or confinement brooding; separation of the young stock from old birds; clean brooder houses; cleaning the dropping boards in the laying houses daily to lessen flies; wiring the dropping boards and the use of a screened manure pit.

Lower Mortality

Cooperators reported that from the original chick flocks they removed 124,615 cockerels, housed 107,983 pullets, culled 10,990 pullets and sustained an average loss of 19 per cent. However, where all points on the program were observed, the mortality was but 14.2 per cent; where merely the screening of the manure pit was omitted the loss was 17.2 per cent; but where nothing at all was done, the mortality rose to 21.2 per cent. Carrying out the full program enabled the poultrymen to raise seven chicks more out of every 100 placed in the brooders, with the added advantage that the pullets housed were undoubtedly of better quality also. Mr. Black stated that the results showed proper sanitation in the poultry plant to be of utmost importance, a fact which was emphasized by the severe losses noted on farms where poor care was the hard lot of the young and old birds.

A talk along the same lines of a better management program was then given by Mr. W. H. Rice, poultry specialist, University of Maryland, under the title "Turkeys Return to Eastern Farms." Mr. Rice spoke of the factors about which we all know which have almost wiped out the turkey industry in the East, explaining that the lack of scientific knowledge about turkeys had been responsible under changing conditions, and how the leadership in turkey raising had shifted from New England to Pennsylvania and Virginia.

"Better Poults" Campaign

Mr. Rice stated that among bad practices employed was that of selling off the best turkeys each year and retaining the smaller and poorer specimens for breeders, and on top of that, neglecting to give these even proper care. In order to bolster up the turkey industry in Maryland the College started a "Grow Better Poults" campaign. Mr. Rice outlined the points made in this campaign, many of which were revolutionary according to established customs and consequently slow to be adopted by turkey growers. The methods recommended are given below:

1. Use good pure-bred breeders, 14 to 20-lb. hens and 25 to 30-lb. toms. Mate one tom to 10 or 15 hens.

2. Put each flock in a fenced lot of about one acre, using clean ground, and providing a roosting shed.

3. Hopper feed a good laying mash from Feb. 1 to June 1 in addition to the grain ration, and at other times give one feed of mash per day. This will cause a greater egg production than can be had on range.

4. Hatch early, during April, May and the fore part of June, using incubators.

5. Brood the poults in brooders, and keep them away from old turkeys and chickens.

6. Provide a clean house and an acre of clean ground for each 100 poults.

7. Feed a good growing mash in hoppers.

8. Keep records of feed costs and mortality.

9. Separate sexes at 12 to 14 weeks or as soon as possible.

Mr. Rice showed that this program when followed out brought good results, by quoting the experience of one man who started 90 poults under this plan and raised 72, while out of 152, which he started under the old methods which he had been using, only 30 survived!

Mr. Rice then paused to pay tribute to the Baker Turkey Farm, telling of their outstanding success in turkey raising, and calling them pioneers in adopting practices now recognized as necessary for success. He then went on to give examples of farms which had taken over the new methods with good success.



W. H. Rice, Poultry Extension Specialist, University of Maryland. Inspecting Turkey from the Certified Flock of George Shaffer.

A new development in Maryland is the official certification of turkey flocks according to vigor and freedom from disease and conformity of the birds to the Standard of Perfection. Several flocks of Maryland turkeys have already been certified, and in the photograph Mr. Rice is shown examining one of the birds owned by Mr. George Shaffer who has a certified flock.

Prof. W. C. Thompson then brought the attention of the audience back to New Jersey, in a talk on "What May We Reasonably Expect 1,000 Pullets to Earn in One Year?" Prof. Thompson, in his capacity as head of the Poultry Department of the N. J. Experiment Station, summarized the figures he had obtained from the study of 30 farms in the state keeping White Leghorns. In prefacing his talk, Prof. Thompson stated that the results obtained were somewhat favorable, as the men were good poultrymen, had no serious outbreaks of disease, and sold many of their eggs at good retail prices.

Starting with 1,000 birds in November, the farms ended with an average of 488 the following October, losing 150 birds from death and 362 from culling. This gave a production of 172 eggs per bird based on the survivors, or 144 eggs based on the original number. Average price per dozen was 52.8c per dozen, total income from eggs and stock $5,897.31, cost of feed $1,982.75, and net income above feed $4,131.76, or a net income over feed per bird of $4.13.

Large Plants Profitable

Many poultrymen present gave their opinion that if the results were figured on a wholesale basis the income would be cut a fifth or a third; the figures given, however, were actual. Prof. Thompson went on to state that if the original cost of the pullets was to be considered the income would be further reduced by something over a dollar, with taxes, interest, other overhead items and labor still to come out. He gave as his opinion that the 1,000 to 1,500-bird plant, which is about what one man is able to handle, has too narrow a margin of profit, and stated that larger plants, which could be operated more efficiently by more labor, would give a greater margin.

In discussing the loss of potential laying capacity in such a plant, which amounted to over 50 per cent during the course of a year, it was pointed out that mortality is steadily increasing, and amounts on the average plant to from 10 to 25 per cent per year. The loss due to culling is a factor which can be reduced by breeding a strain of greater laying persistence, and it is possible that breeding and sanitation may reduce the mortality factor as well.

Poultry Observation

Last on the program was Mr. W. H. Allen, former extension specialist in New Jersey and at present director of research for the Acetol Products Company. Mr. Allen spoke very interestingly of a trip he recently took throughout the United States, under the title "Observations on Poultry Farming Throughout the United States."

Mr. Allen stated that in Ohio he thought there would be a good market for baby chicks the coming season, as the farmers seemed to have plenty of grain, which is what causes them to buy rather than egg and poultry prices. From Ohio he turned to Florida, with the impression that it was a very poor state for poultry, as grain prices are very high and egg prices low, since the big hotels there buy their eggs from Chicago rather than locally. In Georgia he saw one of the best strains of Plymouth Rocks in the country, bred by a woman who has gone quietly about building up a strain of high producers. He told also of a country-wide cooperative Red broiler venture, fostered by the banks and the

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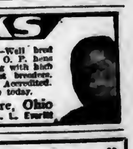
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county agent, which had resulted in making some money for farmers there.

In Alabama he saw poultrymen brooding chicks successfully with a wood-burning "Dutch Oven" arrangement made of bricks and sheet metal. Mr. Allen thought that the southeastern United States needed farm relief more than any other section, as the farmers there, growing cotton on terraced lands in a backward way, produce at a cost of 27c per pound in direct competition with Texas and Arizona, where cotton costs only 10c, with the result that the farmer's income is only $165 per year, much of it in trade! Diversified farming seems to be the only hope of relief.

Heated Buildings

In Washington he found poultrymen employing a heated dry floor as a preventive of coccidiosis in chicks, and in Idaho poultrymen were brooding in a flue-heated building on the same principle as is used in drying sweet potatoes. In Texas many poultrymen feed cottonseed meal to poultry, with no harmful effect except that eggs placed in storage develop a black yolk within a few weeks. Parts of Texas apparently offer a good chance for poultry raising, with Kaffir corn at less than a dollar a hundred and the New York market 1,500 miles nearer than it is to California.

Parts of Arizona, near Phoenix and Tucson, he described as garden spots under irrigation. Poultry keeping there is reduced to its simplest terms. The best type of poultry house consists of a dropping board with roosts above and nests below, but no floor, walls or roof! There is no rain and no cold weather, and hens in—or on—such quarters, built at the cost of 25c per bird, actually do better than in a conventional building. No roup or coccidiosis is present to trouble the poultry keeper. The Southwest is anxious to develop, and the booster and boomer find a fertile field to operate there.

In California Mr. Allen found some amusing examples of the poultry "development" idea, with high paper profits; but in the Petaluma section he found a highly developed cooperative organization marketing standard packed frozen broilers in the East, finding a profit where there had been a loss, and getting ready 100 carloads of low grade eggs for Argentina at a price better than could be secured locally.

In Oregon he saw pullets which had been successfully vaccinated against chicken pox, and in Washington learned of a nicotine capsule treatment for worms and saw houses designed for temperature control.

New Jersey Heads List

The much vaunted pedigreed birds of Vancouver he considered inferior to birds produced nearby. Near Salt Lake City he found the Mormons producing a special grade of lemon yolk eggs for a special trade.

In Ames, Iowa, the poultry department was working on a building designed to avoid the sudden drops of temperature due to weather changes, which are held responsible for sickness and loss of production; and Mr. Allen predicted that in time we would be designing an entirely different type of house than that which we are now using.

In concluding his talk, Mr. Allen stated that after his trip to nearly every state of the Union he felt that no section offered greater opportunities to the poultryman than did New Jersey and adjoining territory.

About 150 persons attended the R. O. P. luncheon at noon, and listened to short talks by Prof. Thompson, Mr. Jones of the State Department of Agriculture and Mr. Schmidt, Secretary of the R. O. P. Association.

WHEN hens are huddled together to keep warm, a quart of small grain scattered in the litter will start them to scratching for it, and the exercise will keep them warm. It's on the same principle that we work in the woodshed on cold days instead of hugging the stove.

8 weeks then BIG WAGES
In eight short weeks I train you for auto jobs open everywhere. Why work for small wages? No schooling required; no experience unnecessary. Learn by doing. Write for amazing offer. Become an expert.

AUTO Tractor and AVIATION Ready for Big Wages
Big firms want Ohio State trained graduates now earning up to $8,000 a year and more. Learn with real tools on real cars.
WE PAY YOUR R. R. FARE to our Training Shops and Board You for Life.
Save One-Third NOW on our Special Tuition Offer. Write today or send coupon for particulars and big FREE book.
No facilities for colored men.

OHIO STATE AUTOMOTIVE SCHOOLS
Cincinnati, Ohio, Dept. G-33, Cleveland, Ohio
Mail this Coupon to Nearest School
OHIO STATE AUTOMOTIVE SCHOOLS,
Dept. G-33—Without obligation, please send full Information and Big Free Book.
Name .....
Street .....
Town ..... State .....

Set it and forget it
STEADY HEAT IN ALL WEATHER — SAVES CHICKS FROM CHILLING AND SMOTHERING AND CROWDING

WISHBONE Oil Brooder
Every chick gets right amount of heat and fresh air. No pets—no blue flame at fingers of match. Flames can't go out unless you put it out. Set it and forget it. No bowls or strainers to clog. No mess, no odor. Chicks and turkeys. Shipped direct or from dealer. Actual capacities: 50 to 100 chicks; 200 to 350 chicks; 316; 400 chicks, $19; 600 chicks, $24.50.
Dealers write for proposition.
Write to Dept. 12

American Coal Brooder
Burns Hard or Soft Coal or Coke
Dependable—economical—great coal capacity—little attention. Hover revolves at touch of button. Heated section raises, permitting quick, easy regulation or any part around door. Drafts eliminated. Proper brooding temperature maintained. Write for free catalog.
AMERICAN COAL BROODER CO., Dept. 12, Cleveland, Ohio
AMERICAN and WISHBONE Brooder Sold Here

FENCE LESS THAN 1½ PER RUNNING FOOT
New Bargain Book Free
Write me today. Get the biggest bargain I've offered in 40 years. Save big money on Farm and Poultry Fence, Gates, Steel Posts, Barb Wire, Roofing, Paint, Oil Stoves, Brooders.
I PAY THE FREIGHT
No extra to pay—My prices are low enough as you about ½ usual cost—Quality guaranteed—24 hour service. Write today.—Jim Brown.
The Brown Fence & Wire Co., Dept. 2915, CLEVELAND, OHIO

EMPIRE WAGONS STEEL WHEELS
Low steel wheels (plain or grooved tires) make loading and hauling easier. Steel Wheels to fit any axle; any load. Make any wagon good as new. Write for Reduced Price Offer.
EMPIRE Mfg. Co., Box [illegible]

INTERNATIONAL PAPER AND POWER COMPANY
New York, December 26th, 1928.
The Board of Directors have declared the regular quarterly dividend of sixty (60¢) cents a share on the Class A Common Stock of this company, payable February 15th, 1929, to Common stockholders of record, at the close of business January 1st, 1929.
Checks to be mailed. Transfer books will not close.
R. G. LADD, Assistant Treasurer

Learn Electricity In 12 Weeks by Actual Work. Not one of our graduates ever sent books. Earn while you learn. Many earn board and room. Courses include Aviation and Radio. You don't need advanced education or experience. Write today for BIG, NEW, FREE BOOK.
COYNE ELECTRICAL SCHOOL, Dept. 24-A, Coyne Building, 500 South Paulina Street, Chicago

You Can Carry a Loan of $10,000 for $35 at the end of each six months. This includes interest and principal. All under Federal Farm Loan Act. Write for booklet.
Ohio-Penn'a Joint Stock Land Bank, 204 Yoffee Bldg., Harrisburg, Pa.

200,000 White-Brown Buff Leghorns **CHICKS** SHIPPED C.O.D. Send No Money
PURE STRAINS—Tancred, Hollywood, Barron, American S. C. White Leghorns; Brown Leghorns, Anconas. Eggs and Chicks pure-bred and Buff Leghorns. Eggs and Chicks produced from some of the finest matings in Pennsylvania. Breeders Specializing in High Egg Production. Dependable Chicks for Commercial Poultrymen. 100% Live Arrival. Special Service. Place orders early. Send postcard for your copy of our interesting catalogue. Actual capacities: 50 to 100 chicks, $7.50; 200 chicks, $16.50; 500 chicks, $39.50; 600 chicks, $24.50.
Dealers write for proposition.
Write to Dept. 12

5 Lb. LEGHORNS
The old reliable heavyweight stock. Produced high up on Pennsylvania's healthy mountain top. Get your chicks from certified record strains above 300 eggs. R. O. P. Hollywood, Tancred, Barron Matings. Hatch weekly pure white eggs up to 24 ounces per dozen. Beautiful Color Plate Leghorn Catalogue Free.
FARM SERVICE
Route S-10 TYRONE, PA.

10 CHICKS FREE with each 100 ordered—Early
Write for details our free chick plan—Ohio Accredited Stock. Prize winners at many shows from Nation-wide. Developed for many years for high egg production. Free range flocks in best of health. 13 breeds. Catalog free. Low prices quality considered.
Don't Miss This Offer.
HOLGATE CHICK HATCHERY, Box N, HOLGATE, OHIO

Schweglers' "THOR-O-BRED" BABY CHICKS "LIVE AND LAY"
OUR breeders are bred for high egg production. White, Brown and Buff Leghorns, Barred and White Rocks, R. I. Reds, Anconas, Black Minorcas, Buff Orpingtons, White Wyandottes. 12c and up. 100% live delivery guaranteed. Write today for FREE CHICK BOOK.
SCHWEGLER'S HATCHERY
201 NORTHAMPTON, BUFFALO, N. Y.

BARRON LEGHORN CHICKS
From Large Type Barron English S. C. White Leghorns. Hens weigh up to 7 pounds. Extra Quality Chicks from free range selected stock any week after March 11th at $16 per 100, $77 per 500, $150 per 1000. 100% Live Arrival Guaranteed. 10% books order. Circular Free.
ROBERT L. CLAUSER, Box N, Kleinfeltersville, Pa.

PENN'A CHICKS
have vim and vigor—hatched by men with 18 years experience from culled flocks. Prepaid and 100 per cent guaranteed. S. C. White and Brown Leghorns, R.C. Rocks, 12c; Reds and Minorcas, 14c. Mixed Broilers, 9c each; $80 per 1,000. Circular free. Our slogan Service after Delivery. PENN'A. HATCHERY, Liverpool, Pa.

BABY CHICKS

Tancred Sir. Wh. Legh'ns	$12 per 100
Common Wh. Legh'ns	11 per 100
Barred Rocks	11 per 100
R. C. Reds	14 per 100
Heavy Mixed	12 per 100
Light Mixed	9 per 100

500 lots 5c less—1,000 lots 10c less. 100% live delivery guaranteed. Order from this ad or write for free circular.
C. F. LEISTER, McAllisterville, Pa.

HERBSTER'S QUALITY CHICKS
Barred Rocks, R. I. Reds and White Leghorns, good, strong, livable chicks, true to breed, which develop into profitable birds. Get our low prices and catalog. Hatch all year.
HERBSTER'S POULTRY FARM,
(Formerly Brookfield Poultry Farm.)
Box 171, McClure, Pa.

CHICKS Will ship C.O.D. 25 50 100
S. C. Reds $4.00 $7.50 $14.00
Barred Rocks 4.00 7.50 14.00
White Leghorns 3.00 6.00 12.00
Heavy Mixed 3.50 6.50 12.00
Light Mixed 2.75 5.00 9.00
500 lots 5c less, 1,000 10 less. Free Range. 100% Delivery. Circular.
W. A. LAUVER, McAllisterville, Pa.

Wilson's Livable Chicks sent C.O.D. from our own select breeders, 300-egg blood, big type Tancred White Leghorns, $15.00-100; $140.00-1,000. "Big Indian" Rose Comb R. I. Reds, dark color, and Parks Bred-to-lay Barred Rocks, Rex Permit, $17.00-100, $160.00 per 100 discount booked this month. Free Circular.
WILSON'S POULTRY FARM, Nottingham, Pa.

70 BREEDS Chickens, geese, turkeys, guineas and ducks. Sure-bred, hardy, northern raised, profitable. Fowls, eggs, baby chicks, incubators at low prices. Largest plant, 36th year. Fine new 100 page poultry book FREE.
R. F. NEUBERT Co., Box 816, Mankato, Minn.

CHICKS From Choice Flocks, culled for heavy laying. Barred Rocks, White Leghorns, and mixed. First hatch in Mar. 100% live delivery guaranteed, postpaid. Bank reference. Write for special price.
L. E. STRAWSER, Box 30, McAllisterville, Pa.

Hampton's Black Leghorn DAY OLD CHICKS
The kind that lay. Circular free.
A. E. HAMPTON, Box F, Pittstown, N. J.

Chicks, Barron Eng. White Leghorns
Common Leghorns, Barred Rocks, Light & Heavy Mixed, as low as 8c each. 100% guaranteed. "New Circular Free." Prepaid.
TWIN HATCHERY, McAllisterville, Pa.

Baby CHICKS (Smith Hatched) Rocks, Reds, Wyandottes, Leghorns, and all leading breeds. Quality and satisfaction guaranteed. Circular free. Early order discount.
BROOKVILLE HATCHERY, Brookville, Pa.

IF YOU HAVE ANYTHING you want to buy, sell or exchange, ADVERTISE in the classified columns of PENNSYLVANIA FARMER

KERR'S 1929 CHICKS

Quality *better* than ever
Prices *lower* than ever

KERR'S 1929 Quality Chicks will have one more cross of the blood that is consistently producing our prize winners in the egg laying contests. Among the best ten-hen pens of all breeders having five or more pens in the 1927-28 contests eligible to compete for the coveted Poultry Item trophy, the Kerr pens stood ninth with an average lay of 221.9 eggs per bird. The leading specialty breeders of the United States competed.
Our 1929 Special Matings White Leghorn chicks are sired by males from hens with official records up to 294 eggs per year; our Special Matings Rhode Island Reds by males from hens with official records up to 280 eggs; and our Special Matings Barred Rocks by males from hens with official records up to 250 eggs. These 1929 chicks are out of hens, 80% of whose dams in four generations have contest or R. O. P. records up to 250 eggs in White Leghorns and up to 240 eggs in Rhode Island Reds and Barred Rocks.
We can furnish both utility and special mating chicks from flocks that have passed the blood test for Bacillary White Diarrhea, thus insuring a high degree of livability. Write for booklet with 1929 prices. Liberal discounts on orders placed before February 1st.
KERR CHICKERIES, Inc.
Department 6
Frenchtown, N.J. Trenton, N.J. Binghamton, N.Y. E.Syracuse, N.Y.
Lancaster, Pa. Danbury, Conn. W. Springfield, Mass.
Camden, N. J. Paterson, N. J.

20TH CENTURY "MARVEL" CHICKS
Special Mating Imported Barron S. C. White Leghorns
Our flocks for this very Special Mating consist of 250 YEARLING hens carefully selected by an Expert Poultryman. These hens weigh not less than 4½ pounds, and up to 6 pounds. They produce better than 250 eggs per year, per hen, imported from TOM BARRON of England.
Standard Bred "MARVEL" Winter Layers
THOUSANDS OF PLEASED CUSTOMERS can tell you about the splendid chicks and wonderful profits made by our Marvelous High Class, Heavy Laying, Standard Bred, American Over-O-Gold Matings for 29 years; Pure Bred, carefully culled for size, type, color, vigor and egg laying ability. Look at the low prices. 100% Live Delivery Guaranteed; you can safely order from this advertisement. Reference: Commercial Bank, Dan or Bradstreet.

	50	100	500	1000
S. C. Wh. Rc., Buff, Blk. Leghorns, Anconas	$7.50	$15.00	$69.50	$135.00
Barred and Wh. Rox. R. C. and S. C. Reds; Blk. Minorcas	8.00	15.00	70.00	135.00
W. Wyandottes, Buff Orpingtons, Buff Minorcas	8.50	16.00	75.00	145.00
Imp. Barron, W. Leghorns, W. Minorcas, Parks' Bred-to-lay Barred Rocks	9.50	18.00	85.00	160.00

Heavy Mixed $12.50 per 100; Light Mixed, $9.00 per 100; White Pekin Ducklings, 25c each.
C. O. D. Shipments: We ship 20th Century Chicks C. O. D. (pay when received) if you prefer. Get our FREE illustrated catalog. Tells all about our money-making chicks, C. O. D. plan, imported matings, etc.
20th CENTURY HATCHERY Box Y NEW WASHINGTON, OHIO

HILLPOT Quality Chicks
Leghorns Rocks Reds Wyandottes
Hillpot Quality Chicks, because of their splendid health and vigor, actually require less time and attention than average chicks. They mature more quickly with minimum loss, thus cutting down rearing cost. They lay heavily and continuously. It is these vital factors that reduce the egg-cost and give that big profits that have won a national reputation for Hillpot Quality Chicks.
SEND FOR MY VALUABLE CHICK BOOK. IT IS FREE.
W. F. HILLPOT, Dept. 128, FRENCHTOWN, NEW JERSEY

NABOB JUST-RITE Baby Chicks GREAT WINTER LAYERS
OFFICIAL TRAPNEST PEDIGREED R. O. P. Male Exhibition Quality Matings in the world's finest Hens. R. O. P. matings in S. C. White Leghorns, also Barron and Tancred strains; Tompkins, Owen, Mahood, R. I. Reds; R. O. P. Thompson and Holterman's Barred Rocks; Martin and Fishel White Wyandottes; Fishel White Rocks; Simonds's Anconas. 40 other leading and rare breeds including Ducklings; Goslings, Baby Turkeys. Member International B. C. A and American B. C. A.

	Postage paid.			
	25	50	100	500 1000
100% live delivery guaranteed.				
S. C. W. Leghorns, Buff, Blk. and R. C. Br. Leghorns	$3.75	$7.00	$13	$60 $120
S. C. White, Buff, Blk. and R. C. R. I. Reds, S. C. Anconas	4.50	8.00	15	72 138
Rd. and Wh. Rocks, R. I. Rds, S. C. Anconas	4.75	8.50	16	77 144
S. C. Blk. Minorcas, Wh. and Sil. Wyandottes, R. C. Orpingtons, R. I. Whites	5.00	10.00	18	90 175
R.C. Anconas, Col. Wyandottes, S.C.Wh., and Bf. Minorcas, Blk. Langshans	5.50	10.00	19	90 175
Silver Sp. Hamburgs, Part. Rocks, Blue Andalusians, Col. Rocks	5.50	10.00	19	90 175
Light Brahmas, J. Blk. Giants, White Faced Blk. Spanish	6.00	11.00	20	98 195
Mixed Assorted, $10 per 100. Heavy Assorted $13 per 100. All other breeds reasonably priced.				

FREE Beautifully elaborate Color-plate Catalog. 56 pages, 70 illustrations. Stamps appreciated. Don't fail to get this big book and invest your money this season in the famous Nabob 16K strains, the most profitable investment you can make in the poultry field this year. References: PEOPLES BANK, Gambier, Ohio, and BRADSTREETS.
NABOB HATCHERIES, Dept. 42, GAMBIER, OHIO

HERE: NEARLY EVERYONE RAISES Full Blooded "AMERICAN" Quality Chicks.

	50	100	500	1,000
American or English S. C. Wh. Leghorns	$6.75	$12.00	$62.00	$120.00
Hollywood, White or Brown or Buff Leghorns	7.25	14.00	67.00	130.00
Tancred White Leghorns, Anconas, Barred Rocks	7.75	15.00	72.00	140.00
R. C. or S. C. Reds, White Rocks, Parks Rocks	8.25	16.00	77.00	150.00
White Wyandottes, Buff Orpingtons, Black Minorcas	9.25	18.00	87.00	170.00
Brahmas, Columbian Rocks, Blue Andalusians	11.25	22.00	105.00	200.00
Light Mixed $9.00 a hundred. Heavy Mixed, $12.00 a hundred.				

Get our NEW CATALOGUE.—It proves to you the SUCCESS our Customers have with our Breeders entitled and Bred for High EGG PRODUCTION in Winter when eggs are demanding large premiums. Reference Curwensville National Bank. 100% Live Arrival. Dependable Service. Order Early.
AMERICAN CHICKERIES, Box 218, Grampian, Pa.

NATIONAL "SUPERBRED" CHICKS—500,000 Super-Quality Chicks for 1929
Insure your future poultry profits by ordering NATIONAL SUPERBRED CHICKS NOW.

	25	50	100	500	1000
S. C. White, Brown & Buff Leghorns	$3.50	$6.75	$13	$62	$120
Tancred & Hollywood White Leghorns	4.75	7.25	14	67	130
Barred & White Rocks, R. I. Reds	4.25	7.75	15	72	140
Black Minorcas & Anconas	4.25	7.75	15	72	140
White Wyandottes & Buff Orpingtons	4.75	9.00	17	82	160
White Minorcas & Blue Andalusians	7.00	13.00	25	120	230
Silver/Black Giants	7.00	13.50	26	50	100
Mixed or odds and ends	2.00	3.50	6	30	60

Send for our Free Catalog with prices on Chicks from our SPECIAL MATED FLOCKS. All chicks sent prepaid by either Parcel Post or Express. 100% live delivery guaranteed. Bank references on request. Express: 100% live delivery guaranteed. Bank references on request. You will save money by ordering Superbred chicks NOW.
NATIONAL CHICK FARMS, Box 404, Millintown, Penn'a

"Peerless" Chicks C·O·D
Send $1.00 per 100 with order. Pay balance when chicks arrive. Let us supply you with our big, strong Peerless Chicks from flocks that have been carefully bred and culled and contain the blood of such leading strains as Tancred, Barron, Wyckoff, Thompson, Fishel, etc. They are real money-makers.

	50	100	500	1000
Prices Post Paid. 100% live arrival				
WHITE, BUFF & BROWN LEGHORNS, ANCONAS	$6.50	$12.00	$57.50	$110.00
WHITE, BUFF & BARRED ROCKS, WH. & S. L. WYANDOTTES & BUFF ORPS.	7.50	14.00	67.50	130.00
S. C. & R. C. REDS, WH. & S. L. WYANDOTTES & BUFF ORPS.	7.50	14.00	67.50	130.00

BARRED, WHITE, PARTRIDGE & BUFF ROCKS ..... to please you.
HEAVY ASSORTED $10.00 per 100. We want you for a customer and will do our best to please you. Order from this ad or send for illustrated circular.
PEERLESS CHICK HATCHERY, Box 197 LEIPSIC, OHIO

FREE BABY CHICKS
You Get the Chicks—We the Advertising, Fair?
Better get your pencil and send for this 4-color, beautifully illustrated catalog now—also advertising slips for your free Baby Chicks. Only a limited number so you should write now—this very minute.
This catalog, the prettiest and most elaborate we have ever seen, gives you some new, cashable ideas on raising pure-bred poultry—actually shows you how to start—in—the—poultry profits—completes history of 12 different breeds—famous strains—Shall we mail your copy tomorrow? —and send your Free Chicks in a week or two?
ADDRESS BOX D
"COCK'S THE BOOST" BABY CHICKS AND HOW TO GET THEM FREE.
YES SIR! FREE BABY CHICKS
...and so easy to get them. Merely do a little advertising in your community for us and we will ship you some of the finest baby chicks you ever saw. Free. Large, peppy and fluffy. Leghorns, Anconas, Rocks, Reds, Minorcas, Wyandottes, Orpingtons and others—take your choice. Many are taking advantage of this liberal offer and you must hurry before this advertising has been finished in your community—You must act at once!
SHOW
GREATER POULTRY PROFITS
GLASER HATCHERIES - NICOMB-LIEPSIC-OHIO

WHARTON ACCREDITED CHICKS
Ohio Accredited Chicks
Quality blicker and prices lower. Breeders selected and leg banded by men trained by Ohio Poultry Improvement Association and authorized accredited inspectors. Leghorns 12c each, Rocks, Reds, Wyandottes 14c each, Light Brahmas 18c each. Write for catalogue and special prizes on 200 or more.
THE WHARTON HATCHERY CO.
Box 108
Wharton, Ohio

Be Safe! BUY MODEL CHICKS
WONDERFUL WINTER LAYERS
4 Reasons, (1) Breeding, high-priced blood lines. Best pure bred, show winning strains, bred for winter eggs, egg size and number of eggs, from high egg record bred-to-lay females, (2) Culled by Accurate experts, strictly for health, vigor, shape, (3) Accurate poultry knowledge, years of experience, poultry understanding, scientific incubating, proper moisture, heat, ventilation. Electric Brooders. Often watch pound gains. 100 sloppy, poor, healthy, fluffy, right start, twice value 16 kinds, better, for less, prices can't be beat. Big Discounts NOW. Catalog FREE.
MODEL HATCHERY, Box P MONROE, INDIANA

BABY CHICKS
13 Leading Varieties—White Leghorns, Black Minorcas, Rocks, Wyandottes, Reds, Orpingtons, Anconas, Speckled Sussex, Buff Orpingtons.
$9.00 per hundred and up.
Free Catalog and Price List.
Lantz Hatchery, Tiffin, Ohio

QUALITY CHICKS
Chicks from winter laying, farm raised, mature stock. S. C. White Leghorns, R. I. Reds, Barred Rocks, White Orpingtons, Anconas, Black Jersey Giants, White Wyandottes, White Plymouth Rocks, Black Minorcas; Pekin and Indian Runner Ducks; $14.00 per 100 up. Live Delivery guaranteed. Parcel Post prepaid. Hatching eggs $8.00 per 100 up. Several breeds rabbits. Circular free. Shipments will be made from our associated hatchery nearest the buyer.
GLEN ROCK NURSERY & STOCK FARM, 705-R Ridgewood, N. J.

BABY CHICKS
FROM HEAVY LAYING FREE RANGE FLOCKS

	50	100	500	1,000
Wyck. & Tancred Strn.,	$6.50	$12.00	$57.50	$110
S. C. W. Leghorns	$6.50	$12.00	$57.50	$110
S. C. Brown Leghorns,	$6.50	$12.00	$57.50	$110
S. C. Rocks & Reds	7.00	14.00	67.50	130
S. C. Buff Orpingtons	7.00	14.00	67.00	130
Assorted Chicks	5.00	9.00	42.00	80

100% prepaid safe delivery guaranteed. Order from this ad or write for circular.
J. N. NACE POULTRY FARM Richfield, Pa. Box 5

PROFIT BRED CHICKS
County Line Chicks are from proven producers. They can be secured in five breeds, S. C. White Leghorns, Reds, Barred and White Rocks and White Wyandottes. All from range reared healthy bred to lay parents. Send for folder which gives prices and information every poultry raiser should know.
COUNTY LINE POULTRY YARDS AND HATCHERY Box 12 Telford, Pa.

COCOLAMUS HUSKY CHICKS

	50	100
Tancred Strain S. C. White Leghorns	$3.50	$6.50
Four Lay Strain Brown Leghorns	3.50	6.50
Parks Strain Barred Rocks	4.00	7.50
R. C. Rhode Island Reds	4.00	7.50
Mixed or Broilers	2.50	5.00

Special prices on 500 and 1,000 lots, all heavy layers. Free range flocks. Free circular and prices list.
COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

BARRED ROCK CHICKS $14.00 PER 100
March and April delivery. 10% off if ordered before Feb. 5. Extra quality; free range; selected stock; good layers. Hatches weekly beginning Feb. 26. 100% live delivery. 100% books order.
SMITH'S VALLONIA HATCHERY, New Berlin, Pa.

Kline's Barred Rocks
Blood-tested stock. Penna State College males. Strong chicks guaranteed. Hatches every week. Low prices.
S. W. KLINE, Box 20, Middlecreek, Pa.

BABY CHICKS
Ready for shipping Jan. 1, 1929. Barred Rocks, White Rocks, White Leghorns. Parkway Hatchery, Geo. J. Sipple, Box 25, Swineford, Pa.

FERRIS STRAIN WHITE LEGHORN CHICKS
$12.00 per 100 $57.50 per 500 $110 per 1000
Send orders now for March and April chicks.
Juniata Poultry Farm, Richfield, Pa.

Fine Points in

Clover seed

that make the difference in the crop

Buying seed, studying crops and markets, examining and testing, comparing and grading varieties is our job all the year around. No farmer could possibly give it even a fraction of the time we do and get his own job done. And yet it is the fine points in seed that make the difference in the crop.

We have been doing this for 30 years and have built up a service that shows its value when the crop comes through. True it is that seed selection is only one factor of successful farming, but there's **nothing more important!**

Hoffman's service costs you nothing. It is found in every bag of Hoffman's seed. It marks the difference between an ordinary crop and a profit-crop.

Our offerings of red clover, alsike and alfalfa this Spring are extra fine, and in the face of a rising market we advise you to buy early.

Send today for Hoffman's Bulletin on "Clover and the Legume Crops". Tell us what crops you raise and we will put you on the list to get all the Bulletins on those crops as they are printed.

Write today.



A. H. Hoffman, Inc.
Box 643, Landisville,
Lancaster County, Penna.

SAVE 1/2 the Labor of Spraying



TWO years of investigation have disclosed the most amazing facts about spray coverage. Our new booklet, "The Truth About Spraying Costs", will give you these facts and show you how you can apply Scalecide in half the time required to spray with either oil emulsion or lime-sulfur. Write for this free booklet today—no obligation.

B. G. Pratt Co., 50 Church St., New York, Dep't 27

SCALECIDE —THE COMPLETE DORMANT SPRAY— Costs More Per Gallon—but Costs No More Per Tree

ROHRER'S SURE PAY SEEDS

It's Seed Time!

Start today to think about your spring planting—it's NOT too soon! Then think of this—for many years hundreds of successful farmers have sown Rohrer's Seeds exclusively. These farmers know the profitable crops that Rohrer's Seeds yield. They'll do the same for you. Send now for samples.

Alfalfa
Clovers
Grasses
Timothy
Seed Oats
Seed Corn
Field Peas
Garden Seeds
Seed Potatoes



We make no charge for bags and pay all freight expense.

To the left is pictured our Spring 1929 catalog. From cover to cover it is full of facts that will interest you. Write for it today!

P. L. ROHRER & BRO. Box 2, Smoketown Lancaster Co., Pa.

(Continued from page 10)

the meetings of the various agricultural organizations. It went on record as opposed to the bill now before the General Assembly, which would take from the Game Commission discretionary power over the game season, it being felt that the Game Commission has shown a sympathetic interest in the problems of the farmer as regards damages to fruit trees and farm crops by protected game. The Association voted to affiliate with the National Horticultural Council, which is the exponent of the various State Horticultural Associations in matters of national legislation, and which will represent the fruit growing interests at the tariff revision hearings now being held in Washington.

The banquet on Wednesday evening, a very informal and enjoyable affair, was featured by the arrest, trial and conviction of the retiring president of the Association, Sheldon W. Funk of Boyertown, for selling peaches out of cold storage without labeling them as a cold storage product. His thumb prints were taken. He was sentenced to secure twenty new members of the Association this year.

The discussion on spraying versus dusting resulted in the usual sharp difference of opinion, with the weight of the evidence, however, still pointing strongly toward spraying as the standard practice, and dusting as the special practice to supplement spraying under certain conditions, rarely to replace it. There was much interest in the subject of stationary spray plants: Professor A. J. Farley of New Jersey stated that all of the twelve plants now operated in New Jersey are giving satisfaction, and favorable reports came from West Virginia and Pennsylvania, also.

Costly Price Fixing

Samuel Fraser of Rochester, N. Y., cautioned against the erection of a high tariff barrier on bananas or other fruits, without very careful examination of possible results; the loss from retaliatory tariffs erected by the countries thus affected may exceed the possible gain by increasing the domestic consumption of fruit. We cannot afford, he says, to take any chance of hurting our present export market for apples in this way. We exported 4,500,000 barrels and 8,000,000 boxes in 1926-27, or about 18 per cent of the crop.

An interesting commentary on the fallacy of governmental price fixing comes from New Zealand. This season the New Zealand government guaranteed the growers, whose apples are mostly exported to Europe, $2.16 a box. The returns now indicate that the government will have to pay the growers about twelve cents a box out of the public treasury, since the apples did not net $2.16. This money is raised by taxation. Can this policy be justified?

Thomas B. Byrd of Winchester, Va., reported that the Virginia mandatory apple grading law apparently has worked out well during its first year, and has raised the standard of the Virginia pack. Virginia, however, is a cartot state; there are few local markets. Pennsylvania growers were doubtful of the wisdom of a [illegible] which would compel all apple growers [illegible] Pennsylvania, most of whom sell in [illegible] markets, to pack under standard [illegible] It was felt that this should remain [illegible] al with the growers. The possibility [illegible] placing a premium on efficiency, by [illegible] mitting the use of a state brand [illegible] certain conditions, was suggested [illegible] George A. Stewart, of the State Bureau [illegible] Markets.

Cost of Production Figures

Frank Farnsworth of Waterville, [illegible] produced careful cost accounting rec[illegible] for a term of years showing that the [illegible] age cost of producing a bushel of [illegible] on his farm is 74 cents, not including [illegible] head, packing or package. This figure [illegible] considerably higher than most Pennsylvania growers would admit. If [illegible] he has to get an average of over $1 [illegible] bushel at the farm to make a profit, [illegible] have done this during the past seven [illegible]

Other comments on the meetings [illegible] appear in Pennsylvania Farmer from [illegible] to time; but every Pennsylvania [illegible] grower should have the Annual Proceeding of the Association, a volume of [illegible] 200 pages, which will give a stenographic report of all the addresses and discussions. The proceedings will be ready for distribution to members about March 1st. Membership is $2 a year. S. W. Fletcher, Secretary, State College, Pa.

EXCEEDED EXPECTATIONS

"THE thirteenth State F[illegible] Products Show just [illegible] has really exceeded all my [illegible] tations." Secretary of Agric[illegible] C. G. Jordan, who is chairman [illegible] the Farm Show Commission, [illegible]

"The exhibits broke all [illegible] records in every department, [illegible] attendance of over 100,000 set a [illegible] high mark. The prominent [illegible] played by the boys and girls in t[illegible] various exhibits, contests and dem[illegible] onstrations proved a most inspiring feature of the exhibition.

"The enthusiasm manifested by both visitors and exhibitors," Mr. Jordan continued, "gives me the greatest encouragement to push forward with renewed zeal for an adequate farm show building, and the appropriation for its construction as recommended by the Governor. The record-breaking attendance assures me that the Show will continue to grow and when the new building is opened it will be filled to overflowing.

"No movement in the history of the Commonwealth has ever met with more universal approval than the new building project. It has been endorsed by all the livestock and agricultural organizations of the state, also by many of our most prominent business men."

Poultry Meetings

THE annual meetings of the Pennsylvania Poultry Association and the Pennsylvania State Baby Chick Association were held in Harrisburg, January 23 and 24. At the business session the Pennsylvania Poultry Association agreed to subscribe $500 to the tariff committee of the National Poultry Council. Similar sums are now being received from other states by national headquarters. A determined effort is now being made through Congress to protect the American farmer against foreign poultry products.

The Poultry Association also went on record as favoring an egg-laying contest for Pennsylvania, the same to be located at the Pennsylvania State College. A bill is now being prepared and will soon be introduced in the legislature providing sufficient funds for this purpose.

The closing business of the morning session was the election of officers as follows: President, Marcus McKnight, Carlisle; First vice-president, M. D. Doupten, Royersford, R. 1; secretary-treasurer, E. M. Funk, State College. Directors for three years, Frank Fitts, Media, R. 1; A. R. Baldesberger, Pittsburgh. Editor of Pennsylvania Poultry Association Bulletin, Livingston Blauvelt of Homesdale.

A most interesting program was given in the afternoon attended by more than 300 poultrymen and women. Dr. Lubbehusen of the Bureau of Animal Industry, Harrisburg, discussed "Poultry Diseases of the Head." His remarks were timely and of great interest to those present.

Mr. Robert W. Lohr, of Boswell, Pa., gave a most comprehensive talk relative to his method of raising 1,000 turkeys during the past year. While this was Lohr's first attempt in extensive turkey production, his success was phenomenal. His losses were exceedingly small and the weights obtained were very satisfactory. Mr. Lohr brooded and managed the poults quite similar to the methods employed in chick raising. He emphasized the importance of clean surroundings, sanitation, and out of the house, clean feed always in hoppers and keeping the poults dry.

Mr. P. S. Martin of Harrisonburg, Va., stressed the importance of proper ventilation, insulation and artificial heat in poultry houses.

Prof. W. C. Thompson of the New Jersey Experiment Station, gave a splendid address relative to feeding and brooding chicks. He urged Pennsylvania poultrymen to raise chicks free from disease through clean stock and sanitation.

H. C. Knandel of Pennsylvania State College discussed their results after several years of raising chicks in confinement. Pullet breeding from hens so raised. It was disclosed that chicks can be successfully reared to maturity in confinement and that egg production maintained.

At 6:30 the annual poultrymen's banquet was held with J. P. Logan of Dallastown as toastmaster. The speakers were Prof. R. L. Watts of the School of Agriculture of Pennsylvania State College; H. D. Jones, formerly of State College, and Mr. Allen of New York City.

Mrs. Noith Shellenberger, of Mechanicsville, was introduced as the egg queen of Pennsylvania. Her right to this title was earned because of the phenomenal record made by her flock of White Leg-

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Dairymen

THE Pennsylvania Dairymen's Association is girding its loins for an earnest campaign for the erection of a new and modern dairy building at Pennsylvania State College. This was decided at the annual meeting of that body, on Wednesday, January 23. Dr. L. M. Thompson of Montrose is chairman of this committee and serving with him are W. S. Wise, Dairymen's Cooperative Sales Company; H. D. Allshach, Inter-State Milk Producers' Association; Allen D. Miller, Dairymen's League Cooperative, and Henry Woolman of Supplee-Wills-Jones, Philadelphia.

The sponsoring of a new dairy building was one of the strongest resolutions adopted by the Association. The organization also went on record favoring the enactment of additional legislation covering the admission of livestock into Pennsylvania so as to protect our stock from infectious or contagious diseases; asked the National Congress to provide a fair and equitable duty on oils and fats from the Philippine Islands; asked the National Congress to increase the import duty on butterfat imported as cream to equal that paid on butter; urged a complete study of the tariff problem as related to agricultural products; asked the Pennsylvania legislature to make adequate appropriation of funds to carry on the tuberculosis testing without interruption; urged its members to cooperate with all the various dairy educational agencies in the state; commended Governor Fisher for his "sympathetic attitude toward agriculture as manifested by his many acts since becoming Governor but especially by his approval of a budget sufficiently large to equip adequately and maintain the Farmers' Winter Show."

Rapid Advance

"The dairy industry in Pennsylvania has advanced more rapidly than any other phase of agriculture," declared Prof. Fitts, in giving his annual report as the retiring president in opening the session. "Back in 1870—barely more than 50 years ago—the average price of dairy cattle was $20.24 and during last year the average price was $103."

His report emphasized the fact that there are now 2,000 members of cow-testing associations in the state and the cattle in these associations produced an average of 5,000 pounds of milk more than the average cow in the state. During 1928, 724 herds averaged more than 300 pounds of butterfat each as compared to 542 for the year previous.

Hugh Fergus is one of the better dairymen of Mercer county. Illness prevented him telling how he accomplished what he did. A graduate of State College, He worked for several years as a cow-tester in charge of Laurel Hill Association and 13 years ago moved onto his present farm. He kept his own records until the Grove City Cow-Testing Association was started and his herd has shown a steady improvement.

"We went in debt to buy this 143-acre farm," wrote Mr. Fergus, "and by fertilizing, cultivating, building and intensifying our dairy we have made some improvement."

He lays what progress he has made to the fact that he always strives to follow this program:

1. To make a permanent improvement every year.
2. To constantly add fertility to the land.
3. To work out a profitable crop rotation.
4. To use proved herd sires and keep records on cows.
5. To better market farm crops.
6. To do most work with least labor.

Mr. Fergus sells very little of his crops in any form other than livestock or livestock products.

Feed and Management

Prof. W. J. Fraser of the University of Illinois gave two talks on feeding and herd management, which were very well received. Balloons, squeakers, horns, etc., together with an orchestra helped to enliven the affair.

On Thursday Dr. H. D. Goodale, of Williamstown, Mass., gave two addresses entitled "The New Knowledge of Breeding" and "Inbreeding". Dr. Goodale is considered one of the leaders in the field of poultry genetics.

Prof. Thompson and W. H. Allen stressed the value of egg-laying contests, and their importance to the poultrymen of Pennsylvania. The poultry meetings concluded Thursday afternoon and were considered the most interesting and most largely attended of any held in Harrisburg at the time of the State Farm Products Show.

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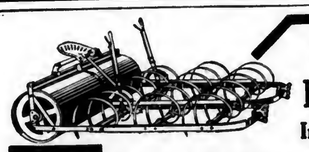
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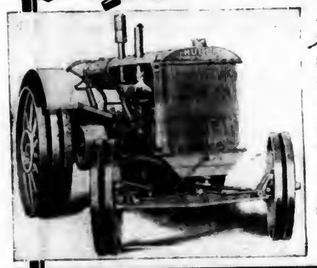
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Dairymen's Banquet

The banquet in the evening was a fitting climax to the most successful meeting of the Pennsylvania Dairymen's Association. Prof. Fitts was in charge and after brief talks by E. S. Bayard, Dr. C. G. Jordan, and Dr. Thompson, the main address of the evening was delivered by Dr. Clyde L. King, former secretary of state.

"There have been various and sundry means of 'farm relief' suggested by various and sundry leaders," declared Dr. King in reviewing the economics of the agricultural situation. "None of the proffered plans is without merit and not without criticism—yet they can all be summarized into four great classes.

"The first group has to do with finances and credits, the second with export price fixing plans, the third with tariff and the fourth through federal market boards. My prediction is that we shall hear more of the proposed Federal Market Board and I am also of the opinion that such a machine, properly manned and properly directed, will be of some advantage to us."

Dr. King believes that within a short time we will be an exporting dairy nation, due to the increasing dairying in the South and other districts—he is also of the opinion that many thousands of acres of so-called farm land could be abandoned to the benefit of agriculture today.

Robert F. Brinton was chosen president of the Association for 1929 and H. H. Olmstead of Pennsylvania State College, secretary with L. M. Thompson, Morris Phillips and W. T. Shumun, vice-presidents.

Nearly 500 persons were at the banquet and about that many attended the sessions during the day.

BUTTER AWARDS

Farm butter. 1. John E. May, Dover, R. 4; 2. James N. Lauchnor, Schnecksville; 3. A. S. Ryder, Chambersburg.

Creamery.—1. Hershey Creamery Co., Harrisburg; 2. Greenville Dairy, Greenville.

Raw Market Milk from T. B. Free Cows

1. Chester M. Stryker, Petersburg; 2. S. D. Minnich, Williamsburg; 3. E. J. Hess, Waynesboro.

Raw Market Milk

1. M. B. Click, Bird-in-Hand; 2. E. W. Shuneck, West Grove; 3. J. D. Bunting, Oxford.

Certified Milk

1. Delehester Farms, Edgemont; 2. Pennshurst Farm, Narberth; 3. Dr. Frederick Taylor, Pulaski.

Pasteurized Milk

1. J. E. Harshbarger, Altoona; 2. Supplee-Wills-Jones, Philadelphia; 3. Greenville Dairy, Greenville.

Dairy Cattle

Guernseys

THE Guernsey breeders this year broke away from the general type of exhibits they have been accustomed to make at Harrisburg shows. They brought here 21 young bulls, all tested for abortion and tuberculosis. They were all from high producing herds. While here 15 of the 21 bulls were sold at prices ranging from $125 to $250. They were judged according to classes during the week.

In the calf class a bull seven months old, consigned by H. J. Kreps of Wilmington, Delaware, was declared the champion. This calf was also declared the grand champion of the exhibit and was sold to L. W. Dandekeiger of Cumberland county for $175. The champion in the senior yearling class was a bull consigned by S. N. Rost of Lancaster county. This animal was also declared the reserve champion of the entire exhibit. He was sold to Walker Brothers of Center county. In the junior yearling class a young bull consigned by M. T. Phillips of Chester county was declared the winner and was sold to Z. H. Jackson of Fayette county.

Ayrshires

At the pure-bred Ayrshire sale a heifer consigned by Glenforch Farms, Torresdale, Pa., sold for $785. The average price for heifers sold was $250.

Sycamore Rustler, one of the four bulls sold, brought $170. The average price for the bulls was $95. The total sales value of Ayrshires sold was $2,710, an average price of $208 per head.

Jersey Club

Bedford county was announced the winner of the American Jersey Cattle Club contest in this state, at the annual meeting of the Pennsylvania Jersey Cattle Club. A $100 prize was the award.

Other counties placing high in the contest were Indiana, Crawford, Mercer, Montgomery, Wayne and Butler. Scores were determined on a six-sided program of work, getting members for the breed association, the number of 300-pound butterfat producers, cows on official test, animals exhibited, members of 4-H calf clubs and proved sires in use in the county.

W. C. F. Randolph, Royersford, was elected president of the Pennsylvania Jersey Cattle Club.

Holsteins

Holsteins were represented at the Show by an aged sire and six females. The bull was grand champion of the Lebanon County Fair; one of the cows was grand champion of four county fairs, and one of the heifers, shown as a junior yearling last fall, was junior champion female at the Lebanon County Fair. All of the cows in milk are enrolled in the Lebanon County Cow-Testing Association and are making good records in the herds of F. W. Fensler at Lebanon and the Lime Rock Farm at Myerstown.

H. H. Allebach, Trappe, was named as president of the Federation of Holstein-Friesian Clubs of Pennsylvania in its annual meeting. J. C. Kerrick, of Bradford county, was chosen as vice-president and H. E. Robertson, of York, was reelected secretary-treasurer.

Swine Growers

MEMBERS of four state swine breeders' associations sat down at a banquet together Wednesday evening, with Prof. W. F. Grimes of Pennsylvania State College as toastmaster.

The chief speaker was L. C. Madison, extension swine specialist of State College. He said that Pennsylvania farmers have grown 186 ton litters in five years, more than any other state has produced in six years. Last year 65 ton litters were grown by 61 farmers 20 more of the ton pocket families than any other state has reported.

Other speakers were Dr. H. H. Havner, former head of livestock extension work at State College; Prof. H. L. Garrigues, head of the Animal Husbandry Department at the Connecticut Agricultural College; Col. George W. Baxter, Elmira, N. Y., auctioneer at the sales of the Farm Products Show; Mrs. E. R. Fritsche, proprietor of Stonemoor Farms at Douglassville; Dr. H. R. Church, of the Bureau of Animal Industry, and the consignors of swine to the sale, Howard Smith, New Carlisle, O., and Dale Lewis, Tiffin, O.

All four breed associations passed resolutions endorsing the action of Governor Fisher in including a recommended appropriation in this budget for a State Farm Products Show Building at Harrisburg. The associations also endorsed the law proposed by the State Bureau of Animal Industry to regulate animal diseases. A petition to the trustees of the Pennsylvania State College to provide more buildings and equipment for experimental work with swine received enthusiastic approval. The associations further expressed appreciation to consignors of swine to the show and sale and decided to hold a similar event next year. The associations will award medals to all members who grow ton litters in 1928.

Breed Association Officers

R. L. Munce, Washington, president, and C. E. Cassell, Hershey, secretary, were reelected by the Pennsylvania Chester White Breeders' Association.

The Pennsylvania Berkshire Breeders' Association reelected B. B. Harvey, Douglassville, president, and J. P. Winslow, Brookville, secretary-treasurer and chose W. E. Risher, Centre Hall, vice-president.

B. H. Wilson, Mortonville, was elected president, and J. B. McCord, Lock Haven, secretary, by the Pennsylvania Poland-China Breeders' Association. Charles Sheffer, York, was reelected vice-president and

(Continued on page 24.)

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On my square deal plan, Wengard, an Ohio [man] made $150.00 for his share in one week. [Emery], in Iowa, made $216.00 for the first week started. In West Virginia, Mason's share [for] week was $156.65. Hundreds are making $200 [a] month the year 'round. No wonder my mail [is] so [heavy].

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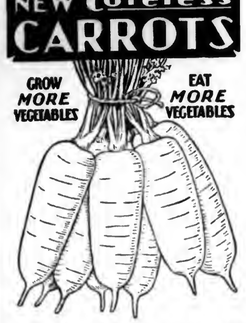
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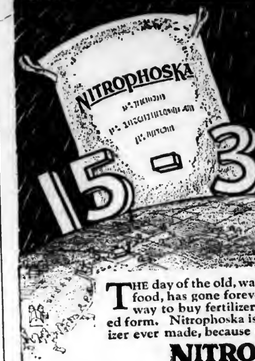
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The Farm Home

The Week's Prize-Winning Hint

By ALICE MARGARET ASHTON

WHY not put a little zest into the winter sewing and house redecorating by using lovely new oilcloths that come in soft attractive finishes and beautiful colors?

Oilcloth for dress accessories is very practical. Collar and cuffs of colored oilcloth set off a plain dress and the cost is only a few cents. Cut after any plain flat pattern and bind or pink the edges. When they become soiled they are so easily cleaned that they are especially desirable for work and school dresses. A belt of the same material is sometimes good, too. The schoolgirl's plain felt hat may be trimmed with a band or cutout motif of the same oilcloth. A figured green dress or one of white is stunning with plain green oilcloth trimmings. A bright print looks well with black and a dark or dull color is brightened with red or blue.

Oilcloth aprons may be really lovely and their use saves an amazing amount of laundering. Bibs of soft oilcloth protect the little one's clothes better than anything else; figures cut using contrasting color and pasted on the bib or apron add interest.

Oilcloth Luncheon Set

For table use oilcloth is not a new idea. But the pretty colored damask-like materials now obtainable are vastly different from the glaring white or ugly browns that once limited our choice. The oilcloth may cover the entire table or be used in the form of runners or plate-doilies. Use oilcloth covers for stands where plants are set, and for the home-made tea-wagon. The discriminating hostess is now buying attractive oilcloth covers for her bridge tables. It makes an ideal cover for the children's play table, the bedroom tables and bureaus and can be fitted into any desired color-scheme.

In a farmhouse where one room serves as dining and living room, the windows unfortunately gave only north light and the room was rather dark and dreary. Made from available lumber a broad shelf supported by small iron brackets was placed over each windowsill; the shelves were then covered with orange oilcloth. This bright color gives an illusion of sunshine and the broad shelf gives space for workbasket, toys and books. Oilcloth overdrapes for the windows are desirable especially for the kitchen. Boys nearly always approve of oilcloth accessories for their rooms.

If sewing must be done in one of the living rooms, cut a generous square of soft-finished oilcloth; provide it with a loop at two corners so that it can be hung smoothly when not in use. Spread this on the floor under the sewing chair and it will keep all threads and scraps from the rug.

Children are proud of book covers made from an attractive shade of oilcloth. These covers are useful for the favorite books of little tots because they may so easily be kept clean.

If in doubt what to use to brighten up a dark room or a dull costume, try a bit of gay-colored oilcloth.



The Study Corner of a High-School Boy's Room, Showing the Strong Writing Desk and the Convenient Hanging Bookshelves



A faithful clock, sunny window, growing plant, perhaps a vine, too—they all help make a cheerful winter retreat.

Planning for the Spring

By HEPSY NEFF

NEWS of blizzards, sleet storms and zero weather come in over the radio, yet we may have nothing worse than low, driving clouds or an occasional drizzle. But outdoor work is at a standstill. On this kind of a day one of the important things to be done is to study seed catalogs and make out our lists for the spring garden. Local stores carry garden seeds in bulk, but those of us who want the best returns for our time and money prefer a product we have tested. All beans and peas may look alike, but we prefer the kinds that have given us certain qualities and seem at home in our soil and climate.

Northern seeds, as a rule, have a vigor and push which is noticeable. Many of us believe in the influence of the moon on growth and we like to look ahead and mark the calendar with days for first and later plantings. The hardier varieties like onions, peas and lettuce have first place, but Lima beans, sweet corn and the tender string beans must have special consideration.

Wise Business Managers

All such foresight and planning makes for speed and efficiency, a fact well known to the merchant who has his spring goods chosen before the winter has well begun. Perhaps some of us have learned the use of mulch paper, one of the latest helps in plant growing. Any one who has bits of old roofing paper, like rubberoid, can test the effect of a paper mulch. The Department of Agriculture, Washington, D. C., offers both history and results of this method in a technical bulletin, price five cents.

The house-mother is no less busy with indoor plans and when she has finished there is a stock of durable working clothes for every member of the family besides one or two Sunday bests all around. Ready-made garments are plentiful and those for men and boys are dependable. Too often clothing for women and girls does not endure beyond the first washing. How we all cling to a garment we enjoy. Plenty of cushions and pillows with covers of a durable turkey red, polka-dot or blue print serve many needs in the busy season. Indeed, the great, superior quality of that little kingdom, the farm home, is the freedom and high activity of its citizens, young and old, due to the wisdom of its business managers, the women of the farm.

Tick-Tock!

By GERTRUDE SHOCKEY

MAGAZINES and papers are filled with house-cleaning chats; whole issues devoted to renovating and refurnishing. How few mention clock cleaning.

Whether for decoration or utility, clocks require care. Dust will gather, on the fancy boudoir clock or the ancient, caseless wag-on-the-wall.

Clocks are cheerful, livening up the whole room many times. If the mantel is the clock's home do not place it close against the chimney; clocks are sensitive to dampness, however slight. If the flue hole is near, overhead, be sure to cover the clock with newspaper when taking down stove pipes.

We cover our clocks when lifting rugs, sweeping, or cleaning walls. Always balance your clocks—level to a hair. Don't expect them to perform their whole duty unless you wind them regularly.

For the Clock's Sake

A veteran silversmith once told me it was much better, for the clock's sake, to wind it twice instead of once; either a day or week clock. Do not wind to the full limit ever. A spring is liable to snap when wound too tight. He also advised winding a few moments before or after striking. When moving a clock, stop it, removing the pendulum.

I have a clock that has never missed its accurate tick in eight years. A small square of cotton goods saturated with kerosene about four times yearly is dropped inside on its base. This, evaporating, seems to furnish the proper amount of lubrication to keep it going smoothly.

Never move the hands backward to set the time; and when some part of their mechanism gives out entirely—the main spring breaks—that's for a well-informed silversmith to remedy—as broken bones and bodies are for reputable doctors.

When the Evenin' Lamp Is Lit

Well, there ain't no riches waitin'
For a farmer nowadays,
And there's mighty few transactions
Which a fellow makes that pays.
And he's apt to git to gloomin'
And a-worryin' a bit,
But he's got to own he's happy
When the evenin' lamps are lit.

When the cows are in their stanchions,
And the horses had their hay,
When the evenin' chores are tended
And the things are put away;
When you're goin' toward the kitchen,
Led by smells of cookin' things,
When the evenin' lamp is lighted
And the kettle sings and sings.

When you pull off your galoshes,
Throw your mittens on the floor,
And you stoop to kiss the baby
Waitin' by the kitchen door,
Well, it ain't quite heaven, maybe
But mighty close to it
When the day dies in the country
And the evenin' lamp is lit.

—By Jay B. Iden.

Timely Tips

YOUR canary will sing oftener and more sweetly if he is not too hot. Hanging high in a room where your thermometer (lower down) registers 75 or 80 degrees the song is all roasted out of him.

* * *

HOT water bottles may be mended with patches like hubby uses for mending inner tubes. Follow the same directions he does.

* * *

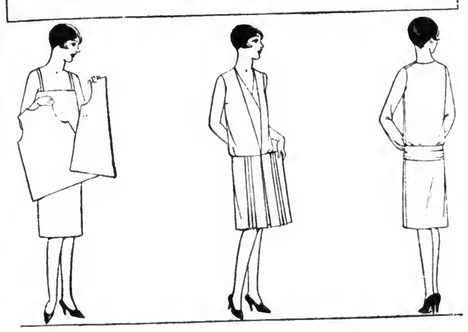
SEALING WAX is helpful in mending leaky pails that need not be heated. Just try it on your sap buckets this spring.

* * *

CONFECTIONERS and caterers use one-fourth teaspoonful cinnamon in each gallon of chocolate ice-cream. It enriches the flavor and gives no taste of cinnamon.

Flora Webster.





Going Away?

WITH the tremendous vogue for sheer woolens, inspired by the rich beauty of the silk crepes, which are quite as supple and easily handled, you'll be delighted with the youthfulness of this charming model, which adapts itself beautifully to these new fabrics. It is in flattering biege and brown tones, with surplice closing vestee of biege faille silk crepe, ornamented with brown bone buttons, which color is repeated in novelty belt buckle.

The graceful arrangement of plaits across front of skirt, with slim back, with fullness through hips, held in by swathed girdle, and deep French V, effected by front of blouse, makes it so entirely suitable for the woman of larger figure. It's easily made! The miniature diagrams show plainly few major parts of pattern. The blouse in three sections; two-piece skirt, pressed in plaits and attached to blouse. Stitch vestee to blouse at each side of front, set sleeves into armholes, tack girdle at each side at waistline, and it's finished. Style No. 2606 is designed in sizes 16, 18 years, 36, 38, 40, 42, 44 and 46 inches bust measure, and takes 3⅝ yards of 40-inch material with ¾ yard of 27-inch contrasting for the 36-inch size.

It is very effective in black crepe satin, using the two surfaces, printed rayon velvet with plain velvet in harmonizing tone, navy blue wool crepe with vestee of biege crepe, patterned wool jersey with plain, purple canton-faille silk crepe, self-trimmed, plain black sheer velvet with rhinestone buttons and belt buckle, and silk crepe in tweed pattern with plain crepe. Pattern price 15c in stamps or coin (coin preferred). Address Pattern Dept., Pennsylvania Farmer, 7391 Penn Ave., Pittsburgh, Pa.

CANDY THE BOYS CAN MAKE

For a taffy pull.—Two cupfuls sorghum, four cupfuls sugar, one and one-third cupfuls water. Boil until it hardens in cold water. Stir in three tablespoonfuls butter, one-fourth teaspoonful soda.

Beat well, pour on buttered tin, pull when cold.

Fudge. Two cupfuls brown sugar, one-half cupful sweet cream, one-half cupful boiling water, one tablespoonful butter.

Boil together until it forms a ball in cold water, add one-half cupful nut meats, beat until thick, pour into buttered pans. Cut into inch squares as it cools.

Molasses cakes. Two-thirds cupful molasses, two-thirds cupful sugar, one tablespoonful of lard, one-half teaspoonful ginger, one cupful of buttermilk, one teaspoonful of soda, about two and one-half cupfuls flour, not very stiff batter; this makes two cakes in pie tins. Reader.

Eggless Molasses Cake

One cupful molasses, two tablespoonfuls shortening, two tablespoonfuls cider vinegar, one teaspoonful cinnamon, one cupful granulated sugar, one teaspoonful salt, two and one-half teaspoonfuls soda, one-half teaspoonful each of ginger, nutmeg, allspice.

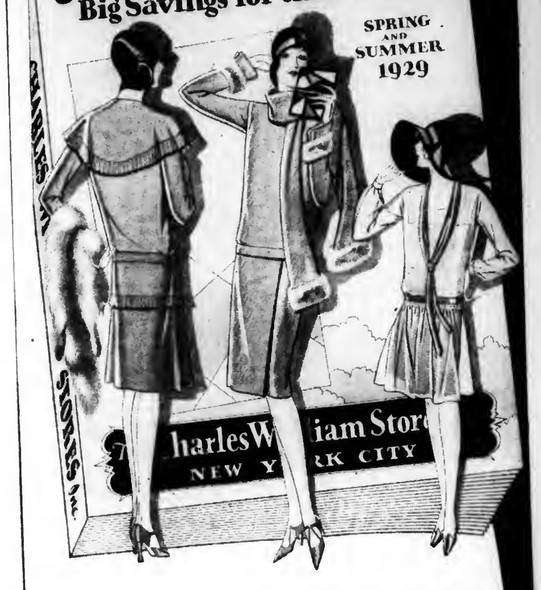
Mix the above thoroughly, then add one cupful boiling water. Quickly add one cupful flour and beat well. Then add enough more flour to make a thin batter. Work fast and bake immediately, using a moderate oven. Made in cup cakes, layers or on a long sheet—all are fine. Especially desirable when eggs are 75c a dozen.

Clarice Raymond.

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SPRING AND SUMMER 1929



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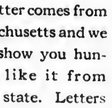
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(Continued from page 21.)

W. J. Treaster, McClure, was reelected treasurer.

The Pennsylvania Duroc-Jersey Breeders' Association elected a board of directors empowered to elect officers of the organization later. Those on the board are: E. W. Kline, Orangeville; A. S. Frommeyer, Chambersburg; W. A. McMullen, Loretto; Lehman Zaeger, Elizabethtown, and Ira Shenk, Hershey.

Swine Sales

Duroc-Jerseys

Twenty-five Duroc-Jersey gilts, consigned by Smith Brothers, proprietors of Chinchinna Farms, New Carlisle, Ohio, sold at the State Farm Products Show for a total of $1,139. The average price was $45.56. George W. Baxter, Elmira, N. Y., was the auctioneer of all the hog sales.

Hockersville Stock Farm, Hershey, Pa., bought the highest priced animal, Chinchinna 296th, a yearling gilt, for $75. The first prize tall gilt and champion of the Show, Chinchinna 365th, was bought by G. E. Frommeyer & Son, Chambersburg, for $62. The first prize spring gilt, Fancy Sensation, went to Hockersville Stock Farm. Two spring boars, sired by grand champions of Ohio and Indiana, sold for $32 and $30.

Berkshires

Twenty-six Berkshire sows and gilts, consigned by members of the State Breeders' Association, brought an average of $32.75 a head. The total received was $1,351.

P. E. Kite, St. Paris, Ohio, purchased the champion sow, consigned by Sycamore Farms, Douglassville, Pa., for $80. The reserve champion, also consigned by Sycamore Farms, went to Alex. Cooper of Jefferson county for $60. The animal was also first prize junior sow pig. P. E. Kite bought the first prize senior sow pig, consigned by Sycamore Farms, for $77.

Chester Whites

The Chester White sale contained 25 sows and gilts consigned by White City Farm, I. T. Hieman and Son, Marion, Ohio. They sold for a total of $1,016, an average price of $40.64 each.

F. L. Heilman and Son, Cleona, Pa., bought the highest priced animal for $60. The first prize junior gilt, later declared champion, was purchased by Michel Brothers, Wexford, Pa., for $50. The senior first prize gilt was purchased by L. B. Rusterholtz, Erie, Pa., for $52.

Poland-Chinas

The 25 Poland-Chinas totaled $1,484 in the sale, an average price of $59.36, the highest of the four breeds entered in the show. Consignors of the Poland-Chinas were Washburn, Hershey and Lewis, proprietors of Greenfield Farms, Tiffin, Ohio.

Charles Sheffer, York, Pa., bought the highest priced individual for $87. The first prize senior yearling and champion of the breed went to the St. Armour Co., Mortonville, Pa., for $70. Charles Sheffer bought the first prize senior pig and reserve champion for $75. The first prize junior pig went to J. K. Shields, Mechanicsburg, Pa.

In all one hundred and one head of sows and gilts were sold Tuesday and Wednesday for a total of $5,010, an average of $49.57 a head.

Prof. M. F. Grimes, State College, and Prof. H. L. Garrigues, Storrs, Connecticut, were the judges in the swine show.

Sheep and Wool Growers

THE Pennsylvania Sheep Breeders' and Wool Growers' Association in its annual meeting reelected R. L. Munce, Washington, president; J. B. Henderson, Hickory, vice-president, and W. B. Connell, State College, secretary.

Sixty persons attended the banquet and meeting, eleven of them being members of the Centre county and Washington county 4-H lamb clubs, who exhibited pens of lambs at the show last week. Mr. Connell announced that the $200 prize money to be awarded the club members had been furnished by wool buyers, the State Sheep Breeders' Association and some of the leading breeders of the state.

The Association adopted a resolution commending Governor Fisher for recommending an appropriation for a State Farm Products Show building in the budget presented to the legislature.

A resolution also was adopted which favored the proposed law controlling shipment into the state of sheep and goats carrying dangerous and transmissible diseases.

Prof. H. L. Garrigues, head of the Animal Husbandry Department at the Connecticut Agricultural College, was the chief speaker. He told of present trends in the sheep and wool industry of New England.

A girl was crowned grand champion of the 4-H lamb club members of the state, following the example set when Martha Hess, Cumberland county girl, was awarded championship honors on her baby beef. The lamb club queen is Alice Foust, Centre Hall, who showed a pen of wonderfully well-fitted Southdowns.

Another Centre countian won the reserve grand championship on a pen of Hampshires, the select group of this breed. Clarence Hoy, Bellefonte, was the exhibitor. By breeds the winning pens were shown as follows:

Southdowns.—Alice Foust, Centre Hall, first; Edward Bitner, Centre Hall, second; Donald Campbell, Pennsylvania Furnace, third; George Smith, Spring Mills, fourth; Florence Brooks, Centre Hall, fifth, and Philip Smith, Spring Mills, sixth.

Hampshires.—Clarence Hoy, Bellefonte; James Campbell, Pennsylvania Furnace; Harold Homan, State College, and Lee Homan, State College, in the order named.

Shropshires.—Fred Luce, Centre Hall; Alvin Shaw, Washington; Wilbur Shaw, Washington; Charles Harter, Nittany; Floyd Weight, Bellefonte, and James Martin, Washington.

Dorsets.—Luke Pasco, Hickory; Robert Vance, Burgettstown, and Howard Vance, Burgettstown.

In the Centre county round-up the six showings were in the following order: Alice Foust, Clarence Hoy, Fred Luce, Edward Bitner, James Campbell and Donald Campbell. The Washington county round-up resulted in the following rating: Luke Pasco, Alvin Shaw, Wilbur Shaw, Robert Vance, Howard Vance and James Martin.

Sixty-one head were shown by the 19 exhibitors.

P. C. MacKenzie, superintendent of livestock at the Pennsylvania State College, who judged the lambs shown by the boys and girls, declared the exhibit the best ever presented at this state show.

Baby Beef Clubs

THE beef cattle show consisted of exhibits by three county 4-H baby beef clubs. The Dauphin county club showed 21 calves, Cumberland county 20 and Lebanon 44. The animals were placed on show-ring merits as follows:

Dauphin County Club

First, Ammon Oberholtzer, Elizabethtown; 2, Harold Graybill, Hershey; 3, Roy Koons, Bachmanville; 4, John Alwine, Middletown; 5, Melvin Brandt, Bachmanville; 6, J. Shelley Kaylor, Elizabethtown; 7, Paul R. McMullen, Elizabethtown; 8, Carl Foreman, Hummelstown; 9, Walter Espenshade, Elizabethtown; 10, Marlin Hershey; 11, Clayton Graybill, Hershey; 12, Clarence Hollinger, Hershey; 13, David Shelley, Elizabethtown; 14, J. Lester McMullen, Elizabethtown; 15, Helen Brandt, Bachmanville; 16, Catharine Alwine, Middletown; 17, Boyd Sponagle, Hummelstown; 18, John McPherson, Middletown; 19, Roy Espenshade, Elizabethtown; 20, John Baseshore, Palmyra; 21, Julie McPherson, Middletown.

Cumberland County

First, Martha Hess, Mechanicsburg; 2, Guy Shultz, Carlisle; 3, Paul Brindle, Mechanicsburg; 4, Lee Weary, Mechanicsburg; 5, Lloyd Stoner, Mechanicsburg; 6, Ruth Shetter, Mechanicsburg; 7, Ruth Weary, Mechanicsburg; 8, William Strong, Mechanicsburg; 9, Leroy Taylor, Carlisle; 10, Vesta Weber, Mechanicsburg; 11, Romaine Shetter, Mechanicsburg; 12, Blaine Leib, Mechanicsburg; 13, C. Junior Harris, Dillsburg; 14, Grace Mellinger, Carlisle; 15, Howard Shetter, Mechanicsburg; 16, Marguerite Taylor, Carlisle; 17, William Ellerman, Boiling Springs; 18, Wilson Mellinger, Carlisle; 19, Anna M. Miller, Carlisle; 20, Gilmer Taylor, Carlisle; 21, Vance Shultz, Carlisle; 22, Earl Shultz, Carlisle; 23, Samuel Leib, Mechanicsburg; 24, Lester Zeigler, Carlisle; 25, Irvin Mellinger, Carlisle; 26, Harold Hertzler, Mechanicsburg; 27, Joseph Hess, Mechanicsburg; 28, Lawrence Shultz, Carlisle; and 29, Lorne Miller, Carlisle.

Lebanon County

First, Wenroy Smith, Lebanon; 2, Paul J. Reist, Lebanon; 3, George W. Bell, Annville; 4, Esther E. Bollinger, Myerstown; 5, Amos Graby, Lebanon; 6, Isaac Smith, Annville; 7, Jacob H. Smith, Annville; 8, Amy G. Freidestine, Lebanon; 9, Hilda Bomberger, Lebanon; 10, Stanley L. Smith, Lebanon; 11, Lester S. Schlassman, Myerstown; 12, Mabel M. Meyer, Schaefferstown; 13, Ralph H. Horst, Schaefferstown; 14, Sarah Forney, Palmyra; 15, Homer Forney, Palmyra; 16, Mary Bucher, Myerstown; 17, Mildred Snyder, Lebanon; 18, J. Isaac Beaver, Prescott; 19, Francis Bauer, Myerstown; 20, Abraham L. Myer, Schaefferstown; 21, Jacob W. Brubaker, Lebanon; 22, David P. Light, Lebanon; 23, David Kettering, Lebanon; 24, Herman Kreider, Lebanon; 25, Paul W. Hershey, Annville; 26, Harry K. Kreider, Lebanon; 27, Russell W. Hartman, Annville; 28, Ruth Brubaker, Schaefferstown; 29, Harry F. Schaak, Lebanon; 30, Allen Mech, Annville; 31, Warner Bucher, Myerstown; 32, Paul E. Hershey, Lebanon; 33, Harold Bollinger, Sheridan; 34, Lloyd B. Horst, Schaefferstown; 35, Christian Bomberger, Lebanon; 36, Dee Wampler, Lebanon; 37, Warren Kreider, Lebanon; 38, W. L. Hartman, Fredericksburg; 39, Rufus S. Kettering, Annville; 40, George Kettering, Lebanon; 41, Martha E. Bell, Annville.







Club Round-Up

Final placings in the round-up of the baby beef clubs were based on show-ring placing of the animals shown, the daily gain of the animals, and the record books kept.

Dauphin county first twelve placings were: Harold Graybill, Hershey, R. 2; John Alwine, Middletown, R. 1; Ammon Oberholtzer, Elizabethtown, R. 3; Paul R. McMullen, Elizabethtown, R. 4; Melvin Brandt, Bachmansville; Roy Koons, Bachmansville, Walter Espenshade, Elizabethtown, R. 4; Jay Lester McMullen, Elizabethtown, R. 4; Carl Foreman, Hummelstown, R. 1; John S. Kaylor, Elizabethtown, R. 4; Catherine Alwine, Middletown, R. 1, and Boyd Sponagle, Hummelstown, R. 2.

Lebanon county first twelve placings were as follows: Esther E. Bollinger, Myerstown, R. 4; Paul J. Reist, Lebanon, R. 7; Amos Graby, Lebanon, R. 4; Hilda Bomberger, Lebanon, R. 7; Isaac Smith, Annville, R. 1; Mabel M. Meyer, Schaefferstown, R. 1; Paul E. Hershey, Lebanon, R. 4; Wenroy Smith, Lebanon, R. 6; Homer Forney, Palmyra, R. 2; Jacob N. Smith, Annville, R. 1; Mary Bucher, Myerstown, R. 2; and Lester S. Schlassman, Myerstown, R. 3.

Cumberland county's best dozen were: Guy Schultz, Carlisle, R. 6; Paul Brindle, Mechanicsburg, R. 1; Lloyd Stoner, Mechanicsburg, R. 5; Martha Hess, Mechanicsburg, R. 1; Ruth Weary, Mechanicsburg, R. 6; Wm. J. Strong, Jr., Mechanicsburg, R. 3; Ruth G. Shetter, Mechanicsburg, R. 3; Romaine Shetter, Mechanicsburg, R. 3; Samuel Leib, Mechanicsburg, R. 2; Vesta Weber, Mechanicsburg, R. 5; Howard Shetter, Mechanicsburg, R. 3, and Earl Shultz, Carlisle, R. 6.

The Champions

In the grand championship competition, judged by Prof. H. L. Garrigues, head of the Animal Husbandry Department, Connecticut Agricultural College, Martha Hess, 17-year-old 4-H baby beef club girl of Mechanicsburg, Cumberland county, won the high honor. Paul Brindle, Mechanicsburg, won second in the state-wide competition; Esther Bollinger, Lebanon, third; Guy Shultz, Carlisle, fourth; Wenroy Smith, Lebanon, fifth; Paul Reist, Lebanon, sixth; George Bell, Annville, seventh; Ammon Oberholtzer, Elizabethtown, eighth, and Harold Graybill, Hershey, ninth.

Money for the baby beef prize fund was contributed by organizations in Cumberland, Lebanon and Dauphin counties, the Reading Railway, and the American Hereford Breeders' Association.

When sold at auction the grand champion, shown by Martha Hess, brought 55 cents a pound. He weighed 1,042 pounds and was bought by Arbogast and Bastian, Allentown.

The reserve grand champion, shown by Paul Brindle, sold for 20 cents a pound. This animal weighed 1,292 pounds and went to the same purchaser.

Both of these steers had been fed since April 9. The grand champion gained 1.62 pounds a day and the reserve champion 1.92 pounds a day.

Awards

Corn

Four hundred and five ten-ear exhibits and 10 single ear exhibits, all of which were prize-winning entries in local shows held throughout the state during the past four months, made up the corn show this year. Sixty-seven of the ten-ear exhibits were in the boys' and girls' classes. The quality of the corn exhibited was unusually fine and was made up of six of the standard Pennsylvania varieties.

The grand champion 10-ear exhibit of corn was shown by C. N. Myers, Hanover, York county. The variety was Golden Queen Yellow Dent. Mr. Myers also won first place in the sweepstakes class of Yellow Dent corn. Other winners in the sweepstakes class were: J. C. Garber, Elizabethtown, Lancaster county; C. Russell Brown, New Park, York county; Leslie Sellers, Chambersburg, Franklin county, and N. E. Solt, Lehighton, Carbon county.

Leading awards in the corn show follow:

District No. 1

Lancaster County Sure Crop.—1, J. C. Garber, Elizabethtown; 2, Henry Heiland, Thomasville; 3, C. B. Newcomer, Mt. Joy.

Yellow Dent.—1, Dr. Vallie Hawkins, Fawn Grove; 2, H. D. Ness, York; 3, Bailey Ruff, Fawn Grove.

White Dent.—2, J. Arthur Bruckart, Lititz.

White Capped Yellow Dent.—1, Lewis Webster, Lahaska; 2, A. H. Vasey, Lumberville.

District No. 2

Lancaster County Sure Crop.—E. S. Egger, Hanover; 2, Robert Bankert, Hanover; 3, Clark Berwager, Hanover.

Yellow Dent.—1, E. S. Egger, Hanover; 2, Frances Murren, Hanover, R. 5; 3, A. A. Atherton, Greencastle.

White Dent.—1, Thos. Atherton, Greencastle; 2, Clarence Atherton, Greencastle.

White Capped Yellow Dent.—1, Leslie Sellers, Chambersburg; 2, Clarence Atherton, Greencastle; 3, Thomas Atherton, Greencastle.

District No. 3

Yellow Dent.—John Kabel, Cabot; 2, Thomas Denniston, Slippery Rock; 3, J. W. Fairman, Creekside.

White Capped Yellow Dent.—1, G. W. Woods, Franklin; 2, Earl Woods, Franklin; J. C. Cowan, Brookville.

Flint.—1, Raymond Frantz, Saylorsburg.

District No. 4

Yellow Dent.—1, R. A. Briggs, Nescopeck; 2, L. A. Harris, Milan; 3, County Home, Tioneata.

White Capped Yellow Dent.—1, Simon Mibaier, Flinton.

Flint.—1, R. R. Putnam, Tioneata; 2, Marvin & Howard Miller, Clarks Summit.

District No. 5

Yellow Dent.—Burton Bayard, Waynesburg; 2, Geo. G. Strosnider; 3, John Eisiminger, Waynesburg.

District No. 6

Lancaster County Sure Crop.—1, H. W. Dromgold, New Bloomfield; 2, Harry Wilson, Lyaville; 3, Daniel Rice, New Bloomfield.

Yellow Dent.—1, Harry B. Cooney, Landisville, No. 2; 2, Carl Boltz, Landisburg; 3, E. N. Reeder, Landisburg.

White Capped Yellow Dent.—1, J. O. Shear, Lewisburg.

Class 8—Variety Classes

Golden Queen.—1, C. N. Myers, Hanover; 2, Henry Heiland, Thomasville; 3, Maurice Resh, Hanover.

Greene County Leaming, 1, F. S. Strosnider, Waynesburg; 2, Austin Watson, Waynesburg; 3, Geo. G. Strosnider, Waynesburg.

Cloud's Yellow Dent, 1, and 2, J. W. Bruckart, Lititz; 3, John Enders, Columbia.

Reid's Yellow Dent, 1, Clarence Atherton, Greencastle; 2, M. G. Sellers, Chambersburg, R. 8; 3, Thos. Atherton, Greencastle.

Ohio Leaming.—1, W. K. Closser, New Bloomfield; 2, H. E. Closser, New Bloomfield.

Yellow Dent, 1, Henry J. Heiland, Thomasville; 2, Howard Atherton, Greencastle; 3, Lilian Ness, York, R. 1.

White Dent.—1, Howard Atherton, Greencastle.

White Capped Yellow Dent.—1, Leslie Sellars, Chambersburg, R. 8; 2, Howard Atherton, Greencastle; 3, David Anspach, Lebanon.

Lancaster County Sure Crop.—1, Henry J. Heiland, Thomasville; 2, Grace J. Heiland, Thomasville; 3, Ruth Herr Garber, Elizabethtown.

Sweepstakes Classes

Lancaster Sure Crop.—1, J. C. Gerber, Elizabethtown.

Yellow Dent.—1, C. N. Myers, Hanover.

White Dent.—1, C. Russel Brown, New Park.

White Capped Yellow Dent.—, Leslie Sellers, Chambersburg.

Flint, 1, N. E. Solt, Lehighton.

Grand champion won by C. N. Myers,

(Continued on page 31)



It pays to use genuine RCA RADIOTRONS

A radio set can be no better than its vacuum tubes. They are the heart of the instrument. Makers of high quality radio sets recommend the use of RCA Radiotrons.

After a year of average use all the tubes of a set should be replaced with a brand new set of RCA Radiotrons. This insures good reception.

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"Extra—Extra"

Extra what? *Extra help*, of course! If by some chance you've never tried Fels-Naptha it will be good news to know this golden soap gives *extra help* in washing because it brings two active cleaners. Good golden soap and plenty of naptha, blended together by our exclusive process and working hand-in-hand to loosen the dirt and wash it away. Try it and see for yourself that . . .

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ORDER FROM YOUR GROCER TODAY

PAPER YOUR HOME for 90¢ PER ROOM

You can paper the average room with high-grade, artistic wall paper for as little as 90 cents—by buying direct at lowest wholesale prices. Send for big free catalog. Not the usual mail order catalog but a large book showing scores of artistic designs for ceilings and borders as well as walls. Write today.

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Stubborn Cough Quickly Ended by Famous Recipe

Here is the famous old recipe which millions of housewives have found to be the most dependable means of breaking up a stubborn, lingering cough. It takes but a moment to prepare and costs little, but it gives real relief even for those dreaded coughs that usually follow the "flu."

From any druggist, get 2½ ounces of Pinex, pour it into a pint bottle and fill the bottle with plain granulated sugar syrup or strained honey. Thus you make a full pint of better remedy than you could buy ready-made for three times the cost. It never spoils and tastes so good that even children like it.

Not only does this simple mixture soothe and heal the inflamed throat membranes with surprising ease, but also it is absorbed into the blood, and acts directly upon the bronchial tubes, thus aiding the whole system in throwing off the cough. It loosens the germ-laden phlegm and eases chest soreness in a way that is really astonishing.

Pinex is a highly concentrated compound of genuine Norway Pine, containing the active agent of creosote, in a refined, palatable form. Nothing known in medicine is more helpful in cases of distressing coughs, chest colds, and bronchial troubles.

Do not accept a substitute for Pinex. It is guaranteed to give prompt relief or money refunded.

PINEX for Coughs

1929 Model Radio $2.95

Works without tubes, Batteries or Electricity. Write us for long lists of statements heard by users and free copy of booklet, "The Radio Millions Have Been Waiting For."

Crystal Radio Co., Wichita, Kansas

IN THE PENNSYLVANIA FARMER ARE NAMES—names of advertised products. Time and again you see them. They are like old friends—to be trusted. Their names mean economy, full value and integrity. Tell the manufacturer you saw their ad in Pennsylvania Farmer.



Washing Your Sweater

THESE cold days a silk or warm, woolly sweater is a part of every girl's wardrobe; but she hesitates to get a light colored one because it might not launder well. If you will remember these directions, you may gratify your wish for blue, pink or even white.

First, jot down the measurements, so you can pull the sweater back to its original size and shape after drying. Dip it in a basin of luke-warm soapsuds, then press the suds through the material without lifting the sweater out of the water. When the water becomes soiled, repeat the process with fresh soapsuds.

Rinse in clear, warm water and squeeze out as much of the moisture as possible without wringing the garment, keeping the water at the same temperature throughout the process. Stretch the sweater into shape and spread out flat to dry.

Say It with Words

IT MAY be true that "silence is golden" but I wonder how many of us take time to praise Mother's cooking. A young girl was away from home and was praising her Mother, declaring she was the most wonderful housekeeper in the world.

"Have you told her so?" asked her hostess.

"Oh, yes, indeed! We hardly ever eat a meal without telling her how good this or that dish is."

"Keep on telling her," said the hostess. "I know her family's praise helps her through many a hard task."

Now this hostess was also a good housekeeper and cook and her family would have resented it had any one told them they were unappreciative of their Mother's work. But they belonged to the class that took these things for granted and their appreciation and gratitude were simply "understood".

The florists use as their slogan, "Say it with Flowers" and say that their business has almost doubled since the advent of these words. Instead of enjoying a well-cooked meal tonight in silence, why not "say it in words" and make the housekeeper's heart glad. The greatest reward that comes to many a mother is the spoken word of praise from Father and the children.

The Farmers' Daughters

By ELSIE K. WATSON

My Mother Tongue

1. I believe that my mother tongue is worthy of my admiration, respect, and love.
2. I believe that it is possible for me to speak my native language correctly, fluently and elegantly.
3. I believe that this takes time, patience and care.
4. I believe that slang is language in the making and that until it is made, it is not proper for children to use.
5. I believe that the use of slang kills one's power to speak fluently.
6. I believe that the proper accompaniment to pure, clearly enunciated language is a musical voice.
7. I believe this voice can be cultivated, for it is everyone's right by inheritance.
8. I believe it is possible to live up to this creed.
9. I believe it is worth while.
10. I believe I'll try it.

—Harriette Treadwell in School News.

Conundrums

Q.—When do broken bones begin to make themselves useful?
A.—When they begin to knit.

Q.—When is the best time to read a book?
A.—When Autumn turns the leaves.

Q.—How do you pronounce VOLIX?
A.—Volume nine.

Q. How do we know that the cow jumped over the moon?
A. By the Milky-way.

Can you read the following?

YY U R YY U B
I C U R YY 4 Me.

Answer.—
Too wise you are,
Too wise you be,
I see you are
Too wise for me.

Sally's Surprise

Some can eat and ha' no meat,
And some ha' meat and canna' eat;
But we ha' meat and we can eat;
And so the Lord be thank 'it.

SALLY liked nothing better than to plan a surprise for someone, so when Mother was called to Grandmother Benson's for a few days when Aunt Lou was in bed with the flu, and didn't get home until Saturday night, Sally began to plan a surprise dinner cooked entirely by herself. Of course she had helped Mother with the cooking but had never done it all herself. It was a fine chance to show Mother what she could do.

Being a wise girl, Sally choose a very simple meal, and here is the menu just as she put it down:

Sausage Roll—India Relish
Baked Potatoes Scalloped Corn Au Gratin
Lettuce Strawberry Jam
Canned Peaches Lemon Sponge
Coffee

First she washed and scrubbed four medium-sized potatoes—one for each member of the family. These, she had often heard Mother say, would take an hour to bake. Next she prepared the sausage roll this way:

Eight large cabbage leaves, one cupful sausage, one teaspoonful salt, one and one-half cupfuls rice (uncooked), one cupful tomatoes, one teaspoonful pepper.

The cabbage leaves were soaked in hot water just long enough to soften them. The rice she washed very carefully; then added sausage, tomatoes, salt and pepper and mixed well. This was then rolled into the soft cabbage leaves and folded in at the ends. She placed it in a pan and covered with hot water, weighting it down with a plate while cooking. As dinner was to be served at six, Sally put the sausage roll on at a quarter after five, allowing it over a half hour to boil.

Scalloped Corn

Next she prepared the corn, using one can corn, one cupful grated cheese,

Chapped Hands

IF YOUR hands are rough and chapped, a simple remedy is to wash them at bedtime with warm water and soap; dry carefully and rub with a good cold cream and pull on a pair of clean cotton gloves.

one cupful cracker crumbs and small lump of butter placed alternately in a baking-dish. Then she mixed one beaten egg, a pinch of salt and a pint of milk together and poured over the first mixture. This went into the oven at half past five and was ready at six.

Lemon Sponge

The lemon sponge, of course, was made that morning and was ready to serve for dinner. Sally selected this recipe because it was so easy to make.

Mix together one-half cupful sugar and two dessertspoonfuls cornstarch; add one large cupful water, juice and rind of one lemon, with a pinch of salt. This was cooked in a double-boiler until thick and for ten minutes more. After it was removed from the fire, Sally added the stiffly beaten whites of two eggs; poured it into wet molds and set it away to chill.

Custard

This boiled custard with chopped nuts topped it off: Two egg yolks, one cupful milk, one-fourth cupful sugar and flavoring.

Sally's dinner was a grand success and to say that Mother was surprised and pleased would be putting it mildly.

A Flower on Your Shoulder

WITH the advance of the winter season, artificial violets and orchids are assuming importance as a touch of color to the fur or cloth coat. Most frequently seen are large clusters of artificial violets in natural purple tones and in the reddish purple shades, according to the Artificial Flower Style Service. Orchids are seen in single and double flower effects, in natural orchid tones and in the more rare green shades.

Small metal flowers are also being worn. These include clusters of small gold and silver petal flowers; gardenias of metal cloth in the full pastel color range and small flower motifs having metal edges, metal threads running through the cloth and other metal touches.



A Girl I Know

By HELEN COWLES LECRON

Oh, no, she isn't beautiful nor even
pretty,
And few would call her talented and
would call her witty,
But Father thinks she's just a dear; he
always telling folks.
(She listens to his stories and she laug
at all his jokes.)

You wouldn't call her brilliant, and h
clothes are far from clever,
She doesn't shine in lessons or in conv
sation, ever,
But her brother says she's "just a brick
a peach, and all of that!"
(Each morning when he's hurrying d
helps him find his hat.)

She's just a little awkward and she's just
little shy,
And no one ever runs to look when Mar
passes by,
But here at home, no other girl could ev
take her place,
(She comes on time to breakfast with
happy morning face!)



By FANNY RICHARDSON

He's just an ordinary dog with common
cars and fur,
His nose is much too stubby—some folk
would call him "cur."
He dines on common refuse cans—the
homeliest of bones,
He chums with no 'count alley dogs, the
kind nobody owns,
And yet there is no high-brow dog could
love me more than he;
How he can be a common dog is more
than I can see.

Our Dumb Animals.

EVENTS CAUGHT BY THE CAMERA



Copyright by Underwood & Underwood

1. Photo shows Dr. A. J. Worden of the Westinghouse Research Laboratories, with his new transmitter which sends messages and sounds of matter through space. The new apparatus is much more simple than present systems, requiring no trained operators, and is much faster. It can transmit up to 600 words per minute.

2. New World's Champion Archer. The new world's archery champion, Clinton W. Douglas, whose score in a tournament at Los Angeles is the highest ever made in competition, 704 points out of a possible 810 with 90 arrows, giving him the title formerly held by Stanley L. Spencer. Mr. Douglas is a teacher of science in the John Burroughs high school.

3. Photo shows Prince Hermann of Saxe-Weimar and Kaiser Wilhelm of Germany, on their first meeting in either. He former Emperor celebrated his 70th birthday on January 27 with a grand command. He is seldom referred to and as the accompanying picture, made on the occasion of the Kaiser's birthday, would indicate, is not in favor with the present government at Berlin. Emphasis is to be given to Weimar.

4. The Capitol Dome. The dome of the Capitol is one of the most imposing sights in the National Capital. The stately beauty of the white dome is enhanced by the sparkling snow.

5. Automobile tourists agree that the famous Axen-trasse road, about seven miles long which extends from Brunnen to Fluelen along the shores of Lake Lucerne in Switzerland, is one of the most picturesque in the world. It was largely cut from solid rock, the cliffs towering on the side of the road, according to the

6. Photo shows one of the world's youngest aviators, and holder of the junior record for the number of hours in the air, Donald MacIntosh, 4-year-old son of Mr. and Mrs. R. P. MacIntosh of California. The youngster has been up 30,000 hours in all. He is attending the Miami All-American Air Meet.

In Enemy Country

By James Willard Schultz

(Copyright, 1928, by James Willard Schultz)

Synopsis

Many Swans, a Sun medicine man, Lone Woman, his wife and Bear Plume, their son, who tells the story, have left the lodges of their own Blackfeet tribe and after perilous adventures, have joined the enemy tribe, the Crows. Lone Woman and Bear Plume cannot understand the move and Many Swans' only explanation is that he has done some secret wrong and must be punished. A tame wolf has joined the trio and is the constant companion of the boy. At the Crow tribe they find a welcome, much to their surprise, and Bear Plume and Black Elk, son of Chief Dusty Bull, pledge everlasting friendship. Comes a day when Many Swans gives a feast and smoke to Dusty Bull, Long Bow, Low Horn, an aspiring leader, and other chiefs and warriors. After the feast, the guests tell of their war trails and the coups they have made. Low Horn tells a tale of bravery and killing but is exposed as a liar by Many Swans and is severely punished by his own people. Lone Woman is warned that the disgraced chief has sworn revenge. Many Swans leads the Crows in battle against the Assiniboines and in the absence of the warriors, Bear Plume and Black Elk are required to provide meat for the families. Buffalo and antelope become scarce and the boys start out on a secret journey for game. They are surprised and captured by the Spotted People and learn their captors are seeking a sacred white buffalo. Being unsuccessful, the Spotted People, with their captives return to the camp. Here the boys are given places of honor but plan to escape at the first opportunity. Bear Plume, Black Elk and a Spotted People brave, Fish Robe, are sent by Otter Head, the Chief, to bring in the white buffalo. Misfortune stalks the undertaking; Fish Robe's horse is bitten by a snake and must be abandoned, and now the party is fleeing from the fierce Snake men.

Signed I, at last: "One chance, just one chance have we to survive this trap that we are in."

"What is that chance?"

"The coming of some hunters of your Crow tribe," Sadly he shook his head and answered: "That chance is of the size of the end of my little finger. By this time they well know that the Spotted People and the South Big Bellies are in this part of the country."

WATER! Before Sun rose to the middle of the blue, we yearned for a drink of it. Came a little west wind that brought to us the far-off gurgling of the creek over its stones, and that made us still more thirsty. And what were our enemies doing? That, we became more and more anxious to know. Some of them were, perhaps, out at the mouth of the coulee, lying low in the edge of the brush and watching for us to come out, while others watched for sight of us from the top of the cliff that hemmed us in on three sides. And again it was possible that the whole party of them were, with the exception of one on watch, resting by the side of the creek; eating, drinking the cool water, vowing that we should die from thirst, if we were not brave enough to come out and die fighting them.

As Sun went on down the skies, I felt more and more that I must know just what the Snakes were doing. "It may be that they have gone, that they feared to remain here, thinking that we were early hunters from the near camp of our people," I signed to Black Elk.

"When they captured our horses, they also got our pouches of dried food; they know that we came from a camp far off," he answered; and was right enough in that.

I got upon my feet and Wolf got up and stood beside me, looking toward the mouth of the coulee and sniffing the little wind. I whispered and signed to him to go out, to see if enemies were near. He wagged tail and went forward a few steps, again and again sniffed the wind, and returned to me, and Black Elk signed: "Now you know. They are out there, are lying at the edge of the brush, watching for us."

Down I sat again, with my back against the tree, and, without wanting to do so, fell asleep.

Black Elk awoke me; his eyes were red, nearly closed. "I must sleep a short time. Now, you watch," he signed.

"The enemy, what of them?" I asked.

"Heard them not," he answered, and stretched out upon the ground.

I let him sleep until Sun was near setting, then awakened him. signed that, by night, we must know what the enemy were doing; that I was going to climb the cliff to try to see them. got him to take himself against a tree, and then, standing upon my shoulders, I managed to get upon one of lower limbs. He then passed me my gun, sticking it under my belt, I slowly went on up. I could see out across the valley. There, near edge of the timber bordering the creek, horses grazing, thirteen horses. Another one, dead, ed, legs stiffly sticking up, lay a little way out the mouth of the coulee; that, of course, was Elk's horse, bled to death. One of the gray horses was mine, so our enemies were twelve, cluding the one I had killed. Not one of them in sight. But as I looked for them, one came from the creek and out past the horses, and to er, whom I had not discovered, sitting as he in the sagebrush, and who now arose, and after talk with the newcomer turned about and went the creek, out of sight in the timber bordering But before he went, while still standing facing I plainly saw him sign: "How is it? Have you them?" And then, a little later: "Watch hard!"

WHERE was the one who had answered signs? I could not see the outer edge of timber and brush stretching across the mouth of coulee. Very cautiously I mounted higher, three higher, and then, ha! I discovered a man on top of cliff to the south of me and a little way back its edge. He was approaching the edge; he down upon hands and knees and crept toward a small bunch of sagebrush that stuck over the edge. That brush did not belong there; never grown there upon the bare hard rock; he himself placed it there to screen his face while tried to discover us in the timber below. He was far off; I could plainly see him: his heavy powerful arms, big wide face, hair all sticking like that of a buffalo bull, and a queer kind of necklace that he wore, with a short heavy bow, two or three arrows in the grip of his right hand and fur bowcase, with more arrows, dragging his side. As I watched him approach that cliff anger grew strong within me. "Killer of my friends, now shall you die!" I hissed, and, resting my gun in the fork of a limb and taking careful aim, pulled trigger. Whoom! Through the drifting powder smoke I dimly but surely saw the man spring to his feet, stand straight up, plucking at his breast and stagger and fall over backward. I heard a shout; it was the watcher near the horses, calling to companions in the timber bordering the creek. him they came running, and, pointing to the cliff, he told them what he had seen. They too stared at the cliff, and talked excitedly. I could hear them.

Black Elk thumped the tree with a stick to my attention, signing, "What have you done?"

I had to thrust my gun under my belt before I could reply: "Killed one, close here on the cliff. The others, ten, are this side of the creek timber looking our way."

"Now, what shall we do?"

"I know not. Wait. I will see," I answered.

Flat upon his back, arms outstretched, lay man I had killed; as I looked at him, it was as I could do to keep from singing. I was glad, glad! Proud that he lay there dead with my bullet in his Then, as I looked at his friends, fear was within me. They still stood in line, there in open, talking now so quietly that I could not their voices. Well I knew that now, with two their number dead, they were more than ever to put an end to us. I reloaded my gun.

Again Black Elk thumped the tree, and signed "Now, what do the Snakes?"

"Still standing this side of the creek timber, ing," I replied.

Wolf, too, was looking up at me, uneasily ing the ground with his forefeet, wagging tail, ing me to come down to him.

Sun had now set. I feared that the enemy make no move to do whatever they decided until it was too dark for me to see them. I waited silent until my eyes ached. At last I saw them toward our hiding-place. On they came, scatter out as they approached the mouth of the coulee. then, when at about fair bowshot distance from they one by one dropped down into the sagebrush and out of sight.

I descended the tree, and Wolf jumped upon licking my face with his now almost dry tongue. I saw that Black Elk's lips were dry and cracked as were mine. I signed to him the position of enemy, and we decided that they would not attempt to come into the timber in search for us, well knowing that we could hear their approach, and shoot kill two of them before they could kill us. Instead of attempting that, they were going to keep us hemmed in there in the timber until

died of thirst or made an attempt to break through the line of them.

Signed Black Elk: "When we can no longer bear our need of water, we will go out, and, fighting, die!"

"Yes," I answered.

I had made up my mind to that before he mentioned it, and was myself about to propose it. I thought that it was well for us to go out right then, while we still had strength to make a good fight, but something held me back, kept me from proposing it. I signed to Black Elk that it was likely that the watcher out in the open had seen the smoke of my gun when I fired from the top of the tree, and that we should move to some other place. We went to the upper, the north wall of the coulee, and got under a heavily branched tree that was almost against it and about fifty steps back from the outer edge of the timber. We there had one advantage: with the wall at our backs, the enemy could come at us only in our front. But, as I have said, we felt sure that they would never attempt to sneak in upon us.

OLD WOMAN was now risen and making the night almost as light as day. Motioning me to keep good watch, Black Elk went to a near young cottonwood, stripped off a large section of its outer bark, and brought many slices of the inner bark, wet and slippery. We chewed them and felt great relief from our thirst. I signed to my friend: "Something may yet happen to enable us to survive this trap; let us pray for it."

Pray we did; Black Elk to his Crow gods, I to mine, over and over again, promising faithfully sacrifice of my body. And when I had finished, I somehow felt encouraged; felt that something would occur to enable us to escape the enemies who so closely lay in wait for us.

The Black Coats tell us that the gods to whom we pray never were, that all that we tell about them, their wondrous power, is all lies; that only their own, their white men's gods, are real. Why, they even say, those Black Coats, that Sun himself is a lie. but a ball of fire! Well, they are ignorant. I pity them for their lack of knowledge. Why, in the long ago, one of our first fathers, Scar Face, made Sun's far-off island home, an island in a great lake, and there for a time lived with him and his wife, Old Woman, Night Light, and their son, Morning Star; and while there, Sun gave to him the right laws of living, by which our kind have survived all dangers to this day. We do not say to the Black Coats: the white men's gods that you tell of never were. Maybe they really do exist, and for the white men's good. But why, then, should the Black Coats persecute us about our faith in our gods? It is not fair! It is not decent!

See now, what happened in answer to our prayers. there in that walled-in coulee, trapped as we were by our enemies, and nearly dead from want of water, came suddenly, a mouth wind, cold, and odorous of the burning grass of the plains,* and then black clouds hid from us Old Woman and all the stars above. Thunder Bird then all but deafened us with his flapping of his wings and nearly blinded us with his arrow - of - fire. Rain then came with the wind, increasing in force, so that the trees shiver and creak and shriek, and Thunder Bird went on southward on his black darkness - that, though we stood shoulder to shoulder, Black Elk and I could not see each other. So sure was I that I had him fed out with his hands. Close, I said. "Our prayers, Sun heard us. Now, may we escape this danger," I said.

"Yes. Lead on. I follow," he signed, and took hold of my buckskin hanging at my side.

With my gun in my left hand I started out, feeling my way by frequently touching the cliff with my right hand. Now and then I stumbled against rocks at the foot of it; ran against clumps of brush through which I could not push my way; and all the time the cold blew hard and rain fell heavily. But soon I lost touch with the cliff, brush no longer hindered our course, and I knew that we had passed out of the mouth of the coulee and across the line of our enemies, it still they remained there in all that storm. Never could they have discovered our passing unless we had happened to step right against one, squatting there in the knee-high sagebrush.

As I have said, the wind was from the north; it was a south-going summer storm that Sun had brought to our rescue. So was it that I now led northward down the valley for a little way, and then turned short off to the east and up the slope of the valley. And still the rain fell heavily and made glad our hearts, for it washed out our footprints as fast as we made them. I became uneasy about Wolf and wondered if he still was with us. I called to him; ha! he stuck his dripping nose against my hand!

We were not long climbing the slope of the valley and out upon the plain we went on at faster pace. Cold we were in the driving rain, but no longer thirsty. On and on we went, with the wind ever against our left sides, and thereby keeping our course straight to the east. We were as wet as though we had been swimming a river; we splashed through pools of muddy water. We did not care. Our hearts were glad. I sang a water medicine song of thanks. Black Elk sang one of his Crow sacred songs. We kept going; on and on and on across the plain, and, toward morning, in ever-lessening rain. It ceased as came the first light of day, and, as the light grew, we discovered, on our right, a brushy coulee in a long high ridge, and thither hurried to take shelter. Lo! there we found buffalo berry trees still heavy with fruit, and in the bottom of the coulee were pools of rainwater. We ate, we drank. The clouds disappeared, Sun came up. We stripped ourselves of our clothing and spread it upon the brush to dry. We looked out over the plain: buffalo and antelope were here and there in sight; of riders, none. I told Wolf to keep watch for us and we lay down and slept.

Toward the middle of the day the flies walking about upon our bare bodies annoyed us so that we could sleep no longer. We got up, looked out over the plain, rubbed our dry, stiff clothing, put it on, drank, and ate more big berries. And then we talked over our dangerous meeting with the Snakes. We sorrowed over the sudden end of our good friend Fish Robe, but were glad that two Snake lives had paid for his passing to his other world; and decided that our narrow escape was a sign that we should not again attempt to find and kill the white buffalo cow.

More good was coming to us: Wolf suddenly sprang up and, with ears set forward, sniffed the wind. We looked out and saw a band of antelope at the top of the ridge and grazing slowly down toward us. I examined the lock of my gun: sure enough, the rain had hardened the powder in the pan. I scraped it out with the point of my knife and primed it afresh. On came the antelope, and, when they were quite near, I took, as I thought, good sight at their buck leader, but only broke his shoulder. But that didn't matter; Wolf ran after him, pulled him down, and killed him for us. So was it that we had meat; but, as we dared not build a fire, we washed the manifold in a pool in the coulee, ate it, and so satisfied our hunger. We were strong to go on when night came.

Two mornings later just as Sun appeared, we looked down at the two camps in Powder River Valley, and saw that the expected Parted Hairs had their army of We descended the slope, heading straight for the camp of the Spotted People and the lodge of our captor.

A rider from the other camp met us: "You return," he signed. "How was it, your search for the white buffalo? Fish Robe, where is he?"

"Fish Robe is dead, killed by the Snake People. We saw not the white one," signed Black Elk, and the man turned his horse about and hurried back to his camp to repeat our bad news.

A great crowd of the Spotted People watched our approach, made way for us to pass on to Otter Head's lodge, where, in front of its doorway, he and his women awaited our coming. "You return! I am glad!" he signed.

With hands to their mouths Lance Woman and Good Singer were talking at our appearance; our ripped moccasins, soiled clothing; uncombed hair; dirty faces. They rushed forward, hugged and kissed us; hung to us as Otter Head signed: "You saw not the white cow?"

"Saw not, I replied.

"You return on foot, you met some enemy?"

"Yes, Snakes. They killed Fish Robe, took our horses. He here," pointing to me, "two Snakes killed," signed Black Elk.

OTTER HEAD loudly brought his hands together, smiled, and the two women shouted to the surrounding crowd the good news of my killing, and loudly they gave praise to it. Came hurrying then, from the camp of the South Big Bellies, Morning Eagle, Fish Robes mother, and others.

Running up to Black Elk, the Crow woman asked: "Is it true that my son is dead, that the Snakes killed him?"

"Yes, true. There on Muddy Creek the Snakes killed your son. We could not recover his body," he replied.

At that, crying dreadfully, the poor woman turned from us and went up the valley slope to mourn for her loved one.

Signed Otter Head then: "Enough of this. Enter now your lodge; rest; eat; and tell us all that we would know."

We went inside, and, oh, how good it was to sit again upon my own soft couch, with Morning Eagle there at my side to talk with me in my very own language! But first, those two good women set water before Black Elk and me, with which to wash our hands and faces; and then gave us food, good food. And while we ate, the men smoked and talked with one another, patiently waiting to hear our tale. At last I told it to Morning Eagle; little by little, he interpreting it to the others. Also, I told it in signs, so that Black Elk would know all that I was saying; and often he interrupted, to put in something that I thoughtlessly left out.

So was it that our truly good friends learned all that we had seen, all that we had done during our absence from the camp. Pity they had for Fish Robe, dead in his young manhood, and glad they were that two of the Snakes had paid for his life. Praise they had for Wolf whose discovery of the enemy in the timber had kept us from riding right into them. They said, too, that Sun surely favored us; in answer to our prayers, he had sent the great rain-storm in which to enable us to escape from the walled coulee. They had me tell again of my climbing of the tree and discovery of the Snake watcher on the cliff. They laughed and clapped hands when I described his appearance; his creeping back toward the brush that he had stuck at the cliff edge, and the way in which he had sprung up and fallen backward when my bullet pierced his body.

At last, in my turn, I questioned Morning Eagle, and so learned that the Parted Hairs had sent a messenger to say to the Spotted People chiefs and those of the South Big Bellies that they would join them as soon as possible. They were at present constantly hunting and giving the hides of their kills to the Big River white traders in exchange for more guns, powder, and balls, so that they would be well armed for the coming fight with the soldiers who were building the fort above us.

Now, this did not seem good to me. I said to Morning Eagle: "But while you await the coming of your Parted Hairs friends, the soldiers will finish building their thick-walls houses, and within them they will be safe from your attack."

"Our sacred men are constantly praying. Our gods will surely provide some way for us to wipe out these soldiers, these whites, who think that they can take from us the very last part of our buffalo plains," he answered.

Later in the day, after Black Elk and I had slept and were fully rested, we went about in the Spotted People's camp, and all whom we met gave us pleasant smiles and told us, in the sign language, that they were glad that we had killed two Snakes and safely returned. They tried to be friendly with Wolf, to pet him, but he shrank from their outstretched hands. We went on to the camp of the South Big Bellies. I to sit with Morning Eagle, while Black Elk entered Fish Robe's mother's lodge, to tell her fully how he had met his death.

Said Morning Eagle to me: "I understood you to say that there in that Muddy Creek walled coulee, in your great danger, you vowed that you would give Sun of your body?"

"Yes. But when shall I be able to do it? Haiya! Maybe I shall never again return to my own people, never have the chance to sacrifice myself in the great lodge that, every summer, they build for Sun," I mourned.

(To be continued)

* Black Coats (Jesuits). The only missionaries with whom the Blackfeet were acquainted in early days.

** A peculiarity of these sudden summer storms from the north is that they are always accompanied by the odor of a prairie fire, when, even up to the farthest limit of the prairies, no grass is burning.



The Cheerful Plowman

THE VIRTUE OF SHAVING

NIG GIBBLE hates to shave, it seems, he wears six days of beard, he looks at times like Hinkle's dog when he is poorly sheared. His whiskers are as black as night and stiff as stranded wire, and though that bush his ruddy face seems more than half on fire. He looks like pictures of the gent who slew the King of Thrace, or shot up ninety-four saloons and crazed the human race.

Nig's neighbors call him "Dirty Nig", or Whisker Nig", for short, and all suggest that shaving soap by gill and pint, and quart, would help to clear that stubble field and put old Nig in trim, but no one has the grit to state those simple facts to him.

Perhaps it is no grief of mine that Nig looks like the devil, perhaps it is his own affair, his own small, pet abuse; but I know Nig is kind of heart, a dandy soul has he, and he would be a friend to you and be a friend to me; he'd give his last full ounce of strength to help a fellow man, and he would give the final rind from out his trying pan. Therefore, it seems a shame to me that he can't understand external standards that our day and modern taste demand.

I hate to see a man misjudged and called by wretched names when he is playing honest hands in honest kinds of games. But just as long as Nig neglects to prune that wretched beard he will be known as "Dirty Nig", he will be shunned and feared. That stubby whisker is a fraud, a bad, misleading ad, makes people think that Nig has traits which he has never had! J. E. T.

HATS OFF!
to the 4-time Corn King



Above — at left — Ira C. Marshall. — At right—Glen Marshall his son. The small photo at the right shows Miss Opal Marshall putting out Chilean Nitrate.

Ira Marshall wins again with Chilean Nitrate

176.22 bu. per acre with Chilean Nitrate

(an adjoining plot on which Chilean Nitrate was omitted made only half as much corn).

FOR the fourth successive year, Ira C. Marshall of Dola, O., is the Corn King of the World. His yield in 1928 exceeds every previous record—*176.22 bu. shelled corn per acre on 10 acres* (average yield certified by Ohio State University). His daughter, Opal, produced 164.88 bu. per acre on 10 acres. His son, Glen, made 151.59 bu. per acre on 10 acres.



Mr. Marshall and some of his corn. That at right received Chilean Nitrate, at left received none. See the difference.

Marshall's Amazing Records

1928—176.22 bu. per acre on 10 acres
1927—157.77 bu. per acre on 10 acres
1926—168. bu. per acre on 10 acres
1925—160. bu. per acre on 10 acres

On every one of these amazing crops, Marshall used Chilean Nitrate. Here is his fertilizer for the 1928 greatest-of-all crop:

250 lbs. per acre 0-14-4 broadcast before planting 100 lbs. 0-14-14 plus 50 lbs. Chilean Nitrate per acre in hill at planting. 150 lbs. Chilean Nitrate per acre as side dressing.

Since using Chilean Nitrate his average yield for four years has been 165.49 bu. per acre, an increase of 64.9 bu. per acre over a three-year average without Chilean Nitrate.

Marshall says:

"With these yields I achieved recognition as the World's Champion Corn Grower for these four years. I attribute this achievement to the nitrogen carrier I used in my fertilizer—Chilean Nitrate of Soda, the only natural form of nitrate nitrogen in the world."

IRA C. MARSHALL

Marshall's Own Story—FREE

A valuable booklet has been written around Marshall's wonderful crop records. "The Corn King and How He Did It". It is free. Ask for Book No. 11 or tear out this ad and mail it with your name and address.

Chilean Nitrate of Soda
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for Profitable Crops

57 William Street, New York, N. Y.
530 Citizens Bank Bldg., Columbus, Ohio

In writing, please refer to Ad No. E-23

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Ewe Raises Four Lambs

I am sending a picture of my ewe which gave birth to four lambs last spring and successfully raised them all. My wife is holding the mother and I the lambs. F. A. Admonson, Franklin county, Pa.

Views and Comments

An Emergency Pasture

FOR three consecutive years, droughts in my locality caused a shortage of summer pasture. Finding no reliable substitute, many of my neighbors were forced to reduce the size of their herds, but last summer I solved the pasture problem on my farm by using oats and sweet clover.

Early in the spring, soon as the ground had settled, I disked up a field which had previously been in corn, and planted it to oats and sweet clover at the rate of two bushels of oats and fifteen pounds of clover seed per acre. The oats, of course, came first, and soon as they were four inches high my cows were turned in for an hour each day. The time was gradually increased, and by the last of June the herd was getting 80 per cent of its roughage from this field.

By this time the sweet clover had got a good start and the cows had become accustomed to eating it. Danger of bloat and similar troubles was eliminated, and during the long dry summer and fall months there was always an abundance of green pasture. Milk flow was maintained and the animals came through in good flesh.

By keeping records, I learned that my emergency pasture enabled me to overcome the cream shortage which usually occurs in late summer. There was also a saving of several dollars in the feed bill. This alone, repaid me well for my time and labor, and in the sweet clover sod I have a pasture foundation for future use. F. R. Cozzens.

The Cat Controversy

WELL, Mr. Scharring-Hausen and Clarice Raymond were not ashamed to sign their names to what they wrote about cats and J. B. D was. Evidently they know whereof they speak. I have kept cats all my life and their experience has been mine.

I am surprised at J. B. D.'s attitude. It is pure spite. He has no use for cats, could not be induced to harbor one, so tries to belittle the whole feline race.

Now it may be some of the poor, homeless, half starved stray cats that have to steal their living will kill birds, but J. B. D. would do the same if he were hungry. The owner is to blame when cats kill birds. A well-fed, well-cared for cat will not.

I had a large white Angora cat for eight years. He was very fat and sleek and the best ratter in the neighborhood. We never had a mouse or rat while he lived. He always brought his trophies home and laid them at my feet. I promptly disposed of them and gave him a bit of meat or drink of milk, as he did not kill for a meal.

He did not bother birds. In fact, was often left in the same room w the canary as long as three or f hours when the family were all a and he never seemed to know the was there. He was always well but earned his keep, and I surely h to hear some one with a grudge beli the cat family.

Don't forget, J. B. D., that as measure to your neighbor he will me ure back to you holds good with a mals too. Esther Rishel.

* * *

J. B. D., in the issue of January 1 spews a terrible tirade against lowly cat. Now I take it that the a said J. B. D. is one of the misfits nature and goes out of his way to k a cat or a dog, and no self-respect feline would live in his presen Worse he hides under a few lette He would not have to go to Jer for a good cat. Pennsylvania, as in other useful commodities, has the b in the world. I have only six—n for sale. O. C. Sigworth.

* * *

WHILE I do not think it is right for cats to catch birds, l me say a few words. Why start o poor defenseless dumb animals, with a brain to reason right from wrong?

True cats catch birds and eat the from the wild nature instinct they p sess. Does the human family not l low the same practice?

"Oh, horrors, there goes a cat wi a bird." But a hunter will don uniform, take his gun and dog and om and kill all the bob-whites he —the more he gets the better he pleased. And he does not do it b cause he is hungry or cannot get an thing else to eat, but for the "sport he has. I wonder if a cat gets as muc sport, or its hunger satisfied?

A man stood or sat, under his cher tree, with a rifle and shot birds th came for a few cherries to eat. A without a doubt those same birds h been eating insects off the same tr for two or three months before, a would have continued to do so lon after the cherries were done. Think it! Dead robins for the sake of a fe cherries! M. E. T.

A SERIES of types-of-farming studies is being made, in cooper tion with a number of states, by th Bureau of Agricultural Economics United States Department of Agricu ture, to provide a basis for defini programs of research and agricultura extension which call for accurate de scriptions of farming systems.

The first of this series of studies ha been completed and published in Tech nical Bulletin No. 102-T, entitle "Types of Farming in North Dakota," issued by the United States Depart ment of Agriculture.

(Continued from page 25.)

Hanover, York county, on exhibit of Golden Queen.

30-Ear Class

Lancaster County Sure Crop.—1, Sam Eby, Gordonville; 2, Henry Heiland, Thomasville; 3, J. C. Garber, Elizabethtown.

Yellow Dent.—C. N. Myers, Hanover; 2, Henry Heiland, Thomasville; 3, Thos. Atherton, Greencastle.

White Dent.—1, C. Russel Brown, New Park; 2, J. R. Yeich, Birdsboro; 3, J. W. Bruckart, Lititz.

White Capped Yellow Dent.—1, D. M. Landis, Lancaster, R. 7; 2, Thos. Atherton, Greencastl.; 3, Harry G. Herr, Lancaster, R. 4.

Flint.—1, N. E. Solt, Lehighton; 2, J. R. Yeich, Birdsboro.

Single Ear Class

Lancaster County Sure Crop.—1, Henry Miller, Jr., Elizabethtown; 2, Leonelle J. Schue, Hanover.

Yellow Dent.—1, D. Raymond Houser, Lebanon No. 7; 2, Buddy Roufe, Waynesburg, No. 3.

White Dent.—1, M. G. Sellers, Chambersburg, 8; J. W. Bruckart, Lititz.

White Capped Yellow Dent.—1, Harry G. Herr, Lancaster, No. 4; M. G. Sellers, Chambersburg, 8.

Flint.—J. R. Yeich, Birdsboro.

Honorary Class

Yellow Dent from Districts 1, 2 and 5.—1, Clarence Atherton, Greencastle; 2, C. N. Myers, Hanover; 3, Thomas Atherton, Greencastle.

Yellow Dent from Districts 3, 4 and 6.—Lenry Leach, Lewistown.

White Dent.—1, C. Russel Brown, New Park; 2, J. R. Yeich, Birdsboro; 3, J. W. Bruckart, Lititz.

White Capped Yellow Dent.—1, M. G. Sellers, Chambersburg; 2, D. M. Landis, Lancaster, R. 7; 3, Harry G. Herr, Lancaster, R. 4.

Flint.—1, N. E. Solt, Lehighton; 2, Preston J. Edleman, Nazareth; 3, Phillip McCarty, Milford.

Apples

The honor of having the best bushel of apples in the State Farm Products Show went to G. P. Barnard of Northbrook, Chester county, on a basket of Staymans.

The Gabriel Hiester Cup awarded to the exhibitor winning the greatest total of points in the number of classes was won by S. L. Smedley, Jr., Newtown Square, Chester county.

First places in apple exhibits follow:

County Association Exhibits

First, Chester-Delaware Co., Fruit Growers' Ass'n, West Chester; 2, Bucks Co. Fruit Growers' Ass'n, Weisel; 3, Luzerne Hort. Ass'n, 84 Scott St., Wilkes Barre.

Box Exhibits, Special Varieties

Stayman, C. B. Snyder, Ephrata. Stark, Daniel Rice, New Bloomfield. McIntosh, Woodbourne Orchards, Dimock. N. Spy, Woodbourne Orchards, Dimock. Delicious, S. L. Smedley, Jr., Newtown Square. Grimes, Smedley. Jonathan, Smedley. Rome, Smedley. Smokehouse, Smedley.

Barrels—Special Varieties

Rome, C. L. Hayman, Northbrook. Stayman, Smedley. Paragon, H. R. Worthington, West Chester. Stark, Worthington, York, Worthington. Delicious, Smedley. Jonathan, Smedley.

Box Exhibit, Any Variety

Winesap, Smedley. Banana, Daniel Rice, Golden Delicious, Woodbourne Orchards.

Bushel Basket Exhibit, Special Varieties

Paragon, Edith Hills, Glen Mills. Baldwin, Buffalo Valley Fruit Farms, Mifflinburg. N. Spy, H. V. Lesher, Northumberland. Delicious, Smedley. Jonathan, Smedley. Smokehouse, Smedley. York, Edith Hills, Glenn Mills. R. I. Greening, Shaffer Bros., Gravity; Rome, G. L. Hayman, Northbrook. McIntosh, Paul Lengel, Pine Grove. Stark, Daniel Rice, Stayman, C. P. Bernard, Northbrook. Grimes, H. R. Worthington, West Chester.

Bushel Basket Exhibit, Any Variety

Winesap, Smedley.

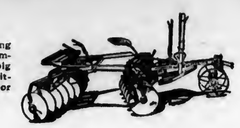
Plates, Special Varieties

Smokehouse, H. R. Worthington, York. Worthington, Rome, Guy L. Hayman, Northbrook. Grimes, Hayman. Delicious, Wernersville State Hosp., Wernersville, R. I. Greening, Paul R. Seifert, Nazareth. Wagoner, Hayman. N. Spy, Birch Hill Orchards, Lawrenceville. Jonathan, Smedley. Baldwin, Daniel Rice. Stark, Wer-

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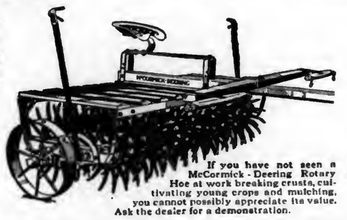
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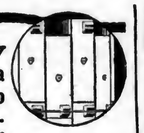
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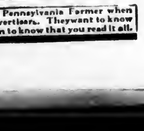
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Sixteen Apple Exhibit

Grimes, H. R. Worthington, West Chester. Stark, Worthington. York, Edith Hilles, Glen Mills. Baldwin, V. Panover, Easton. Delicious, Panovee. Stayman, C. P. Bernard, Northbrook. R. I. Greening, Woodbourne, Orchard. Jonathan, Smedley. Rome, H. S. Nolt, Columbia. Smokehouse, Smedley. N. Spy, H. V. Lesher, Northumberland. Paragon, Edith Hilles, McIntosh. Woodbourne Orchards.

Sixteen Apple Exhibit—Any Variety

Winesap, Smedley, Grimes, Worthington. Paragon, Edith Hilles. York, Edith Hilles, Baldwin, C. B. Snyder, Ephrata. Stark, Daniel Rice, McIntosh, Woodbourne Orchards. R. I. Greening, Woodbourne Orchards. Delicious, Smedley, Jonathan, Smedley. Rome, Smedley. Smokehouse, Smedley. Stayman, Smedley.

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District No. 1

White Rurals.—1, Floyd L. Roth, Nazareth, Pa.; 2, Amos Carner, Nazareth, Pa.; 3, Fred Hunsicher, Germansville.

Russets.—1, Mrs. Wm. F. Gombert, Andreas; 2, Edwin W. Knorr, Klingerstown; 3, Samuel Echert, Oley.

District No. 2

White Rurals.—1, Rufus Myers, Shafferstown; 2, Warren S. Reed, Lansdale R. 1; 3, H. E. Clouser, New Bloomsfield.

Russets.—1, H. B. Diener, Jonestown; 2, Robert W. Diener, Jonestown; 3, W. P. Smedley, Media.

District No. 3

White Rurals.—1, G. H. Dumm, Ebensburg; 2, G. Clarence Griffith, Ebensburg; 3, C. M. Schwab, Loretto.

Russets.—1, G. H. Dumm, Ebensburg; 2, W. D. Wetzel, Carrolltown; 3, Paul Strittmatter, Patton.

District No. 4

White Rurals.—1, Don Stearn, Coudersport; 2, Cal Stahlman, Baxter; 3, E. J. Vasbinder, Brookville.

Russets.—1, G. W. Lewis, Edinboro; 2, V. A. Larue, Montrose; 3, Raymond Goodenough, Coudersport.

District No. 5

Cobblers.—1, H. W. Billmyer, Quakertown; 2, Samuel Eckert, Oley; 3, Edgar Beck, York No. 9.

Green Mts.—1, Clifford Yerkes, Dansville; 2, W. A. Reid, Oxford; 3, Albert Tyson, Horsham.

Blue Skin.—1, R. L. Shenk, Hershey; 2, Ira L. Shenk, Hershey.

Pink Skin.—1, Geo. Barkman, Berlin; 2, J. W. Sheibley, Landisburg; 3, Harry B. Cooney, Landisburg.

Sweepstakes

Rurals.—1, G. H. Dumm, Ebensburg; 2, Don Stearn, Coudersport; 3, G. C. Griffith, Edensburg.

Russets.—1, Mrs. Wm. F. Gombert, Andreas; 2, G. H. Dumm; 3, G. W. Lewis, Edinboro.

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White Skin.—1, Clarence Griffith, Ebensburg.

Russets.—1, John Metzel, Carrolltown; 2, P. C. Strittmatter, Patton, R. D.; 3, Harry Strittmatter, Patton.

Grand champion.—Russets shown by John Metzel of Carrolltown.

BOYS' AND GIRLS' CLASSES

District No. 1

Russets.—1, Leonard Jones, North East; 2, Reid Waving, Linesville; 3, Earl Miller, Linesville.

District No. 2

White Skin.—1, Mary Alice Hay, Myersdale; 2, Paul Butler, Berlin; 3, Pauline Wegley, Berlin.

Russets.—1, Rhode Peters, Munson, R. D.; 2, Clifford Moore, Reynoldsville, R. 2; 3, Geo. Young, Jr., Mahaffey.

District No. 3

Rural White Skin.—1, Kenneth Sloat, Shinglehouse; 2, Milton Goodenough, Coudersport; 3, A. C. Reming, Coudersport.

Russets.—1, Walter Leite, Genessee; 2, Harry E. Jones, Shinglehouse; 3, Floyd Valentine, Susquehanna.

District No. 4

White Skins.—1, Kenneth Ritchey, Martinsburg.

Russets.—1, Luther Yoder, Mattawana; 2, Wm. Lenker, Jr., Harrisburg, R. 4.; 3, Harry Metz, Allensville.

District No. 5

White Skin.—1, Wayne Kistler, Wanamaker; 2, Miriam Hunsicker, Germansville; 3, Allen S. Hentzelman, Coplay.

Russets.—1, Roy Conrad, Jonestown; 2, Mark Hershey, Lebanon, R. 7; 3, Nancy R Meck, Jonestown.

Sweepstakes

White Skins. 1, Mary Alice Hay, Myersdale; 2, Wayne Kistler, Wanamaker; 3, Paul Butler, Berlin.

Russets.—1, Leonard Jones, North East; 2, Walter Leet, Genessee; 3, Rhoda Peters, Munson, R. D.

Grand Champion.—Leonard Jones, North East.

Poultry

Barred Plymouth Rocks

Cock, Roe L. Getz, Beaver Springs. Hen, J. G. Warner, Mohnton. Cockerel, Wm. J. Kelly, Doylestown. Pullet, J. G. Warner. Old hen, J. W. Parks, Altoona. Young pen, Lewis Tyreman, Scot Run.

Barred Plymouth Rocks—Dark

Hen, Noll & Nonnemeker, Sinking Springs. Pullet, W. H. Hench, New Cumberland. Old pen, Adam Smith, Harrisburg. Young pen, John F. Cable, Middletown.

Barred Plymouth Rocks—Light

Cock, Lewis Tyreman, Scot Run. Cockerel, J. G. Warner. Old pen, J. W. Parks. Young pen. Warner.

White Plymouth Rocks

Cock, Frank Fitts, Media. Hen, Fitts. Cockerel, Fitts. Pullet, Fitts. Old pen, Fitts. Young pen. Fitts.

Buff Plymouth Rocks

Cock, Sophia H. Erwin, Painted Post, N. Y. Hen, S. G. Hoke & Son, Spring Grove. Cockerel, Wm. A. Koehler, Sinking Springs. Pullet, S. G. Hoke & Son. Young pen. Wm. A. Kothler.

Silver Pencil Plymouth Rocks

Cock, Hoke & Son. Hen, Hoke & Son. Cockerel, Hoke & Son. Pullet, Mrs. G. W. Wallace, Bowmandale.

Partridge Plymouth Rocks

Hen, Hoke & Son. Pullet, Hoke & Son.

Columbian Plymouth Rocks

Hen, Mrs. Wallace. Cockerel, Mrs. Wallace. Pullet, Guyon Bunty. Hanover. Young pen, Lillian Lawyer, Littlestown.

Silver Laced Wyandottes

Cock, F. K. McDowell, Lincoln University. Hen, Hoke & Son. Cockerel, McDowell. Pullet, H. E. Keefauver, York. Young pen, Fred T. Lancaster, Elizabethtown.

Golden Wyandottes

Cock, Oliver Scheib, Gratz. Hen, C. B. Rothermel, Bowers. Cockerel C. B. Rothermel. Pullet, Scheib.

White Wyandottes

Cock, John W. Hutton, Red Lion. Hen, Mrs. Wallace. Cockerel, Peola Poultry Yards. Beaver Springs. Pullet, Peola Poultry Yards.

Buff Wyandottes

Cock, hen, cockerel and pullet, Whatglen Poultry Farm, Lancaster.

Partridge Wyandottes

Cock, Wm. E. Johnson, Gratersford. Hen, Hoke & Son. Cockerel, S. J. Harlacker, Hanover. Pullet, Harlacker. Old pen, H. S. Weidner, Hanover.

Silver Penciled Wyandottes

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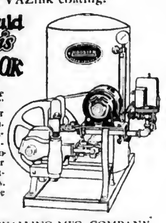
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Columbian Wyandottes

Cock, hen, cockerel, pullet and young pen, Joseph Weston, Phillipsburg, N. J.

Black Javas

Cock and hen, John C. Kriner, Stetlersville. cockerel, Hoke & Son.

Mottled Javas

Cock and pullet, Hoke & Son. Hen, Kriner.

American Dominique

Cock and hen. Kriner.

Single Comb Rhode Island Reds

Cock, C. L. Pensyl, Bloomsburg. Hen, Chas. E. Fanning, Canton. Cockerel, W. M. Shirk, Ephrata. Pullet, Boyertown Hatchery, Boyertown. Young pen, Shirk.

Rose Comb Rhode Island Reds

Cock, B. H. Gumbert, Apollo. Hen, Bruce W. Lentz, Bloomdale. Cockerel, Lentz. Pullet, Lentz. Old Pen, Lentz. Young pen. F. T. Thompson, Washington, D. C.

Jersey Black Giants

Cock, Pennhurst Farms, Narbeth. Hen, Wm. J. Noll, Robesonia. Cockerel, Pennhurst Farms. Pullet, Pennhurst Farms.

Light Brahmas

Cock, C. J. Balthaser, Sinking Springs. Hen, Harry Reigle, Gratz. Cockerel and pullet, Balthaser.

Dark Brahmas

Cock and hen, John C. Kriner. Cockerel, Hoke & Son.

White Langshans

Cock, Chas. E. Hershey, Dover. Hen, Hershey. Cockerel, pullet and young pen, Hershey.

Black Langshans

Cock, Kriner. Cockerel, H. P. Brinton, West Chester.

S. C. Dark Brown Leghorns

Cock, hen and cockerel, E. A. Ring, Perkasie. Pullet, R. F. Roger, Annville.

S. C. Light Brown Leghorns

Cock, hen, cockerel and pullet, Ring.

R. C. Dark Brown Leghorns

Cock, hen, cockerel and pullet, Hoke & Son.

R. C. Light Brown Leghorns

Cock, hen, cockerel and pullet, C. W. Myers, Spring Grove.

S. C. White Leghorns

Cock, W. D. Cook, Uniontown. Hen, Brenner's Hatchery, Carlisle. Cockerel, W. D. Cook. Pullet, Adam Smith, Harrisburg. Old pen and young pen, Brenner's Hatchery.

Rose Comb White Leghorns

Cock and hen, Kriner. Cockerel and pullet, C. W. Leader, York.

Single Comb Buff Leghorns

Cock, Harry E. Myers, York. Hen, Dr. H. W. Blyer, Lebanon. Cockerel, Blyer. Pullet, Myers. Young pen, Fred Bertram, Bound Brook.

Rose Comb Buff Leghorns

Cock and hen, Kriner.

Single Comb Black Leghorns

Cock, Kriner. Hen, cockerel and pullet, W. A. Eberly, Dallastown.

Single Comb Silver Leghorns

Cock, hen and pullet, Myers. Cockerel, Ring.

Single Comb Red Leghorns

Cockerel and pullet, Harry T. Schrawder, Valley View.

Single Comb White Minorca

Cock and hen, W. A. Eberly.

White Faced Black Spanish

Cock, Hoke & Son. Hen, Wm. A. Loch, Andreas. Cockerel, Mrs. Wallace.

Single Comb Blue Andalusians

Cock, Daniel Sanders, Annville. Hen, Whatglen Poultry Farm, Lancaster. Cockerel, Whatglen. Pullet, Whatglen.

Single Comb Anconas

Cock, Wm. Schm, Hilton, N. Y. Hen, H. H. Strickler, Lititz. Cockerel, Ideal Ancona Yards, Hagerstown, Md. Pullet, T. L. Williamson, Imperial. Young pen, T. A. Lewis, Clearfield.

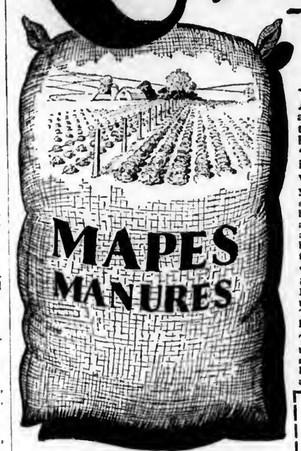
Rose Comb Anconas

Hen, cockerel and pullet, Ideal Ancona Yards.

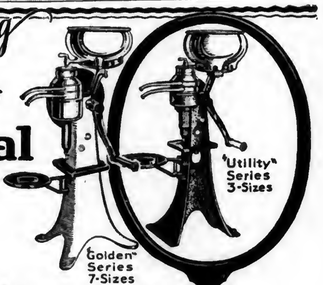
Buff Orpingtons

Cock, Klinger & Shade, Gratz. Hen, Boys' Poultry Club, Hanover. Cockerel,

(continued on page 36)

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No. Cows.....

Farmer's Business Letter

IT was a dizzy week in the hog market. Though 90,000 hogs were reported here on Monday, other points had fewer hogs, and for the week Chicago had 250,000 head, against 264,000 last week and 275,000 the same week last year. The run at eleven markets totaled 751,000, against 840,000 last week. Bullish sentiment reached a climax on Wednesday when the average price showed an advance of 45 cents over the day before. The advance set in in the morning and continued until the close. On Thursday morning it was the same story, tops being carried up to $10.15 on early trading, but then a reaction set in, which continued to the end of the week, and at the close packers were seeming hog droves at $9.15. Old-timers said it was the wildest trade they ever saw.

What it was all about, the trade in general does not know. Many theories were advanced, but most of it was guess work. As usual under such circumstances, the suspicion prevailed that the big packers were playing a game, but if so their purpose was not revealed, by statement from them or by analysis of the "experts". Average weight of hogs at 228 pounds is running about normal for the time of year.

In spite of the reaction it is evident that the hog market is on the strong side. Product has advanced in price and the outlook is regarded as favorable. Fresh pork is higher. Loins are easing wholesale at 17@20c, within 2c of the highest since November 20, when similar loads brought 18@21c, with 19@22c the range on November 19 and 17@20c on November 9. At the low time in December, fresh pork loins sold at 12@16c and at the high time of the season on September 7 brought 23@28c.

To Promote Beef Business

At the Denver Livestock Show representatives of the beef industry held a conference and adopted a plan for promotion of their business. Their plan involves, in the main, the raising of a fund to promote consumption of beef, and also safeguarding the interests of the industry in legislation, and so on. One project in view at the moment is securing adequate tariff protection on beef and hides. A committee of 29 on beef policy was named, as follows:

"James Cox, Dayton, Ohio; Clyde Brenton, Des Moines, Iowa; Charles D. Carey, Cheyenne, Wyo.; Dan D. Casement, Manhattan, Kan.; Eugene D. Funk, Bloomington, Ill.; F. W. Harding, Chicago, Ill.; W. C. Harris, Sterling, Colo.; Harry Hopley, Atlantic, Iowa; Heber Hpard, Central City, Neb.; Wallace Huidekoper, Two Dot, Mont.; H. J. Kinzer, Kansas City, Mo.; R. M. Kleberg, Corpus Christi, Tex.; Hubbard Russell, Los Angeles, Cal.; I. Blaine Shaum, Tarkio, Mo.; F. S. Snyder, Boston, Mass.; Oakleigh Thorne, Millbrook, N. Y.; W. H. Tombave, Chicago, Ill.; F. Edson White, Chicago, Ill.; Thomas E. Wilson, Chicago, Ill.; W. W. Woods, Chicago, Ill.; G. F. Swift, Chicago, Ill.; Dante Pierce, Des Moines, Iowa; H. O. Harrison, San Francisco, Cal.; W. A. Cochel, Kansas City, Mo.; John E. Painter, Roggen, Colo.; Henry Boice, Phoenix, Ariz.; H. C. Moffit, San Francisco, Cal.; R. P. Lamont, Jr., Larkspur, Colo.; George Bailey, Lowell, Ind.

Cattle Market Weak

Outside of some activity in demand for top and near-top cattle this week, with prices on such selections firm to a little higher than a week ago, cattle trade was pretty weak and slow from day to day, with prices generally showing a loss of 25 to 75 cents. With only 43,000 cattle offered it was evident that demand for beef was not urgent. This was about 11,000 cattle fewer than last week. So far this month Chicago has received 181,000 cattle against 191,000 on the same date last January.

Condition of the beef trade is said to call for light supplies next week, unless the market is to show a further dip. A good many short-fed cattle are being marketed, and feeders frequently are heard to say that they wouldn't be selling so soon if corn were not so high. Comment on this tendency is frequently heard, yet market receipts fail to indicate that up to this time it has had much effect. Nothing is in sight to indicate any material change in the market.

Lambs in Good Demand

Receipts of sheep and lambs reduced run a little this week, but the market was well maintained, in fact prices on the tops gained a little. Practical tops paid for lambs this week was $17.40. Last week's top was $17.35. Receipts this week totaled 76,000, against 69,000 last week and 70,000 the same week last year. Average price of lambs this week was figured at $16.60. Receipts for the year to date are running under those of a year ago.

Western lambs are coming to market in a little larger volume, about 18,000 Colorados being here this week, the largest run of the season.

Activity in Grains

The grain market showed more activity this week. Wheat futures registered a net gain or around four cents, carrying some quotations to the highest of the crop season. Export demand for wheat is steady, but not insistent or large; milling demand is strong; and the weather over wide areas is not regarded as having been favorable to the winter wheat, though of course no one can know now what the damage has been, if any. There has been much ice, long continued, and severe cold weather. These were the principal factors in the advance, coupled with a feeling on the part of some traders that action on the market is overdue, and more likely to be in an upward than in a downward direction.

It is the first note of encouragement in the wheat market for a long time.

Corn showed both strength and weakness during the week, advances being offset by declines with practically no net change at the close. Argentine news continues to be favorable to domestic corn, dry weather continuing there at last reports. Receipts of corn are running large, but so also is demand.

May wheat is quoted near $1.30; May corn is fluctuating around $1.01 to $1.05; and May oats at 53 to 54 cents.

Farm Horses

One Illinois farmer sold at auction 18 farm horses that averaged $160 a head. At other Illinois and Iowa farm sales good work horses are bringing $100 to $150. It takes a pretty fair sort of a worker to bring $100. Evidence of horse shortage is not showing up in a very impressive manner.

To Arbitrate Strike

The Chicago milk strike was called off early this week by agreement between the dealers and the producers' organization to arbitrate, Dr. Clyde L. King, of Philadelphia, has since been chosen to settle the dispute. The producers are seeking an advance from $2.50 to $2.85 a hundred. The strike had assumed serious proportions before the agreement was made, farmers stopping the delivery of much milk, destroying some by contamination with gasoline or kerosene, even dumping milk from railway cars in transit, but all without decisibly affecting the Chicago supply. The agreement involved recognition of the producers' organization on the part of the dealers, for the first time, which was considered a victory; as was also a provision to assess every hundred pounds of milk one cent to finance the association.

When to Sell, or Buy, Corn

In a study of the time to sell corn the Iowa State College economists found that it costs about one cent a month to carry corn; that "on the average the price of corn rises from winter to summer more than enough to cover this cost"; and that, after big crops, the price of corn usually rises more than it does after small crops. After small crops, the price of corn may not rise enough to cover the cost of storing. It is advisable, then, to store corn after a big or average crop, but not after a crop 95 per cent of average size, or smaller. This rule worked 21 times out of the last 23 years.

Sheep Killing in Iowa

Sheep-killing dogs did damage amounting to $3,940 in one Iowa county in 1928, with not enough money in the dog tax fund to pay the claims. In another county the claims amounted to $7,733.10, settled for $2,916.14. Sheep raisers are asking for increased dog taxes. The losses appear large in view of Iowa's scanty sheep population.

Wool growers in one Iowa county received an average of 49½ cents for their pooled wool last year. Watson.

Chicago, January 26, 1929.

Produce Market Review

LOOKING back over the month we find that the potato market has shown several short periods of advancing prices but in every case these were followed by slight price declines and slow demand. Most of the eastern markets reported a slow movement during the past week and while prices showed but little change there were fewer lots bringing top quotations. Buyers with abundant supplies from which to choose were particular and wanted only the best stock.

In Philadelphia the average receipts of Pennsylvania round whites sold at $1.40@1.50 per 120-pound sack and poorer stock sold at $1.25@1.30. There were a few lots of well-graded fancy stock that brought $1.55. Prices of Pennsylvania potatoes ranged from $2@2.10 in Pittsburgh while most sales were reported at $2.25 in Washington, D. C. The total shipments of old potatoes from leading states up to January 19 totaled 91,747 cars compared with 119,890 during the same period last year.

The lack of speculative interest and the low prices prevailing are largely responsible for the lighter shipments in the face of the heaviest crop on record. More potatoes are being used as feed on the farm than ever before, according to reports from growers and county agents.

Apples

Shipments of apples from both eastern and western sections were larger during the week and New York City and Philadelphia markets reported a rather slow demand. Pennsylvania 2¾-inch Stayman sold at $5@5.50 per barrel on the Philadelphia market while Yorks showing scald sold at $2.75@3. Truck receipts of apples from New Jersey were moderate and prices about steady. Nearby Gano sold at $1@1.25 per bushel, Paragon at $1.25@1.65, Winesaps at $1@1.25 while Staymans and Delicious brought $1.25@1.75. On the New York market Baldwin brought $1.75@5.50 per barrel with fancy large sizes bringing $6@6.50. Yorks brought $3.50@5.25 and Greenings $3.50@7.

The Locust Grove Farm of Westville, New Jersey, of which A. Clinton Conrad is manager, won 61 prizes for fancy apples this season at the Trenton farm show and at Atlantic City.

Sweet Potatoes

The rather unsatisfactory condition of the sweet potato market has caused shipments to drop off. The market at New York was generally dull although prices were steady. Sweet potatoes from the Swedesboro section of New Jersey sold at $2@2.50 per bushel hamper while fancy wrapped stock brought $2.50@2.75. Stock from other sections of New Jersey ranged from $1.50@2.50. In Philadelphia the demand for sweet potatoes was slow with yellow varieties bringing $1.15@1.85 per bushel.

Cabbage will probably be more plentiful than last season in seven second early states, which report intended acreage of 26,360, compared with 22,150 in the 1928 season. Increases are particularly sharp in Virginia, South Carolina and Alabama. The Eastern Shore and Norfolk section Virginia have 8,380 acres.

Reports from growers in Delaware indicate that the acreage of broccoli will be greatly reduced this season in that state. Low prices and increased competition from the southern states are causing the growers to turn to other crops.

Butter and Eggs

The eastern butter markets were steady to firm during the past week. Supplies in dealers' stores were light, especially of top grades. Buyers were more active and in some cases bought in excess of current needs. Prices advanced on practically all grades, but Philadelphia was somewhat less active than the other eastern cities on account of more liberal supplies. A few weeks ago there were more than ample supplies of the low grade but last week there was a scarcity. The movement from storages was also more active.

Fresh eggs were firmer in Philadelphia as shipments from western sections were held up by storms and extreme cold weather. Toward the close of the week receipts of fresh eggs from nearby sections were also smaller and prices advanced. Average receipts brought 39@40c per dozen with some extra fists at 42c. Fancy eggs were in good demand in New York. Offerings of western eggs showed considerable chill of stock. Supplies of nearby eggs were fairly liberal and the market was steady toward the close of the week.

The best nearby white eggs brought 47@48c per dozen while eggs of good quality ranged from 41c to 46c. Brown eggs brought 39@40c and mixed colors 37@38c, depending on grade and condition.

Poultry

The live poultry market in New York was weak. Fowl were in moderate supply and sold at lower prices while chickens were weak. Colored fowl were quoted at 29@30c per pound, Leghorn fowl at the same figure, Leghorn chickens at 25c and colored breeds at 26@27c. Receipts of dressed poultry were light and the market was steady to firm for desirable stock. Most of the fresh killed chickens arriving were coarse and staggy and but few brought top quotations. Fowl were in light supply and firm for the smaller sizes.

Philadelphia, Jan. 26, 1929. W. R. W.

Miscellaneous Produce

Philadelphia

Eggs.—Extra firsts, 41c; firsts, 38@39c; seconds, 29@31c; storage, 29; selected average, candled fresh eggs, 47@49c; select in cartons, 49@51c.

Butter.—Creamery, tubs, 92 score, 45½@46c; 88@89 score, 45@46c.

Poultry.—Fowls, 29@31c; Leghorns, 26@30c; springers, 28@33c; broilers, 36@40c; old roosters, 22@24c; ducks, 22@33c; turkeys, 28@33c; geese, 25@27c; rabbits, per pair, 18@20c; guineas, per pair, $1@1.75.

Strawberries.—Fla., auction sales, 32-qt. crate, 110@175 per qt.; pony refrigerator express, best, 45c.

Apples.—U. S. No. 1, per bbl., Pennsylvania Yorks, $2.75@3; Stayman, 85@5.50; bushels, N. J., U. S. No. 1 Romes, $1.50@1.60; Md., Black Twigs, $1.40@1.50; nearby, ½ bushels, Delicious, $1@1.25; Romes, 75@90c; Yorks, 65@75c.

Cranberries.—Per ¼ bbl., N. J., $1.50@1.75.

Celery.—California crates, large root, $4.50@5.50; nearby bunches, wired, 15@20c.

Potatoes.—Pa. round whites, per 120 lbs., $1.40@1.50; N. J., ½ bskt., redskins, 75@90c; ½ bskts., Delicious, $1@1.25; Romes, 75@90c; Yorks, 65@75c.

Sweet potatoes. Md., bu. hamper, Jersey yellows, $1.65@1.75; Va., Eastern Shore yams, $2.75@3.

Broccoli. Texas, per bu., $1.

Beets.—Crates, bunched, $2.50@3; nearby ½ bskts., 60@85c.

Brussels sprouts.—L. l., per qt., 18@25c.

Collards.—Va., Norfolk section, bbl., $1@1.25.

Carrots.—Nearby ¾ bskts., $1@1.25.

Cabbage.—Fla., ½ bbl., hampers, $2@3; Texas, 100-lb. crates, $3@3.50.

Kale.—Va., bbls., $1.25@1.50.

Field cress.—Md. & Va., bu. hamper, 65c to $1.

Lettuce.—Calif. Iceberg, 4 to 5 dz., $3.25@3.75; Fla. ½ bbl. hampers, Big Boston, 75c to $1.10.

Onions.—Ind. 100-lb. sacks, U. S. No. 1 yellow, $3.25@3.50; Ohio, 100-lb. sacks, $4.50; New York, $3.50@6.50.

Mushrooms.—Nearby, 5-lb. bskt., 40@60c.

Parsnips.—Nearby, ¾ bskt., 75c@$1.25.

Rutabagas.—N. J., ¾ bskts., 50@75c; Penn'a, 65@90c.

Turnips.—Nearby, ¾ bskts., purple top, 30@50c; Aberdeens, 30@50c.

Watereress.—Va., per bunch, 10@3c.

Baltimore

Butter.—Creamery, fancy, 48½@46c; prints and dairy prints, 20@32c; packing stock, 28@29c; butterfat lb., 46½@47c.

Eggs.—Md.-Pa. nearby firsts (loss off), 36½@37c; nearby current receipts, 35½c; western firsts, 36½c; southern, 35½c.

Live poultry.—Hens, old, 4½ lbs. and over, 29@30c; small to medium, 25@26c; Leghorns, 20@28c; young chickens, 3@4 lbs., broilers, small, 37@38c; Guineas, young, 1¼ lbs. or over, each, 75@80c; roosters, 17@18c; ducks, 25@30c; pigeons, pair, 20@25c; squabs, 30@50c; turkeys, 35@40c.

Lancaster

Butter.—Country butter, 54@60c; creamery, 52@60c.

Poultry.—Chickens, dressed, $1.25@3.50 each; springers, 75c@$1.25 each; ducks, $1.50@2.75 each; squabs, 25@50c each.

Eggs.—Fresh eggs, 40@45c.

Vegetables.—Beets, 10@15c per bunch; asparagus, 25c bunch; string beans, 40@45c per ¾ pk.; beans, lima, 40@45c per pk.; boxy; cabbage 10@20c per head; carrots, 10@15 per bunch; cauliflower, 20@40c per head; celery, 10@25c per bunch; cucumbers, 10@15c each; spinach, 15c per pk.; endive, 5@10c per head; mushrooms, 25@30c per box; onions, 20@25c per ¾ pk.; parsley, 10c per bunch.

Potatoes.—Per bu., 65@75c.

Sweet potatoes.—20@25c per ¾ pk.

York

Butter and eggs.—Creamery butter, 55@60c; separator, 60c. Eggs, per doz., 36@40c.

Poultry. Hens, 24@30c.

Vegetables. Potatoes, 60@75c per bu.; cabbage, 40@5 per lb.; lettuce, 5@15c bskt.; spinach, 15@20c ¾ pk.; parsley, 2@3c per bunch; turnips, 15c ¾ pk.; celery, 5@10c per stalk.

New York

Butter. Creamery, higher than extras, 48½@49c; extras, 48c; seconds, 44½@47c.

Eggs. White eggs, current receipts, average extras, 46@47c; extra firsts, 42@43c; firsts, 41c; mediums, 40@42c.

Poultry. Live, lc express, fowls, 30c; chickens, 28c; old roosters, 18c; ducks, 17@20c; geese, 24@25c.

Livestock Markets

PITTSBURGH

Cattle

MONDAY'S receipts were around 45 carloads. Demand was not urgent and buyers refused to pay the advances asked, which resulted in a rather slow trade. At the close about everything had changed owners at prices which were generally not far from those of last week. Some of the light cattle sold a little better than then. Best steers here brought $13.25 and were good. Other well-finished steers with weight brought $12.75@13, the best handyweight steers here going around $12.50. Very useful butcher steers could be had at $11.75@12, and fair kind at $11@11.25. Ordinary light steers, not carrying much flesh, brought $10.25@10.50 and a few common light steers $9.50@9.75. Good heifers were not numerous, one of choice quality going at $12 but $11 was about the limit for such as usually come here. Fat cows were about steady, with good market cows largely $6@9.50, a few thick ones up to $10. Canners went at $5.50@5.75 largely. Bulls were irregular in both quality and price. A few butcher bulls sold up to $11 per cwt. Bolognas brought $9.25@9.75 largely, common kind on down to $8.

Choice grain-fed steers, 1,200 lbs. or over	$13.25@13.50
Good to choice	12.75@13.25
Fair to good, do.	12.00@12.75
Plain heavy steers	10.00@12.00
Choice handyweight steers	12.50@13.00
Good butcher steers, 1,000 to 1,150 lbs.	12.00@12.50
Fair to good, do.	11.25@12.00
Ordinary to fair, do.	10.75@11.25
Common, do.	10.00@10.75
Good light butcher steers	11.75@12.25
Fair to good light steers	10.75@11.75
Common to medium, do.	9.75@10.75
Inferior light steers	9.00@9.50
Feeders	Nominal
Stockers	Nominal
Choice heavy bulls	10.00@10.50
Choice handy butcher bulls	10.25@10.50
Good handy bulls	9.75@10.25
Fair to good bulls	9.25@9.75
Common to fair bulls	8.50@9.25
Inferior bulls	8.00@8.50
Choice fat heifers	10.75@11.00
Good to choice heifers	10.00@10.50
Fair to good heifers	9.50@10.00
Common to fair heifers	8.50@9.50
Thin light heifers	7.00@8.00
Choice fat cows	9.50@10.00
Good to choice fat cows	8.75@9.50
Fair to good cows	8.00@8.75
Common to fair cows	6.00@7.50
Canners and cutters	5.00@6.00
Fresh cows, calf at side	50.00@150.00

Monday's Representative Sales

Steers

No.	Wt.	Pr.	No.	Wt.	Pr.	No.	Wt.	Pr.
20	1387	13.25	20	1320	13.00	4	1155	13.00
22	1325	12.65	20	1130	12.50	27	1102	12.40
12	1108	12.00	22	1148	11.75	4	1087	11.20
*9	924	10.75	14	1023	10.50	4	848	10.50
9	984	10.35	10	960	10.00	*10	995	9.50

* Mixed.

Cows and Heifers

1	900	12.00	3	1040	11.00	6	872	10.60
1	1260	10.50	3	777	10.50	6	788	10.40
4	927	10.25	10	966	10.10	4	1050	10.00
8	869	10.00	1	1060	9.50	1	1000	9.50
2	675	9.50	1	1210	9.25	1	1110	9.25
1	1370	9.00	1	1260	9.00	2	1020	9.00
2	850	9.00	5	830	8.75	2	985	8.50
8	1015	8.35	4	802	6.00	8	752	6.00

Hogs

Monday's hog market was a peculiar one. Receipts were very light, only 25 carloads. Only a few hogs were offered and some of these brought $11 per cwt. Then the others could not be placed at that figure immediately but ultimately all were taken at $10.50@10.75 for heavy weights, $10.90@11 for sorted handy weights and irregular prices for pigs and light. Some light weights went above the $10 level, but $9.25@9.75 took the most of them when the market cooled off. Pigs were quoted at $8.50 downward, but some weighty pigs went in with light weights. Sows brought $8.50 mainly, a few $8.75. This market was out of line with other points, and quotations cover a wider range than usual on account of the irregular trade.

Heavy wts., 250 lbs. or over	$10.50@10.75
Heavy mixed	10.75@11.00
Medium wts., 180-200 lbs.	10.75@11.00
Heavy Yorkers, 165-180 lbs.	10.75@11.00
Light Yorkers, 125-150 lbs.	9.25@9.75
Pigs, 100-110 lbs.	8.00@8.50
Roughs	8.00@8.50
Stags	5.00@7.00

Sheep and Lambs

Around ten carloads were on sale, lambs of course in the majority. The sheep trade was dull and showed signs of weakness. The recent top figure of $11 was realized, but closer sorting made this possible, the buyers demanding more for their money than in the past. Few ewes were on sale, $8.50@10 probably covering their value and the heavier the cheaper. The quality of the lambs offered did not average very high, and good ones were wanted at a quarter above last week's prices. Best sorted lambs brought $17.25, culls $12@14 largely and medium class $14@16 according to what they were. A flock of 110 goats, including some kids, brought $3 per head, going to a country buyer.

Good to best wethers	$10.50@11.00
Fair to good wethers	9.50@10.50
Good mixed	10.00@10.50
Fair to good, do.	8.50@10.00
Common to fair	6.00@8.00
Inferior sheep	4.00@6.00
Good to best spring lambs	17.00@17.25
Medium lambs	14.50@16.00
Culls and throwouts	12.50@14.50

Calves

Receipts were light on Monday, 500 head. Best veal calves brought $13 per cwt., with medium kind $14@16 and others on down.

LANCASTER

Cattle

Lancaster, Jan. 28.—Five hundred head of cattle made up the supply. Steers and yearlings strong to 25c higher. Top was $13, paid for 1,370-lb. steers. Other cattle about steady. Stockers and feeders nominal.

Good steers	$12.00@13.50
Medium to good	10.75@12.00
Common to medium	9.00@10.75
Good to choice heifers	10.25@11.75
Medium and common	7.50@10.25
Good to choice cows	7.25@10.00
Common and medium	6.00@7.25
Low cutter and cutter	3.75@6.00
Good to choice beef bulls	10.25@11.50
Cutter, common and medium	7.50@10.25
Feeder and stocker cattle	Nominal
Good to choice calves	16.50@19.00
Medium	14.00@16.50
Culls and common	8.00@14.00

Hogs

Receipts of hogs amounted to 1,150 head. Market 25@50c higher, with top at $11.25. Bulk of receipts went at $10.75@11.

Heavy weights, 250-350 lbs.	$10.75@11.25
Medium weights, 200-250 lbs.	10.75@11.25
Light weights, 160-200 lbs.	10.50@11.00
Packing sows (rough and smooth)	7.50@10.00

BOSTON WOOL MARKET

THE opening of new lines of goods by mills held much of the attention of members of the wool trade during the first few days of last week, says the U. S. Department of Agriculture Market News Service. Toward the closing days of the week interest in wools tended to broaden. Inquiries were more numerous and some sales were closed on fairly large quantities, mostly on wools of the finer qualities.

Fleece wools were very slow. Business was closed on a moderate quantity of 64s and finer French combing wool at 40@41c, in the grease, but on the strictly combing class of this grade the market was inactive with asking prices about steady. Quotations were medium on the lower grades and a little business was done on 56s strictly combing Ohio wool at 56c, in the grease.

Domestic Wool Quotations

Grease Basis Ohio and Similar

64s, 70s, 80s, (fine) strictly combing	40c
64s, 70s, 80s, (fine) French combing	40@41c
64s, 70s, 80s, (fine) clothing	38@39c
58, 60s (½-blood) strictly combing	52c
58s, 60s, (½-blood) French combing	45c
58s, 60s, (½-blood) clothing	43@44c
56s, (¾-blood) strictly combing	56c
56s, (¾-blood) clothing	51@52c
48s, 50s, (¾-blood) strictly combing	54@55c
48s, 50s, (¾ blood) clothing	45@47c
46s, (low ¾-blood) strictly combing	48@49c
36s, 40s, 44s (common and braid)	43@45c

CASH GRAIN

Chicago, Jan. 28. The following cash prices ruled here today: No. 2 hard wheat, $1.27@1.27½; No. 3 yellow corn, 97@97¾c; No. 4 white oats, 55¾@56¼c.

HAY AND STRAW

New York.—(Large bales) timothy and light mixed, No. 1, 82@27; No. 2, 824@25; medium mixed Nos. 1 and 2, 824@26.

Baltimore.—Hay is arriving here in ample quantity, but the demand for hay locally is very limited, and hardly enough actual business is passing to establish quotations on the various kinds and grades. Receipts by truck are taking care of most requirements. Little demand for straw, receipts generally ample. Wheat straw, No. 1, per ton, $12@12.50; oat straw, $12.50@13.

Philadelphia.—Hay, timothy, No. 2, $17.50@18; timothy, clover mixed, No. 1, $16@17; No. 2, $14@14.50. Rye straw, $18@20; wheat, $14@15; oat, $12@15.

Government reports show:

Three-Fourths of Wells on Farms are contaminated!

—diseased animals and birds having access to drinking tanks also pollute the water!

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(Continued from page 31.)

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Class 3.—1, M. Carpenter, Ephrata; 2, Henry M. Kolp, Landisville; 3, J. H. Hostetter, Millersville, R. 37.

Class 4.—1, H. N. Risser, Marietta, R. 1; 2, Milt S. Snyder, Manheim, R. 4; 3, Roy H. Miller, Manheim, R. 2.

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Syrup in gallon glass.—Stranahan Bros., Spartansburg.

Syrup, quarts.—1, Stranahan Bros; 2, Mrs. C. E. Logue, First Fork; 3, John Peck, Fort Hill.

Sugar, cake.—1, Stranahan Bros.; 2, John Peck, 3, C. F. & M. C. Whitney, Susquehanna.

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Wheat

District No. 1.—1, Edgar R. Beck, York, R. 9; 2, Harold Keller, Nazareth, R. 3; 3, Harry J. Light, Lebanon, R. 2.

District No. 2.—1, G. H. Dumm, Ebensburg; 2, I. T. Stuttmatter, Patton; 3, Ralph Strittmatter, Patton, R. 1.

District No. 3.—1, Paul W. Young, Lewisburg; 2, Paul Turck, Hunlocks Creek; 3, Amos Kresge, Gilbert.

Pennsylvania Agriculture

(Continued from page 5

does mean that the rapid and widespread intensification of Pennsylvania agriculture is being accomplished without a corresponding increase in horse population.

The trends in dairy and poultry industry are perhaps the most gratifying features of the state's agricultural progress. There were approximately 35,000 fewer milk cows on farms in 1924 than 40 years before and yet annual milk production has increased over 75,000,000 gallons. This means that the average milk production per cow increased during the period from 398 to 519 gallons. Another trend of great significance is the decrease of almost 50,000,000 pounds in the amount of farm-made butter. What a burden the shift from making butter on the farm to the marketing of whole milk and cream, has lifted from the shoulders of farm women!

With the possible exception of market gardening, the poultry industry has expanded more during the past 40 years than other important branches of Pennsylvania agriculture. The number of chickens on farms has doubled, being 8,500,000 in 1884 and 17,300,000 in 1924, and the production of eggs, due to modern methods and improved breeding, has increased even faster than the chicken population. The average annual production per hen was 4.9 dozens in 1884 compared to 5.9 dozens in 1924.

Market gardening and orcharding are also giving a good account of modern methods. The former has grown from a sideline to a very important industry during the past 80 years and the orchardists, through a shift from the home to the commercial orchard, have succeeded in materially reducing the total number of bearing apple trees with an apparent increase in the total value of the product.

After a study of the statistics for the entire state as well as for individual counties, one can easily perceive that the dairy cow, the hen, the production of grain, orcharding and finally market gardening are each finding an important place in a widely diversified and industrialized state.

Unfortunately, statistics on farm income and cost of living are not available for the 80-year period so that it is impossible to draw comparisons as to the relative prosperity of farmers now with 40 and 80 years ago. Statistics do show, however, that expenditures for fertilizer and inventories of farm machinery have more than doubled since 1884. Furthermore, it is common knowledge that the standard of living has changed with the coming of the automobile, the radio, and hundreds of other modern conveniences.

One thing is very evident, we have today a "more expansive" agriculture compared to 40 years ago, and this very fact is a direct requisition for maximum business efficiency on every farm.

G. F. J.

Champion.—Edgar R. Beck.

Oats

Patterson type.—1, M. G. Selkets, Chambersburg, R. 8; 2, Edgar R. Beck, York, R. 9; 3, P. R. Seifert, Nazareth, R. 2.

Victory type.—1, Ralph Strittmatter, Patton, R. 1; 2, A. L. Shaffer, Brookville; 3, Jay Cowan, Brookville.

Champion exhibit.—Ralph Strittmatter.

Barley

First, Walter H. Schlegel, Bath, R. 1; 2, V. H. Kaul, East Stroudsburg; 3 Paul W. Young, Lewisburg.

Rye

First, N. E. Sott, Lehighton; 2, Harry C. Poffer, Marchand; 3, Paul Turck, Hunlocks Creek.

Soy Beans

First, H. E. Speicher, Greenwood, Delaware.

Buckwheat

First, V. H. Kaul, East Stroudsburg; 2, Edgar R. Beck, York, R. 9; 3, Emory L. Miller, Stahlstown.

Vegetables

Special exhibit.—1, Harrisburg St. Hospital, Harrisburg.

Display.—1, Wm. Wenker, Bustleton.

Radishes.—1, Frank Stewart, 1634 N. 5th St., Harrisburg.

Mushrooms, white.—1, Walter B. Evans, Kelton.

Mushrooms, brown.—1, Walter B. Evans.

Mushrooms, buttons.—Walter W. Moule, West Grove.

Rutabagas.—1, A. D. Alberger, Bustleton; 2, Wm. Stoker, Byberry.

Turnips.—1, Wm. Stoker, Byberry; 2, Yeagle Bros., Bristol, R. 2.

Parsnips.—1, Chas. Humphreys, Forresdale; 2, Wm. Wenker, Bustleton; 3, A. H. Meade & Sons, Bristol, R. 2.

Beets.—1, Wm. Wenker, Bustleton; 2, Chas. Humphreys, Torresdale.

Carrots.—1, Yeagle Bros., Bristol, R. 2; 2, Wm. Wenker, Bustleton; 3, Andrew Gersch, Huntingdon Valley.

Savoy cabbage.—1, Yeagle Bros., Bristol, R. 2.

Cabbage.—1, G. E. Smith.

Onions.—1, Espenshade & Sons, Harrisburg, R. 3.

Celery, yellow. 1, H. N. Dudley, Bustleton; 2, T. H. Fleming, Andalusia; 3, Wm. Wenker, Bustleton.

Celery, green.—1, T. H. Fleming, Andalusia; 2, A. H. Meade & Sons, Bristol, R. 2; 3, W. L. Bashore, Mt. Wolf.

Bee Products

Light comb honey.—1, A. Leun Lesher, Chambersburg; 2, Castle Farms, 501 Cascade St., Erie; 3, C. C. Bastian, Wescosville.

Dark comb honey.—1, D. C. Gilham, Schuylkill Haven; 2, Castle Farms.

Light extract honey.—1, I. L. Barnes, Townville; 2, Loren Yaw, Roaring Branch; 3, Chas. D. Ruth, Emaus.

Amber extract honey.—1, John L. Fry, Manheim, R. 3; 2, Wayne Shilling, Lebanon, R. 3; 3, Wm. S. Weaver, Macungie.

Dark extract honey.—1, Treesdale Farms, Marse; 2, D. C. Gilham, Schuylkill; 3, Treesdale Farms, Mars.

Beeswax.—1, David Conn, Roaring Branch; 2 and 3, Treesdale Farms, Mars.

Individual collective exhibit.—1, Loren Yaw, Roaring Branch; 2, William H. Heiss & Son, Mifflinburg; 3, Treesdale Farms, Mars.

County association exhibits.—1, Allegheny Beekeepers' Ass'n; 2, Lehigh Valley Beekeepers' Ass'n; 3, Lycoming Co. Beekeepers' Ass'n.

Wool

Fine Wool

Ram.—1, R. Patterson & Son, Kirby; 2, Chas. B. Orndoff, Waynesburg; 3, Geo. West, Waynesburg, R. 3.

Ewe.—1, 2 and 3, R. Patterson & Son.

Wether.—Lawrence Co. Wool Growers' Cooperative Ass'n, New Castle.

Lamb, 1, Clarence Paxton, Washington, R. D.; 2, Patterson & Son.

Commercial fleece.—1, R. D. Hamilton & Son, Huston; 2, Harold Bell, Clarksville; Mercer Co. Sheep & Wool Growers, Mercer.

Medium Wool

Ram.—1, H. A. Thoren, Port Allegany; 2, J. B. Henderson, Hickory; 3, Fred M. Dowell, Mercer.

Ewe.—1, Robinson Bros., Mercer; 2 and 3, Susquehanna Co. Sheep & Wool Growers, Montrose.

Ram lamb.—1 and 2, Lawrence Co. Sheep & Wool Growers; 3, H. A. Thoren.

Lamb, 1 and 2, Mercer Co. Sheep & Wool Growers; 3, Fred McDowell.

Commercial fleece.—1, Mercer Co. Sheep & Wool Growers, Mercer; 2, Fred M. Dowell.

Champion fleece.—R. Patterson & Son.

Coarse Wool

Ram.—1 and 2, Lewis F. Nichols, Bethel.

Ewe.—1 and 2, Mercer Co. Sheep & Wool Growers; 3, Lewis F. Nichols.

Special County Exhibit

Fine wool.—1, Greene Co.; 2, Washington Co.; 3, Mercer Co.

Medium wool.—1, Lawrence Co.; 2, Kean Co.; 3, Mercer Co.

Veterinary

Abscess

I have a horse that got his right hind fetlock hurt, went lame and it swelled up to the hock joint. He would be lamer at times, part of the time I could work him. Finally it ruptured. I opened it and it has been running matter for over a month. He has been hurt for three months.

W. D.

I am afraid that there are some pockets connecting with the main abscess and, due to the presence of pus and infection in these pockets, the abscess continues to discharge. You have probably flushed out the opening with an antiseptic solution, using for this purpose a hard rubber necked syringe. You may have to get your veterinarian to open up the abscess some more. Several arteries and nerves are present in this location so you should proceed with caution.

Cow Coughs

I have a cow which I think may have goiter. She is in good flesh and milking well, but breathes hard when she comes in, especially in the evening. Coughs a good bit when fed dry feed. She has been T. B. tested. R. C. H.

While there is a possibility of goiter, I would be inclined to look for other factors as the cause of the trouble. Extra gas formation in the rumen will have this effect and particularly if enlarged glands are pressing upon the esophagus at the entrance to the rumen. My suggestion would be to have a thorough physical examination made by a competent veterinarian.

Calcareous Deposit

Could you explain the presence of a lump of deposit like lime or whatever it is, in a cow's teat? For two years, soon after freshening, the teat has had this obstruction come down in it. The first time I noticed it I thought she had lost the use of the teat, as not a particle of liquid could I get through it and finally by manipulating and lots of patience a lump came through last year. Now this year the same thing has occurred.

W. S.

Calcareous deposits sometimes occur and it is thought that possibly the diet may have some slight bearing on the trouble. Use a good leguminous hay like alfalfa or clover during winter season and in addition use wheat bran in the grain mixture. It is well too to use about three pounds equal parts of steamed bone meal and ground limestone for every 100 pounds of feed.

Operative measures are the only relief when lumps take place.

A Mangy Condition

Will you please give me a remedy for mange in horses?

A. L. P.

Mange in horses is caused by small parasites which bury themselves under the skin. They cannot be seen with the naked eye unless the scrapings beneath the scab are put on a piece of black paper, the scab to be heated in the sun or by a small flame. On dark paper the small parasites appear as white specks.

The disease is infectious and will spread through the stable, and for that reason the harness, blankets and other equipment should be carefully disinfected. Wash the affected parts with castile soap suds to which has been added a tablespoonful of coal tar dip to every 1½ quarts of warm water. Follow this with an application of an ointment consisting of vaseline three parts, sulphur one ounce, zinc oxide one ounce. All scabs should be thoroughly softened by rubbing well with the soapy water.

Cow Pox

We have a cow that has sore teats. They have been sore since in the spring. We have tried several salves, yet they will not heal.

J. S. B.

This is either a case of true cowpox or a condition rather commonly called false cowpox by dairymen. When the pimples first appear bathe the udder with a boric acid solution. This is prepared by dissolving in hot water as much boric acid as will go into solution. Procure from your druggist a small amount of potassium permanganate crystals and put enough crystals into whole water to make a deep wine-colored solution. Bathe the sores with this solution after the udder has been dried with a clean cloth following the bathing with boric acid. If any of the sores appear difficult to heal, paint them with tincture of iodine and glycerin in equal parts.

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IN THE SAN JOAQUIN VALLEY of California general farming is a paying business, feeding millions of people in towns and cities. Alfalfa combined with dairying, hogs and poultry, yields a good income. A small one-family farm, with little hired labor, insures success. You can work outdoors all the year. Newcomers welcome. The Santa Fe Railway has no land to sell, but offers its free service in helping you get right location. Write for illustrated San Joaquin Valley folder and get our farm paper—"The Earth" free for six months. C. L. Seagraves, General Colonization Agent, Santa Fe Railway, 818 Railway Exchange, Chicago.

DELMARVA—6,000 SQUARE MILES Finest Agricultural Opportunities. Within three to ten hours by motor truck over splendid concrete highways to New York, Philadelphia, Baltimore and Washington markets. Pennsylvania Railroad System permeates entire Peninsula. Mild, equable climate. Very little snow and freezing. Farms, town and waterfront homes, low priced. Good schools, low taxes. Handsome descriptive booklet, Free. Address 163 Del-Mar-Va Building, Salisbury, Md.

FARMS ALL SIZES.—Mild climate. Easy terms. C. Whitten, Crewe, Virginia.

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WHY BLAME THE BULL when your cow does not breed? Use Cow Catch 1 hour before service. Results or your money back; $5 cents for one cow, $2.00 for five cows, postpaid. Woodstock Farm, Route 2, Box 59-C, Renton, Washington.

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ROOFING PAPER.—3-ply, $1.35 per roll, 100 square feet. Prepaid. Asphalt shingles, roof coating, paint. Send for price list. Winiker Bros., Millis, Mass.

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WHY NOT HAVE AN EXPERT examine your farm for oil and gas, cost responsible. C. J. Williams, 909 R. Union Trust Bldg., Pittsburgh, Pa.

ONE 1½ H.P. FAIRBANKS DAIRY BOILER, like new, with pump, mud and burner, at a bargain. Joseph A. Blose, New Washington, Ohio.

TOBACCO

HONEST'S TOBACCO—Chewing: 5 lbs., $1.50; 10, $2.50. Smoking: 10 lbs., $2.00. Pay when received. Farmers' Association, West Paducah, Kentucky.

TOBACCO—Sweetheart Smoking, 12 pounds, $1.40. Chewing, $1.00, 50 Cigars, $1.50. Twist, Plug, Sack Smoking, 20 either kind $1.80. Farmers' League, Waterside, Kentucky.

GUARANTEED HAND-PICKED TOBACCO. Chewing, 5 pounds, $1.50; 10, $2.50. Smoking, 10, $1.50. Pipe Free. Pay Postman. United Farmers, Roxwell, Kentucky.

LEAF TOBACCO. Good, sweet. Chewing, 3 lbs., $1.00; 5 lbs., $1.25; 10, $2. Smoking, 3 lbs., $1.00; 5 lbs., $1.50; 10, $2.40. United Farmers, Sturgis, Ky.

SITUATION

POSITION WANTED by Farm School graduates. 20 years of age. Have had three years practical and theoretical training in the large School farms. Some of these graduates are trained as dairymen, herdsmen, tractor operators, vegetable gardeners, poultrymen, greenhouse men, landscape men, and general farm managers and only interested in good farms. Ready for employment April 1st. Communicate with C. L. Goshing, Penn. Farm School, Penna.

MALE HELP

WANTED.—Married or single man to work on poultry and general farm. Must be capable and industrious. No bad habits. Send references and wages expected. Adress J. Pennsylvania Farmer, Pittsburgh, Pa.

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The MARKET PLACE

IF ANY ONE is over weight I recommend the Farm Products Show as an excellent method of reducing. I have walked about fifteen or twenty miles so far today and I am resting up waiting the Market Place column. I hope that the legislature will realize the value of having a central building for exhibits and meetings. It will make possible a bigger and better show and will save us from trotting around so much between buildings which are a half mile to a mile apart.

The exhibit of the Pennsylvania Bureau of Markets had many interesting features. There was a display of the baskets and other containers for fruits and vegetables that will be legal after the new container act goes into effect November 1st of this year. Potatoes were shown in 150-pound sacks and in 120-pound sacks, and the trend toward the smaller sack was brought forth. D. M. James, in charge of fruits and vegetables inspection in Pennsylvania, told me that he believed growers should recognize that with increased competition Pennsylvanians will have to study what containers are most popular with their customers and make an effort to put up a more attractive pack. Mr. James stated that a grower who buys a good package should fill it with well-graded stock, as a fancy package will not sell a poor commodity.

A pasteboard carton holding twenty pounds of selected potatoes packed by the Fruit Growers of Chester County, Inc., was displayed. They report that they have been able to sell these boxes of strictly fancy potatoes at 50c apiece wholesale in their section and that they have been able to retail them at 75c. The potatoes have been marketed in the surrounding towns and have proved very attractive to the buyers. It is a quantity that the average housewife will buy and the fact that they are of fine quality brings the repeat orders.

Another feature was potatoes wrapped with an attractive printed tissue and packed in a wooden box holding 50 pounds. This pack was prepared by Mark W. Hoffman of New Tripoli, Pa. I do not have all the information that I would like to have concerning these, but I understand that Mr. Hoffman has a wiping machine similar to the one used to remove spray residue from apples. He runs his potatoes through this and as a result they are bright and clean. They are then passed over a picking table where two workers pick out an irregular stock. Only perfect baking potatoes are placed in the boxes. Most of these will weigh about eight ounces. In this way Mr. Hoffman is working up a trade that wants a good baking potato and is making an effort to recapture the market that the Idaho growers have taken in Pennsylvania. It is an expensive pack and requires experience, time, equipment and also a crop of good quality. All of the potatoes of good quality which do not meet the requirements of the box pack are put in sacks.

The display of the record crop of potatoes grown by H. A. Walton of Chester county, the potato king of Pennsylvania, was inspiring. It seems hardly possible that 626 bushels should have come from one measured acre. I do not wish to detract from Mr. Walton's wonderful accomplishment, but I am sorry that it could not have been arranged to have these exhibited in new sacks rather than old ones turned inside out and sewed with binder twine. From a market standpoint and that is the view that I take it was a poor exhibit and at the Farm Show we look for examples of the best not only in the way of production but also in the attractiveness of pack and container.

W. R. W.

The South Jersey Farmers' Exchange at its recent annual meeting showed gross sales for the year just closed of $89,000, despite the failure of the tomato crop in South Jersey and the exceedingly low prices received for potatoes. Officers of the Exchange for the coming year were reelected as follows: Asa Moore, president; Asher Waddington, vice-president; Arthur B. Lippincott, manager; Oscar Ware, treasurer; and James C. White, secretary. These officers, together with S. Frank Powell, John P. Ridgway, C. B. Mitchell, John J. Butcher and James M. Tweed, comprise the Board of Directors.



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SPOHN MED. Co., Dept. 8

Farm Conditions

Lebanon Co., S. E. Pa.

Jan. 21: Have had an open winter so far. Only about an inch of snow has fallen. Thermometer read zero on the 11th. There has been little thawing of ground, so grain and grass appears undamaged. Farm sale season is on again in full swing. All farm organizations are busier than usual with winter activities. Many are attending the show at Harrisburg. Several hundred carloads of potatoes have been shipped out of the county, also some cars of red corn. Shippers pay 55c bu. for potatoes at farm, 80 lbs., corn, hay and straw around $14 ton, eggs 36c, butter 55c. Colds, grippe and flu epidemic about over. Pneumonia claims its usual winter toll of elderly victims. R. L. W.

Clearfield Co., Central Pa.

Jan. 17: Have had very cold weather, little snow, injury to winter grain, ice 11 inches thick being cut. Market demand dull. Potatoes 75c to $1 apples 75c to $1.50 bu., dressed chickens 22c, live hogs, pork 12c, cows 10c, heifers 50 to 60c, calves 5c lb. D. H. Wells.

Cumberland Co., Southern Pa.

Jan. 17: Coldest weather of the season, mercury today with snow and rain. Farmers well up with their work owing to open winter. Grass and wheat fields look fresh, well, would be much improved by covering of snow. Potatoes in farmers' hands partly sold, cleaned up shipped to eastern markets at 50c per bushel. Less than usual, 85%, wheat $1.24.

A. L. Bahnker.

Jackson Co., Western W. Va.

Jan. 16: Have biggest snow of the season. Roads in good condition. Cattle wintering good. Epidemic of flu in county. Farmers busy getting in wood and hauling feed. Hens not laying well. Eggs 35c, butter 25c. R. D. C.

Union Co., Central Ohio

Jan. 18: Having old-fashioned winter weather, several inches of snow. Stock consuming considerable feed but looking well. Many tenant farmers preparing to move to new locations brings the fact that spring is just around the corner. Much sickness, flu everywhere and in every section. Wheat looks fine. Not much doing but hauling feed and mail. Hens laying fairly well. Eggs 38c, corn 75c, oats 45c. C. O. M.

Van Wert Co., N. W. Ohio

Jan. 17: Have had nice winter, not much mud. Butchering about all done and fat hogs in market. Several deaths and considerable sickness. Not much plowing done. Most of corn is out of field. Corn selling for $1.30 cwt., oats 48c bu., hogs $8.75 cwt. Stock looking well. Roads good. Tyra L. Rasor.

Potter Co., Northern Pa.

Jan. 16: Only routine work being done on farms at present. Cold weather but not much snow as yet. Rain ground after repeated frosts is beginning to heave and kill grass roots will follow. Much sickness in the county. Most of the potato crop still stored in cellars. Local prices 90c per bushel consumer and not in towns put $1 retail. Local prices eggs 50c, butter 50c cheese 25c. M. C. Stone.

Centre Co., Central Pa.

Jan. 19: Coldest weather of the winter reported but work when the mercury dropped as low as 10 degrees below. In some localities streams and water pipes were frozen, ice thirteen inches deep was cut, although not much ice being harvested.

A. L. Alexander.

Lehigh Co., Eastern Pa.

Jan. 21: Weather up to this time almost like spring. Had no snow and roads generally fine for the season. Farmers cutting wood, pruning trees and doing outside work. Owing to the high price very few cattle being fattened on the farms. Potatoes are cheap and generally dull on the market. Prices paid at loading stations 40 to 45c per bu. Grippe prevalent. Doctors busy but no deaths have been reported. G. J. R.

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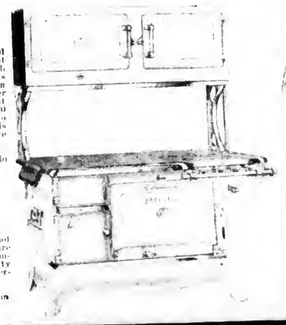
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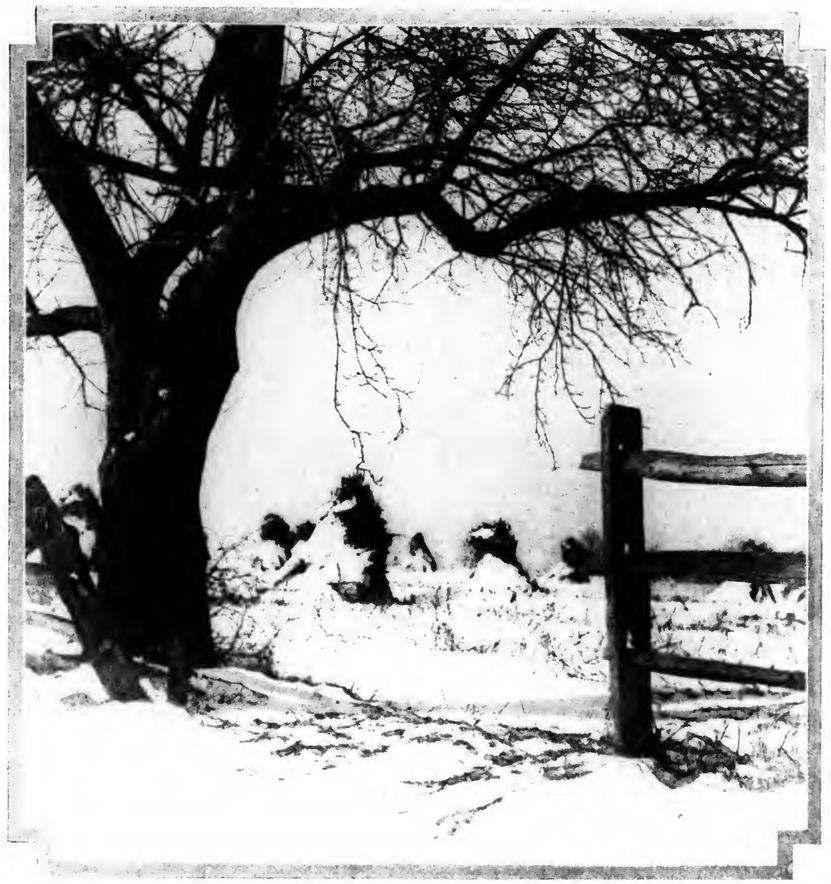
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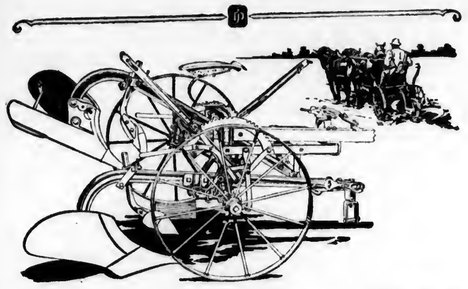
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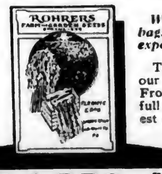
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Farm Facts and Fancies

By ALVA AGEE

THERE is a large number of eastern people who have investments in land in Southern California. The other evening two friends from the East called on us, and they had been looking over some Imperial Valley land that had come to them as the chief part of a parent's estate years ago. This land has not been renting for enough to pay all charges, and makes an annual draft on other income, and they wanted to see what the matter was.

I doubt the ability of any visitor to get the hang of any real estate matter on this Western Coast in a short time, but they attribute the trouble to lack of interest in non-resident owners, and look forward to a better demand for land as the public grasps the advantages that are to flow with the water from Boulder Dam. Some people in most agricultural developments do well, it may be, but the non-resident investor is at a sad disadvantage. I am mentioning this incident for another reason.

Keep Your Money

There is every sign that this country is to have a lot of booming of western opportunity if contracts are made for the building of the huge dam in the Colorado river. The amount of water gathered from seven states by this river is immense. The law is so queerly worded that I do not doubt the building of the dam even if in the outcome the nation contributes the larger part of the money. The engineers estimate that there will be sufficient water to irrigate an additional area of four millions of acres.

There is something alluring in becoming the owner of a tract of land now worthless that can become able to make an enormous production per acre and become as valuable as some ranches near the Coast now are. Later on advertising matter will reach millions of eastern people. A word of caution cannot do some people any good, but a conservative person will keep his money in his own possession until he knows more than he can learn from any advertising. Six months personal observation a few years hence might do some good—and might not. Keep your money until you know that you have a bargain, and that will be quite a while.

The Question of Time

It is estimated that the dam can be built in nine years. This assumes that the states will ratify, that the Secretary of the Interior will be satisfied with promises made of part reimbursement of the government, and that there will not be delays in construction. My judgment regarding time isn't worth the paper to set it down, but time estimates on such undertakings rarely are big enough. Land capable of irrigation cannot be brought under production until well after water is provided, and any particular development may be delayed much longer by unforeseen circumstances.

Granting that it ever is wise to put money into such a project when one does not become a resident, or when one has not served his term as a novice, this question of time is something that cannot be argued with. I need your money, keep it safely in bank for a good many years to come, is an opportunity far from me. There is more land than there will be people need, and the bargains usually go to the early investors must let go the options to every sort of promoter if it can be tied up to the proposition.

A Creditable Attitude

Some leading men of [illegible] are seeking means of curbing [illegible] for eastern money by irresponsible persons that is already being put on. Some absolutely worthless sand hills between the true Imperial Valley and the Colorado river have been marketed, and the flow of eastern money has begun.

Five years from now a little better guess on the wisdom of investment might be possible. Who knows what areas will prove capable of attracting bona-fide farmers that give value to a region? Who knows about the townsite? Who knows how much stuff can be marketed at a living price from new land a dozen years hence? Who knows how much additional tax for water will be placed on land now irrigated but turning to the new supply of water brought through costly canals? Who knows anything for certain?

I believe in the western country—it is a great place to live if one stays where people came before he did—but the investor should be on the ground, and he should be of a backward disposition.

Seemingly a Closed Mind

People get old because they close their minds to all new truth and interests, or their minds become closed because they are old. I wish that I knew which is the horse and which is the cart in this hitch-up, but the connection is sure anyway. As some young people close their minds to some truths, maybe the first statement is the correct one. I prefer to think so because I find my mind seemingly closed on one point that constantly is coming up in farm practice, regardless of evidence that should be good.

We have no more competent adviser regarding the use of lime on land than the director of the Ohio Experiment Station. The results of his tests lead him to say that it is all right to apply lime to land and to plow it down at once. The Station's teaching is that lime may be plowed under or worked into the top soil with equally good results. Most people will know that this should be conclusive, but I have seen clover failure when a light application of lime was buried in sour land, and I have seen a pretty good catch of clover when a light application was worked into the top soil of sour land before clover was seeded.

It all appeared so reasonable that apparently my mind closed on that point. Of course Director Williams is right in the matter, and my belief remains that he is in error so far as a light lime application on sour land is concerned.



Champion Potato Grower

OSCAR Dick, an 18-year-old boy, of Berkeley county, West Virginia, who is a student of the Martinsburg High School, holds the record for potato production in West Virginia in 1928, and it is believed that his record yield has been surpassed in the state only by a high school student.

The spring season was unusually [illegible] and it was late in May when [illegible] planted his plot of slightly less than one and one-half acres. After [illegible] preparing the soil and applying fertilizer, he planted 32 bushels of certified Maine Irish Cobbler seed.

It needs [illegible] and frequent cultivation during the growing season. He sprayed twice with a 5-5-50 Bordeaux spray. Late in August, Oscar [illegible] his crop of potatoes which amounted to 700 bushels.

F. R. Butts

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Ask the A. S. A. (Authorized Swift Agent) for Red Steer. And look for the certification tag on every bag. It's your assurance of quality in fertilizers.

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Drop in and talk this over with your A.S.A. He can help you make more profit with Swift's Red Steer Fertilizers.

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WHY every farm home should have a new and modern

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1. Because a radio set will bring to the most remote farm the best music the cities provide. Distance, bad roads, weather, and the daily duties of farm life need not deprive you of good vocal and instrumental music. At practically any hour a great variety of music is to be heard by radio, and the whole family may listen without leaving home.

2. Because weather, crop and market reports are to be had daily. A single market report may save you the cost of your radio set many times over—such has been the experience of farmers all over the country.

3. Because church services may be attended by radio every Sunday. Famous preachers are to be heard, trained choirs will sing for you, and skilled organists will play.

4. Because radio offers the children of all ages many educational advantages, which the grown-ups may share if they wish.

5. Because bulletins of important news are broadcast. Radio will tell you what has happened, soon after the event.

6. Because you may hear talks by authorities on many subjects. Agricultural topics are discussed. Current events are analyzed frequently and their significance pointed out. Interesting lectures are to be heard.

7. Because all these things and many more are to be enjoyed fully for only a small expenditure for radio equipment. Modern battery-operated sets, particularly the Eveready, will bring you the best reception that radio affords. Experts say that radio is better with battery power—more dependable, reliable, with less interference, fewer outside noises.

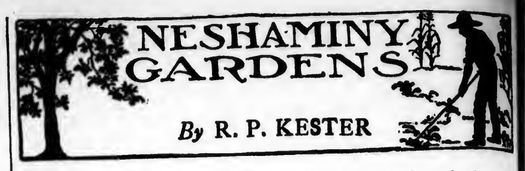
Your set should be new and modern, because great improvements have been made in radio transmission and reception. If you have a set that is several years old, you aren't hearing 1929 radio at all, and you will be surprised at the great improvement you will notice if you listen to a really modern set. Go hear one today—don't miss another day of this year's radio marvels!

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SEE AND HEAR THE NEW EVEREADY RADIO SETS



By R. P. KESTER

LETTERS to the writer of these notes furnish many inspirational thoughts, especially in the off season when I am not busy on the farm. My thinker works best when I am working; that is one reason for the establishment of Neshaminy Gardens. It may be that other people can think to a purpose in idleness, yet a reading of much of the stuff that is published does not bear out that supposition.

* * *

I once heard a story of an old brick mill horse that has stayed with me. After this horse had spent most of his life working on a sweep power grinding clay for brick in the old-fashioned way the owner put in modern machinery, so the old horse was turned out to pasture with nothing to do the rest of his life but eat and rest. But it was noticed that he would stop eating every once in a while and begin to travel around in a circle as he had done all his life, and he would keep this up for an hour at a time. I find that human beings are much inclined the same way. Their minds travel in circles, and if you talk with them frequently, hear them speak often enough, or read their regular typewriter outputs, you will find that their minds work much as did that of the old horse. It is only by gaining new wisdom in work and through contact with our fellow men that new ideas continue to hatch.

* * *

I have a letter from a reader down in Tennessee—down where the law of evolution has been repealed by statute—that furnishes food for thought. However, the letter shows that the writer has progressive ideas, at least progressive aspirations. His difficulties and perplexities read much the same as those from hundreds of other farmers. He says:

"I have read your articles for three years and am much interested in what you say about garden tractors. I would appreciate some advice. I live on a farm of 140 acres, one-half of which is in grass, and the other half in cultivation. We have no modern implements but keep three horses. Our main crops are corn and Laredo beans and millet for hay. We keep a few hogs and cows. The land is practically level, and is a tough clayey loam with some limestone rocks scattered about.

"After trying the tractor, do you think it would be cheaper than buying a team at $350 and new modern equipment for the team? Could a four-horse-power tractor plow as deep as a two-horse walking plow? Could a corn crop be worked with the tractor? Corn, a small potato patch and a garden would be the cultivating requirements.

"I think you have a good idea in mulching tomato vines with paper. Don't forget that there is one away down here in Tennessee who reads your articles every week. E. N. S."

To be frank, our correspondent evidently needs other equipment more than he needs a garden tractor. Seventy acres, farmed efficiently and intensively, would furnish work for a modern, medium-sized farm tractor. Or three horses could be kept busy. The writer is evidently in need of increasing his money crops. He mentions "a few hogs and a few cows," and probably the crops raised are fed to these animals. I know nothing about his markets, but seventy acres would feed several animals of either or both kinds. But on the point at issue I would advise putting the money into equipment that will plow and cultivate in the best possible way that much land, a task that a garden tractor is not intended to perform.

* * *

Another interesting letter from an eastern Pennsylvania reader is as follows:

"I live on a 12-acre farm. Have been here four years and have taught school eight months each year except this year. I value the place at about $4,200. It is mortgaged for $2,400 on which I pay interest at six per cent. I have not been able to pay off any of the principal. I have a wife and three little children and do all my own work. Do you think that, with a little patience and some hard work, it will pay me to continue?

"I have made on the average $200 a month during the five summer months and expect to do better the coming season. I have a small egg route in Bethlehem where I sell vegetables. Do you think it would pay me to borrow enough money to buy a small tractor and pay it off this summer? I keep about 400 hens, but this has been my worst season for eggs. What variety of early beets do you plant? Also, what variety of early spinach? B. J. L."

Here is another man wavering between his doubts and desires. Advice in such instances is difficult unless you know the man personally. The possession of twelve acres in that locality furnishes ample opportunity to make a living and build up a real home for a little family. But whether the task is accomplished or not depends on how much grit, brains and health a man has, and also how well satisfied the wife is to pull her end of the load during the first years. If you can pass the following examination, go ahead.

Do you both love country life?

Are you willing and able to work early and late when necessary?

Have you the capacity to be patient and take pains to do everything well?

Are you inclined to read, study and find out the latest and best?

Are you both good at looking out for the details of work and business?

Do you want to develop an ideal place, or are you satisfied with slipshod conditions?

These general questions include a multitude of others connected with poultry raising and vegetable gardening, both of which are necessarily in the intensive lines of production, and nothing but thoroughness will get anybody any place in any kind of intensive farming. Think it over. It is entirely up to you.

* * *

A good garden tractor would be a useful implement on a place of this kind, unless the soil is too stony or rocky to permit full use. Marking out, cultivating, covering seed, etc., can be done with it. Also, light plowing is easily and well done. Unless a horse is needed for marketing or other work, a good garden tractor would be an economical implement on such a farm.

The Dark Red Egyptian is one of the very earliest of beets, followed by Detroit Dark Red and Crosby's Egyptian. The Bloomsdale and New Zealand spinach are good varieties for spring planting.

A CATSUP company operating at Philadelphia and Bridgeton has announced $20 per ton as the 1929 base price on tomatoes. This represents an increase of $4 to $5 a ton over last year's quotation.

Other leading canhouse buyers have not as yet announced their prices, but unofficial comment from their field representatives indicates that the above figures correctly show the general trend of the market for the coming year.

It is too early in the season to have acreage statistics available. The base price, however, is an encouraging sign

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The Master Farmers of 1928

Standing, left to right: William G. Mendenhall, E. S. Ferry, William J. Clayton, Clifford E. Snyder, Paul Willits, Clarence H. Smith, L. Otis Corkran, Harrison S. Nolt.

Seated: Ray F. Brown, Frank P. Willits, Oliver A. Newton, Amandus Larson, Edison M. Hay, C. B. Snyder, Warren C. Newton, S. S. Lehman. A group picture of the wives of the Master Farmers of 1928 appears on page 30 of this issue.

The Ancients Talked Weather and Did Something About It

By K. E. EVANS

MODERN science has put an end to many of the uncertainties of farming. We know now or can find out, just which of the vital elements a soil lacks without waiting till the mortgage is almost due. We know, or can learn, in advance whether the fertilizer we purchase is really fertilizer. We know just what liquid diet has an injurious effect on plant lice and potato bugs. But in regard to one matter the farmer still remains a bit of a gambler. Despite those "About this time look out for—etc," warnings in the old Farmer's Almanac, he cannot feel quite sure of the weather.

Oh, of course, he is pretty sure that if he watches the calendar close he can keep a rough track of the seasons. He is not like the ancient Egyptians here. They, poor fellows, never knew what to do with those extra five hours and forty odd minutes. For them 365 days made a year. So every century or so the Nile rose a month later by the calendar and it took 1460 years to make the complete cycle. And if one was not good at arithmetic he might get arrested for catching trout or shooting deer out of season.

We have no worries on this score. Thanks to Julius Caesar and Pope Gregory we are decently certain that in the North Temperate zone summer will arrive in June or July and not in December or "heaven knows when." And spring will open the rivers in March or April. And when October is under way why—as stunning we live north of the Ohio—'tis time to look out for a killing frost. So far we are on solid ground. But when it comes to telling whether it will rain in haying time, or refuse to rain for so long that the ground will look like pie-crust, or a late frost will catch the peach blossoms or a hail storm riddle the tobacco plants—who knows?

Not, of course, that we don't have weather prophets both "vocal and instrumental," local and universal—including, if you please, the ground hog. And sun spots are measured and counted, and averages for seventeen years computed. Also from time to time inventive minds come forward with schemes at least for starting if not for stopping the rain. Taking ice up in a balloon has been suggested, distributing refrigerated air from an airplane, catching the drifting fog with a 250-foot screen (250 feet high). Indeed back in 1891 our progressive lawmakers at Washington were so impressed by some of these proposals that they appropriated nine thousand dollars for experiments along this line. 'Twas not long afterwards that the following "poem" by G. W. Clarke appeared in one of our magazines:

Said Jeremy Jonathan Joseph Jones
"The weather is far too dry.
So I reckon I'll have to stir my bones
And try the effect of concussive tones
Upon the lazy sky."

So Jeremy Jonathan Joseph went
Away to the nearest town,
And there his money was quickly spent
For queer contraptions all intent
To make the rain come down.

There were cannon and mortars and lots of shells
And dynamite by the ton,
With a gas balloon and a chime of bells
And various other mystic spells
To overcloud the sun.

He fired a shot and barely two
When the sky began to pall.
The third one brought a heavy dew
But ah, the fourth tornadoes blew
With thunder, rain and hail.

It rained all night and another day
And then for a week or more,
It flooded the farm in a scandalous way,
And drowned poor Jeremy, sad to say,
Who couldn't stop the pour.

To check the flood they started. I've heard
All efforts were in vain.
Until the Bureau in Washington stirred
And stopped the storm with a single word
By just predicting "rain."

Probably that last rap at the Weather Bureau was not quite justified. Meteorology was an infant science then. And yet was it? Much depends after all on one's definition of science. For so far from being a new study when one scans the agricultural treatises of two thousand years ago he is impressed by how much they knew about the weather and its changes in those days—or thought they knew—how skilled they were in forecasting. "Never," sings Roman Vergil, who, though a poet, was one of the greatest farm-writers of his age, "never has rain brought ill to man unwarned."

And certainly if one memorized all the "prognostics" attested by the poet in his "Georgics", by Greek Theophrastus, the "father of botany," and by Pliny in that wonderful collection of information and otherwise, entitled the "Natural History"—well he would have no valid excuse for letting his hay get wet, nor would his wife have any for borrowing an umbrella. Some of those prognostics, 'tis true, would not help a Kansas farmer very much. Of what avail for him to learn that

"Dolphins sporting in a calm sea announce wind in the quarter from which they make their appearance" or that "The ink fish springing out of the water and sea urchins fastening by them stickles upon the sand are indications of stormy weather"?

Then too some of them are a bit open to question. Is it absolutely certain that when a housewife's feet swell, the wind, as Aristotle affirms, will blow from the South very soon? Perhaps if her husband had bought her a washing machine—? Or is it invariably the case that when the White Wyandottes and Fido roll in the dust or a heron mopes in the sand a storm is coming—right away? Might not Fido suffer from fleas—though these, 'tis true, are said to "bite more sharply when it is about to rain"? Yet while some of these prognostics may raise a smile—like that charm against damage by storm, the burying of a bramble frog in an earthen vessel in the middle of the wheat field, still many of them indicate a close observation of atmospheric conditions. Without any barometers to aid them the farmers of that day had watched the sky and the sun and the way things reacted to changing conditions in the air, and built up a stock of practical wisdom some of which was

(Continued on page 29.)

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UNDER CONTROL

FOOT-AND-MOUTH disease has made a second appearance in California, eight miles distant from the original outbreak. The fact that the disease has been found in only one more place is distinctly encouraging. In all probability it is under control, even if it should appear at a few other points in the quarantined area.

FUTILE

AN ILLINOIS legislator has introduced a bill which prohibits the sale of any farm product for more than twice what the producer got for it. It would be interesting to know how many such futilities have been proposed, and even enacted, in the course of commercial history. That history records no permanent success in price legislation and many failures, but facts seldom bother the ambitions legislator.

REASONABLE REQUEST

PRODUCERS ask the Department of Agriculture to report not merely the number of hogs arriving at public markets but the number to be sold there and the number going direct to packers. They cite the fact that on a recent Monday Chicago receipts were officially reported at 90,000 when only 65,000 were on sale, the rest going to the packers. This is a reasonable request and no doubt the Department will grant it without any publicity campaign.

WOOL CONSUMPTION

WOOL consumption in this country last year amounted to 465,018,144 pounds, according to the annual summary by the Department of Commerce. This is a little less than in 1927 when 477,118,171 pounds was reported, but a little more than in 1926 or 1925 when the figures were 438,356,058 and 450,020,745 pounds respectively. The comparisons cannot be said to be exact, since not all mills report to the Department, but they indicate that consumption of wool is holding its own in spite of abbreviated costumes, substitutes for wool and competition of other fabrics. Most observers agree that consumption can hardly be expected to show any further decline and hope that it may increase, in order to make better clothes and more of them.

CHICKEN THIEVES

THE pernicious practice of relieving the henhouse of its honest inhabitants has gone beyond the joke stage. It is a real problem in many sections, the thieves being organized and using motor trucks to carry away the fruits of a season's labors with poultry. One New Jersey county has gone on record in favor of a more severe penalty for those convicted of wholesale chicken stealing and making the penalty mandatory. Whether this would curb the practice is questionable, but at least the habitual sinners while in jail would not be stealing chickens.

A BUTTING BULL

JANUARY 20th Joseph Shartz of Starucca, Pa., died in the hospital at Susquehanna. A few days before his death Mr. Shartz attempted to drive out of his sister's field a bull belonging to a neighbor. The bull attacked him and butted him while he was on his feet and then, after he had been knocked down, inflicted injuries which proved fatal in spite of an operation in the hospital. Mr. Shartz's sister, Mrs. Anna Mack, came to his rescue when the bull attacked—another instance of a woman's courage in the face of great danger. Our informant does not say whether this bull was naturally polled or had been dehorned, but no matter, a bull is dangerous regardless of what he may or may not wear on his head. It is our duty to help everybody to realize this before it is too late.

SIGN OF CAUTION

THE many agricultural groups which are participating in the movement for the revision of the tariff upward are acting naturally. Each group feels that its product should not be neglected in any such movement, that its producers would be at a disadvantage if it were neglected, and this is probably correct. Tariff revision by schedule rather than as a whole always produces such a situation. It always results in inequalities too.

The whole system of tariffs on farm products should be considered in the light of the possible effects on the whole industry, but will it be so considered?

The imposition of much higher tariffs on some agricultural products may hurt agriculture more than it will help. Tariffs so high as to be practically embargoes may have an effect on other countries that is more than financial, and those countries may be needed as customers by our agriculture. The possible effect of prohibitive rates on the consumers of our own country is likewise worthy of serious consideration. Consumers vastly outnumber producers in this country. They are not going to remain silent long if they once get the idea that prohibitive tariffs enhance the cost of their food. If this reaction occurs, and it may at any time, not merely the prohibitive tariffs will be swept away but all protection of this kind.

This sign of caution is given because we are concerned about the future welfare of agriculture. We believe that our industry should share equitably in whatever tariff policy the country adopts. But in all consideration of the problem the ultimate good of our industry rather than any transient phase of it, or some minor part of it, should be the guiding principle.

CONSERVATION CONFERENCE

A MEETING of those interested in conservation, and in legislation pertaining to it, was held at Harrisburg last week. Those who expected that the assembly would either condemn or commend the Board of Game Commissioners for its recent course of action were disappointed. This large group, representing all interests, appeared to assume that the Board had done its best under trying circumstances and let it go at that. The assembly unanimously condemned Senate Bill 47, which would deprive the Board of its authority; but it recommended a plan whereby all changes in regulations must be published before the first Monday in May, with provisions for hearings and appeals so that all matters may be determined prior to October 1. This does not abridge the powers of the Board while it protects all concerned against hasty decisions. As was stated last week the farmers of Pennsylvania are opposed to the movement to deprive the Board of its present authority. They want a body with which to deal, and they have found the Board disposed to be fair in its consideration of farmers' interests. The same disposition was manifest at last week's conference, which was attended by representatives of agriculture.

OUR NATIONAL HERD

THE official report on livestock on farms at the beginning of this year estimates the value of our national herds and flocks at $5,953,000,000, or $440,000,000 more than a year earlier. Horses, mules, cattle, hogs and sheep are all given a higher per capita value than last year, though the hogs are rated at only 15c per head more. The number of horses continues to decline and is now at the lowest point in forty years. We may add that there is no prospect of an early increase. How long can we continue to reduce our herd of horses at the rate of half a million a year? The numbers of cattle show unimportant changes, but the decrease in our beef herd has been checked and there is some increase in the number of future dairy cows. The official estimates fail to show any substantial change in the number of cows and heifers now kept for milk production. Hogs decreased in number as was expected—a natural effect of unfavorable prices. Sheep continue to increase and are now close to the highest point on record, which was in 1909. On the whole our great animal industry is better balanced than it has been at some times in the past. Our outlookers may foresee serious overproduction in the near or remote future, but the official estimates do not indicate anything of the kind. Changes are not radical in that direction at least.

OUR GREATEST PROBLEM

WE DO not need to tell anybody that taxes on farm property have increased enormously in the past quarter of a century. Every man who keeps his tax receipts knows how much. Every organization can get at the public records and ascertain how much. Out in Iowa a study has been made by the cooperation of state and federal investigators. They found that in 1926 and 1927 taxation took over 28 per cent of the net rent of cash-rented farms and 27 per cent of the net rent of share-rented farms. In 1913-15 taxation took 14 and 8 per cent respectively. In other words taxes have advanced much more than returns from farms as indicated by cash and share rentals. Probably this is as fair a way to state the situation as any, but in territory where the percentage of rented farms is low it is inadequate.

The Iowa investigations failed to reveal that city property has any advantage over rural property in the matter of taxation. In 1927, for example, taxes took 31.5 per cent of the net rent of business property and 29.9 per cent of the net rent of residential property. We have found that urban and rural taxpayers alike feel that the other fellow has the best of it in taxation.

A constructive suggestion comes from Nebraska. It is to change the basis of taxation from property to a composite basis which shall include some measure of ability to pay—income for example. Very little has come of all our investigations and discussions thus far, but something must be done sometime. Here in the East the problem is largely local, and local study must precede intelligent action. It is past time to begin that study.

New Jersey Farm Comments

By G. W. HARRIS

IN order that owners of good aged dairy sires may exchange them for equally good sires of other breeding, the New Jersey extension service is cooperating with the breed associations and cow-testing associations in securing up-to-date pedigrees of herd sires and scoring them for pedigree and type. Pedigrees are scored by a committee at the agricultural college and type by a judge approved by the county breeders' associations. Bulls that score 70 per cent or above are considered worth saving. The county agents have records of the bulls scored in their counties and aid dairy owners in finding satisfactory exchanges. Also in this way many sires which later prove to be valuable breeders are kept from the butcher.

This work was started in Mercer county in 1928. Seventeen Holstein bulls were scored in the county during the year and already five other counties have signed up for the scoring in 1929. The extension service is continuing assistance in securing well-bred sires for dairy owners.

* * *

NEW JERSEY stands first in milk production per cow in the United States. The present production is estimated at 6,000 pounds per cow.

* * *

OFFICERS of the Peninsula Horticultural Society for 1929, elected at the Forty-Second Annual meeting at Camden, Delaware, January 29-31, are: President, W. Mason Sheehan, Easton, Md.; vice president, H. G. Baker, Bridgeville, Del.; secretary, J. F. Adams, Dover, Del., and treasurer, W. Lee Allen, Salisbury, Md.

Vice-presidents for the several counties are: Delaware,—New Castle, N. L. Grubb, Grubbs; Kent, Frank W. Richardson, Wyoming; Sussex, W. J. Newton, Bridgeville. Maryland.—Cecil, Levi H. Balderston, Cohora; Kent, O. B. Burrill, Galena; Queen Anne, W. Irving Walker, Chestertown; Caroline, Col. A. W. Sisk, Preston; Talbot, Elmer Fike, Easton; Dorchester, Fred Hirst, Cambridge; Wicomico, F. W. Allen, Salisbury; Worcester, F. J. Dukes, Girdletree; Somerset, Homer S. Kemp, Princess Anne.

Virginia.—Accomac, W. O. Strong, Onley; Northampton, W. L. Elzey, Exmore. The executive committee is made up of W. M. Dickson, Woodside, Del.; Albert C. Allen, Salisbury, Md., and Herbert Richardson, Wyoming, Del.

* * *

RESULTS of the news contest, conducted during the past year by the New Jersey extension service, were announced at the Annual Extension Conference at New Brunswick, January 29 to February 1. News writing, circular letters and feature articles in agricultural magazines written by county agents, home demonstration agents, college specialists and club agents were judged by Walter Siemmons, Connecticut Agricultural College. Awards were made as follows: Weekly agricultural column, H. H. White, Cape May county agent; news article, Raymond Stone, Bergen county agent; circular letter, H. H. White, Cape May county. Weekly home economics column in newspaper, Mabel E. Smith, Monmouth county; home economics circular letter, Mary A. Bartley, Morris county. Weekly club department in newspaper: B. F. Ramsburg, Middlesex county; club circular letter, Alice M. Seely, Ocean county. Special feature article in magazine: H. R. Cox, farm crop specialist; circular letter, E. L. Scovell, farm forestry specialist. Monthly news sheet to county agents: W. F. Knowles, farm management specialist, and syndicated press story, Mrs. Marion C. Bell, home management specialist.

* * *

A NEW VARIETY of peas, Mammoth Podded Extra Early, which in 1928 proved to be especially well adapted to New Jersey conditions may become one of the leading commercial varieties. It is slightly earlier than World's Record or Thomas Laxton, grows vigorously, produces a large green pod and yields heavily.

Seventy-five per cent of the 1928 commercial pea acreage in Burlington county was planted to World's Record variety as shown by the New Jersey Experiment Station. It has become a leading commercial variety since its excellent showing in trial plots in 1922.

* * *

A LIST of field seed varieties which have been found especially well adapted to New Jersey conditions has recently been announced by the Experiment Station. These varieties, for some of which a shortage of seed exists, include: Kanota oats, Alpha barley and three varieties of winter wheat, Red Rock, Leap's Prolific and Dawson's Golden Chaff. Cooperative farm tests show Hubsart Yellow Dent, Reid's White Cap, Lancaster Sure Crop, Mercer White Cap and Somerset Learning to be well-adapted varieties of corn.

"There is no reason why some New Jersey farmers should not raise the necessary seed of these improved crops if they begin with certified seed, handle the crop in an approved manner and have it inspected and tagged by the proper state authorities," says Dr. H. B. Sprague, agronomist at the New Brunswick Station.

* * *

RECENT tree plantings indicate outstanding increases in the production of McIntosh in New York and some of the New England states; Delicious, in a number of important apple states scattered from coast to coast; Stayman Winesap, in the Cumberland-Shenandoah section, and in New Jersey and Delaware; Yellow Transparent, in New Jersey, Delaware and Maryland. Winesap, in Delaware and New Jersey; Jonathan, in the Cumberland-Shenandoah section and New York; Rome Beauty, in Delaware and in New Jersey.

* * *

DO you know that the price of a ten-cent cigar will pay for the electric power used to milk a cow for one month? Four years of experimental work in Illinois and Iowa shows that 52 per cent of time was saved by using electric milking machines in place of hand milking. This includes time used in caring for the machines. About 40 per cent of saving in money was made.

* * *

THAT the Elberta peach is riding for a downfall within three or four years was predicted by M. A. Blake, New Jersey Agricultural Experiment Station, at the annual meeting of the Peninsula Horticultural Society held at Camden, Delaware, on January 29-31. The fact that it is so widely advertised and a well-known variety will probably aid in its rather sudden unpopularity. Some of the reasons given by Doctor Blake for his prediction are: Elbertas are being grown succulent and without color, and are picked green with many going into storage. This results in poor quality. Elberta must be replaced by a better variety, he told the growers.

* * *

WITH the new Farmers' Market at Newark, N. J., available to producers of the five near-by North Jersey counties, shortly to be opened, the city marketing officials are planning to segregate the speculators from the farmers. At the present market place the speculator has been in an honored position for years. The speculators buy up trash, and under market regulations have been permitted to park next to farmers' trucks and to undersell the farmers by offering inferior produce. In the new market the superintendent will be obliged to put all speculators to one side of the market, as is the case in other New Jersey cities such as Trenton and Atlantic City, which cater to the producers.

* * *

THE state and local Granges in New Jersey took an active part in National Thrift Week, which ended January 23. Programs were held in subordinate Granges throughout the state, explaining and encouraging life insurance and the making of a will. A number of excellent movements have come out of the Thrift Week idea in recent years, including school saving plans and Christmas clubs.

Dr. W. H. Whitson, Lecturer of the New Jersey State Grange, was in charge of the program in New Jersey. Life Insurance Day was January 19, and Make a Will Day was January 23.

* * *

DISCUSSION of the selection of breeding stock at the Vineland Poultry Breeders' Club early last month shows that emphasis in selection of breeding fowls is not laid on egg production alone. Prof. Atkinson said that fowls selected as breeders should not only have a record of large egg production, but should be of strong and rugged body and have standard qualifications for the breed. Proof by trapnest record is not sufficient in this day of high producers, as absence of constitutional vigor may cause the laying capacities to run out in several generations. In the Vineland area of New Jersey, nationally known for its heavy egg production, the poultrymen have already developed their average flock production on a fairly satisfactory basis. The Breeders' Club this coming year will follow a program which will give more consideration to the size of egg and the type and condition of the parents.

* * *

IN early January the Burlington County Extension Service brought together committees representing the County Bankers' Association, the County Dealers' Association and the farmers, to discuss ways and means for improving business methods in the sale and purchase of farm supplies and equipment. The meeting, held at Mt. Holly, N. J., was well attended. It was pointed out that in order to extend credit on sales of their goods, dealers in farm supplies, implements and feeds were compelled to make financing charges varying from ten per cent up. This was not given as a reflection on the dealers, but to point out the desirability of farmers paying cash or securing credit at the local bank whenever possible, where loans can be secured at the usual interest rate of six per cent. Dealers were urged to encourage cash sales by making appropriate price concessions and when billing customers on open terms to give a cash price and then add a definite and separate credit expense. This would make it plain to purchasers just how much they could save by operating on a cash purchase basis with reference to dealers. A uniform system of credit charges was likewise recommended.

* * *

THE Farmers' Roadside Market Association of New Jersey revised its rules and regulations with reference to membership, at its annual meeting held in conjunction with Agriculture Week at Trenton, January 15 to 18. A new set of by-laws is being made which will make it possible for any roadside market operator running a first-class market to become a member.

During the last few years the Association has held to very rigid requirements, which have limited its membership. However, it has done much good in building up consumer confidence in the roadside market through an honest pack and fair dealings. C. William Haines, of Masonville, N. J., president of the Association, reports a growing interest in the development of organization among roadside market operations.



Governor Moore examining the brass-hinged treasure chest of New Jersey's outstanding farm products presented to him at the State House on Wednesday, January 16, the day after he relinquished his office as chief executive of the Garden State. The polished walnut chest was given to him in appreciation of his work for New Jersey agriculture and he is probably the first governor of any state to receive such a unique gift from the farmers in a state.



Farm Products Show in Armory at Trenton, N. J.

What Is the Best Rotation?

We Are Trying to Find a Good Substitute for Corn-Oats-Wheat-Clover

By HUGH FERGUS

ON THE farm on which I was raised in Allegheny county, according to custom in the community, my father would go out early every spring and look over the timothy fields—no one in that community ever thought then of plowing down a sod for corn that had been in clover the year before—to see which one to plow for corn. From then until the field was plowed the manure was hauled out on a sled or a wagon and broadcast by hand on the poorest looking spots of the field. Sometimes these fields if they produced a good hay crop were in timothy three or four years before they were plowed up. That was the nearest our farm ever came to having a rotation.

For the past thirteen years here on Amity Farm I have tried several rotations in an effort to secure one that would give us the highest yields, the most profit in crops produced and one that would work in best to keep the labor system on the farm balanced. We are starting one next year with a rearrangement of our farm and a rotation which I hope is the one we have been looking for.

Kind of Soil

Here in the central and northern part of Pennsylvania where we have Volusia soil and several other types and where we are on one of the old glacial terminal moraines, it is hard to follow either our own State College Experiment Station's advice or that of the Ohio Experiment Station. For State College has a limestone clay wholly unlike ours. I am not sure what Wooster calls their's but whatever it is they can grow fine wheat. I do not have their figures but know their average is over 30 bushels per acre and their rotation calls for wheat. This is right too for if I could average 30 bushels I would grow wheat too.

I grew wheat several years, then cut it out two years and tried it again last year and have a crop in the ground now. The first years we rarely went over 20 bushels per acre. My best crop was 29 bushels per acre. Those of you who grow wheat know there is no profit in 20 bushels.

In the fall of 1927 I thought "We have been growing good crops of corn, oats and clover, maybe I did not try wheat hard enough, so I will try it again." I had been reading how the Master Farmers and others who produced high yields had been growing wheat, so here is how we tried and I leave it to you high producers of wheat whether we should have had a crop. We plowed the ground about the middle of August or as soon as the oats were off. The ground was harrowed and dragged with the double disk and plank drag either that same day or the first thing the next morning. After it was plowed and harrowed it was given two more double diskings and draggings before the wheat was planted. As I remember both these were after rains as soon as we could work the ground.

I sent to a reliable seed house for Penn'a 44 wheat for seed. This was seeded seven pecks to the acre about September 15th. Early in the winter before January 1st we top-dressed with eight loads cow manure and 1,500 pounds of ground limestone per acre. Oh, yes, I forgot to mention that we used about 275 pounds of a complete fertilizer, 2-12-4 I believe, per acre. Now how much wheat per acre should we have got? Well, we got 13 bushels and I believe I am safe in saying two bushels of this was foreign material and shrivelled grains. We used about the same practice on what we planted this last fall. I do not know what the yield will be, but do know it will be my last crop until I can see where I can get better yields. The experience of my neighbors is practically identical with mine. Very rarely do I hear of a thirty-bushel yield, yet almost without exception they all grow good corn, oats and clover where they apply lime.

Our farm is divided by a public road. On account of the topography there are three fields of 9, 10 and 12 acres below the road, all adjoining the permanent pasture. Above the road is one large field of 43 acres that thus far we have divided into five fields of about equal size without fences to separate them. During these thirteen years we have tried out the following rotations on the eight fields and have found some objections to all of them:

Six Combinations

1. Corn, corn, oats, clover. We manured both years for corn and had trouble with weeds the second year and the yield was never quite as good. Another trouble was from washing. Then the corn borer cleanup took a lot of work. This rotation too did not balance the labor system and held down our hay crop.

2. Silage corn, wheat and clover. We tried this rotation only a couple of years when we were depending on the custom silo filler. We already had enough work at corn harvest without having to stop and put in a crop of wheat.

3. Corn, oats seeded to sweet clover for fall pasture. In November or early December this was plowed up and seeded to oats the third year. The oats was used as a nurse crop for the common red and alsike clover the fourth year. In this rotation we had some good pasture in the fall from the clover. I do not know whether manure on the corn, oats put too much nitrogen in the ground or whether the first crop of oats took too much potash out of the soil. Anyhow the oats the second year went down so badly that we had to abandon the rotation.

4. Corn, oats, wheat, clover. This I believe is the rotation usually recommended by both Pennsylvania and Ohio Experiment Stations, if one can grow wheat profitably. We cannot, so have eliminated it.

5. Corn, oats, sweet clover for pasture. We intended using this rotation in the three fields below the road that adjoin our permanent pasture. We have been running it two years and have the sweet clover seeding for pasture next spring. We intended running this rotation in these three fields and were going to try the following rotation in the five fields above the road:

6. Corn, oats, clover, wheat, clover. In the corn, oats, sweet clover rotation we had so much trouble with the sweet clover freezing out the first two years in winter, and already it has done it this winter, so that next summer we will have to do as we have done the past two, viz, cut it for hay. Enough of the sweet clover lives over winter to make "mean" hay. The hired men and I have nicknamed it "brush" hay. The cows do not like the coarse stems. When we throw them out in the manure I believe they are harder to run through the manure spreader than corn stalks.

Future Plans

We have run these various rotations on eight fields. Now I am planning to rearrange the five fields above the road into three fields of eighteen, thirteen and twelve acres. We will run these three with the nine, ten and twelve-acre fields below the road in a rotation of corn, oats and the two common clovers, red and alsike. This will give us approximately twenty-five acres in each crop.

Twenty-five acres of first cutting hay will give us plenty of hay. In order to get the pasture I have been trying to get with sweet clover we will cut the clover first in one of the fields below the road adjoining the permanent pasture. Instead of cutting the second crop for hay we will pasture it, and if we have any on the field above the road it will be cut for hay.

We usually do all the plowing for oats in the fall and a good part of the sod for corn, so that our spring work will be pretty well balanced without crowding. The hay crop will be out of the way before oats harvest. Then oats harvest will be over and we will have time to get the manure hauled out that accumulates after the spring work starts and in the summer months, before we start the corn harvest in the fall.

Beavers Are Expert Engineers

By N. S. GRUBBS

ONE often hears of the work of beavers but seldom do we find such perfect engineering of small dam building as is illustrated in these photographs.

A colony of busy beavers in Potter county, Pa., selected a convenient spot by the road-side in a dense wooded section of the country in which to build their dam, build their home and lay in a supply of tender underbrush for their winter's food.

I have lived in forests as a ranger for months at a time and have hunted, camped and traveled through wooded sections, but have never seen the equal of this beaver dam. It was of unusual interest in regard to efficient dam building as well as to observe the wonderful habits and life history of these queer creatures of the woods.

The stream was like many other mountain streams, but the dam, when in operation, behaved as well, if not better, than a man made structure. Their little hut was up-stream from the dam about fifty feet, and was surrounded by a large quantity of brush placed there for winter food. The hut was about half under water and half exposed above water, but covered very thoroughly with a mud covering that made the roof watertight and, no doubt, insulated the interior against freezing temperatures.

The beavers are without doubt a busy group of wild animals and above all are interesting to observe. An active beaver dam is worth going miles to see.





Left—Stubs of trees and brush cut by the beavers for the dam. They are skillful lumbermen as well as engineers.

Above—General view of the Beaver Dam in Potter county which Mr. Grubbs describes in the accompanying column.



Jack-in-the-Pulpit or Indian Turnip Corm or Bulb That Lives over Winter

How Animals and Plants Spend the Winter Months

By DR. E. M. GRESS,
Pennsylvania State Botanist

THE winters of Pennsylvania become very cold; sometimes the thermometer falls to more than 30 degrees below zero. Animals, including man, and plants cannot stand such low temperature without protection of some kind. Many people run away from this extreme cold. They may go south to Florida, west to California or to some other warm place. Those who cannot do this must wear warm clothing and live in heated houses.

Most of our birds migrate to the warm South; those that do not grow a heavy coat of warm feathers and seek shelter in wooded ravines and protected places. Animals that cannot travel long distances must seek some kind of protection. The frogs and turtles bury themselves in the mud at the bottom of a stream or some moist place. Snakes creep into openings in the warm ground.

Among the mammals, the raccoon and gray squirrel sleep in some warm place during the severest part of the winter. The skunk usually spends January and February in his hole in the ground. The bear, especially if food is scarce and the temperature very low, scoops out a den under a log or among the roots of a hollow tree. The woodchuck, which in Pennsylvania is commonly called groundhog, is the most profound sleeper of all of our mammals. He goes into his burrow about October first and does not come out until about the first of April, notwithstanding the fact that superstition tells us he comes out on February 2, or groundhog day, when, if he happens to see his shadow, he will go back and remain for six weeks more.

All of these animals eat nothing while they hibernate. They breathe very slowly which causes the fat stored in their bodies to be consumed slowly and their temperature to fall below normal. In the spring, when the temperature rises, they emerge much emaciated and begin to search for food, of which they eat an abundance so as to store up a surplus of energy in the form of fat for the next winter.

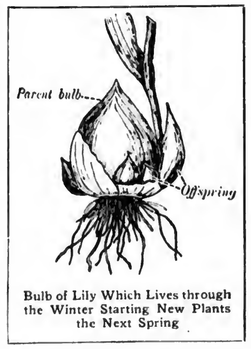
Among man's enemies the greatest are the insects. Indeed they multiply so rapidly that if it were not for his reasoning powers the insects would no doubt subdue man in his struggle against them. The mosquito, as a carrier of yellow fever, prevented for many years the building of the Panama Canal. The slogan "swat the fly" has saved thousands of human lives by preventing typhoid fever and other diseases. And now in our state we are in a fierce warfare against the Japanese beetle, the corn borer, the Oriental fruit moth and other injurious insects. All of these insects and thousands of others are abundant in the summer, but where are they in the winter?

Away from the Cold

Each kind of insect has its own peculiar method of spending the winter. Only a few of the insects are long-distance fliers, and therefore do not migrate to warmer places. It is known, however, that the monarch butterfly travels southward in autumn and northward in spring.

The house fly spends its winter chiefly in the pupal stage in its filthy habitat, where it can withstand the freezing temperatures of winter. The adult potato beetle, commonly called potato bug, digs deep into the warm ground, coming out the next spring to lay its eggs on the under side of the leaf of the potato plant. The periodical cicada, which is known as the seventeen-year locust, lays its eggs in the twig of some shrub or tree during the summer. In five or six weeks the egg hatches out into the nymphal form, which enters the ground and feeds for almost seventeen years on the roots of trees, shrubs and other plants. These nymphs or larvae grow slowly and molt, or shed their outer skin, occasionally. In seventeen years they come out of the ground crawl up a tree or some other object, split their outer skin up the back and crawl out as an adult cicada.

Who has not seen the warm silky cocoon of some of our beautiful moths, tucked away in some protected place for the winter? Perhaps you have brought some of these into a warm room, and seen the beautifully colored moth emerge in the spring. Many of the injurious insects which attack the flowers, vegetables or field crops during the summer, and which cause us expense and trouble, are snugly protected during the winter among the weeds and rubbish that should have been burned or otherwise disposed of the previous fall.



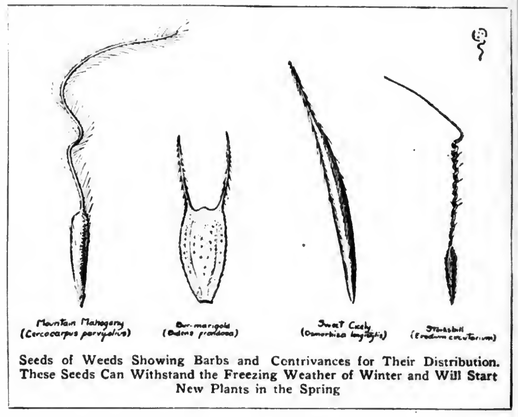
Bulb of Lily Which Lives through the Winter Starting New Plants the Next Spring

Plants, like animals, are living things and are affected also by the severe winter temperatures. They too have ways of protecting themselves, which are not so obvious and well known as those among the animals. They cannot wrap themselves up in furs or turn on the radiator or hie themselves off to Palm Beach, but must remain rooted to a definite spot.

Although the protoplasm, or living matter of plants, is as sensitive as that of animals, yet this sensitivity is not so apparent in the plant, because most plant cells, unlike animal cells, are surrounded by a firm cell wall which makes the plant more rigid, less active and much slower in adjusting itself to changing external conditions. Nevertheless the plant must adjust itself to the changing conditions of moisture and temperature, or it will perish just as surely as will the animal that does not get water or that cannot protect itself against the extreme cold of winter.

This necessary adjustment has led the plants to some very interesting adaptations and behavior.

Man sows the seed in the spring, cultivates and protects his crop during the summer, and harvests and stores it for food during the winter. In a similar way the tree and the shrub absorb moisture and food material from the soil and air, and work throughout the summer to manufacture these raw materials into starch, sugars, proteins, fats and other food products. These food products are not all used during the summer, but a great amount of them is stored away for the winter and to start growth the next spring.



Seeds of Weeds Showing Barbs and Contrivances for Their Distribution. These Seeds Can Withstand the Freezing Weather of Winter and Will Start New Plants in the Spring

New Leaves Protected

If one will examine a tree sometime in August he will notice that the winter buds are being formed. These buds are among the first sign of protection for the winter. The leaves for next summer are carefully folded and tucked away in these buds. So young and tender are these tiny leaves, that freezing weather would soon kill them if they were not protected in some way. This protection consists of a hard outer covering of scales. In most buds these scales overlap each other like shingles on the roof of a house, thus protecting the buds against the entrance of external water and from the evaporation of the moisture which they contain. These bud scales usually offer further protection by forming on the outside a varnish-like covering or in some instances a dense felt-like growth of hair.

A second noticeable behavior of our deciduous trees is the shedding of their leaves on the approach of cold weather. On the under surface of the leaves are thousands of tiny openings through which the excess water brought up from the roots may escape during the summer. If these leaves were to remain on the tree during the winter and continue to evaporate water as they do in the summer the plant would die of thirst, for when the ground is cold and frozen the roots absorb but little water; therefore, the leaves transfer all their food products to other parts of the tree, change their color, and drop off, leaving a small scar which is sealed so as to prevent the escape of any moisture during the winter.

But what do such trees as the pines, spruces and hemlocks which retain their needle-like leaves do to protect themselves against the rigors of winter? While these trees do not drop their leaves, they too have their own peculiar behavior. The food products in these leaves undergo a unique chemical change. The starches and other products that would be frozen are changed into sugars, oils and such foods that will endure extreme cold without freezing. In addition, the outer covering of these needles and the tough leaves of such evergreens as mountain laurel and rhododendron, become very hard, thus offering protection to the moisture and more delicate materials on the inside.

Some of the trees that drop their leaves in winter even undergo some of these chemical changes, which explains why such trees as the poplars and birches, along with the pines, spruces and firs are the only trees that are able to endure the extreme cold of the far North.

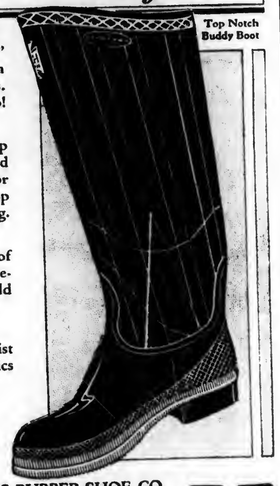
How do the small plants that we find growing by the road-side and in the fields and woods spend the winter? They too have their own peculiar method of protecting themselves.

Some of these small plants work hard during the entire summer to manufacture a large amount of food which they store in some underground fleshy root or bulb. Most of our very early spring flowers spring from such roots and bulbs. The bulbs of crocus, snow drop, tulip, hyacinth, jack-in-the-pulpit, or Indian turnip, and many other plants sleep snug under a cover of five or six inches of soil.

Other plants like the dandelion and burdock form buds in the fall which nestle close to the ground in the center of a cluster of leaves. These tender buds for the next season's growth are pulled down a little below the surface of

(Continued on page 48.)

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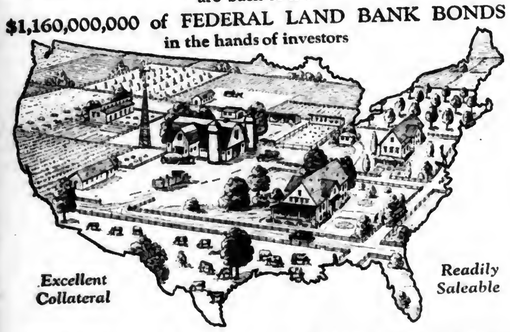
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What Our Readers Say

A Remedy for the Surplus

POTATO farmers have overdone the job again so much so that they have to sell their product below cost. They have used every means to produce—high-priced seed, enormous quantities of fertilizers, cultivating and spraying up to digging time. Potato farmers have learned to produce heavy yields. All professional potato growers have invested heavily in equipment and hence will not likely quit the business of potato raising, but on the contrary will raise more and more to the acre so as to raise the crop more economically.

Now as I look at it, it will hardly pay the common farmer to raise potatoes for market. Why not cut down on such crops which require so much labor and have no returns for your labor? Why not put more land in pasture and raise stock and take it a little easier on the farm? If more farmers would do this the price would soon come to normal or a living price.

More Land in Pasture

As for me, I have put about one-fourth of my land in permanent pasture, and I like it very much. I raise cattle in somewhat "western" style. I let the calves do the milking and when the season is over the calves are almost as big as the cows. Anyway they are worth from $40 to $75 a head. I have been buying calves from the dairy farmers who are glad to sell them at ten to fifteen dollars a head. These I like to buy in the fall or early winter so as to get them well started by spring and thus get the full benefit of the season's pasture. Of course it is some work to raise them this way, but it pays. After they are turned on pasture the labor is very little, and in about twenty months they are worth something.

I have followed this plan for the last two years and have public auction with cattle which I expect will bring me some real money.

We have one farmer in Berks county who purchased 600 sheep and he wants to do the sheep business in "western" style—and why not? Nowadays people have to go east to get land cheap—just opposite to what it used to be. Good farming land with good buildings can be bought for $50 per acre.

Yes, I think there are wonderful opportunities right here for the wide-awake young farmer who thinks for himself.

C. R. Bashore.

Berks county, Pa.

The Tide of Time

I DO NOT know whether such thoughts as these will be of interest to the editor of Pennsylvania Farmer, but they may bring back cherished memories to some of its readers who have passed the age of three score and ten.

When I was one year old my father died. I cannot tell here of the struggles and of the ups and downs of my courageous, thrifty, hard-working mother who with four small children was left with a farm and a few implements.

Until eight years ago I lived on and farmed that one hundred and eighty acres of the best land of Westmoreland county, Pa. I think I read The Stockman nearly as long as it was published and years ago occasionally contributed to its columns. In 1921 we moved here to a town in another county. While I am fairly well contented yet every day my thoughts go back to the farm and the work we did. Night after night I dream I am harvesting hay, threshing, feeding cows, or driving one of my fine teams.

Last night I got out the book we used at singing school fifty years ago. My daughter played, and for a while we sang from the yellow, dog-eared pages of the "Conqueror", "Song King" and "Song Garner" the songs I always liked best. Many of the old timers will be familiar with these songs.

As I sit here in front of my warm grate fire a whirling blizzard is raging and howling outside. A while ago I thought I heard sleigh-bells, but it was only the clink of the chains of a passing automobile. The thought of the bells, too, reminds me of long ago. On just such an evening as this the singing school was most enjoyable. After the chores were done and we had lapped our supper of mush and milk, we dressed in our coarse, warm clothes and listened for the sound of bells then we hastened to pile into the first neighbor's sled that was bound for the schoolhouse.

The schoolhouse was packed from corner to corner. The whole neighborhood, old and young, was there. We always began by singing "Greeting Glee". It was followed by "Over the Tide of That Jasper Sea", "They That Trust in the Lord", "Summer's Going", "Nearer Home", "Serenade", "Merry May", and many others. Even as a boy I was impressed with these lines of "The Tide of Time":

"Leaves are lost, the strong grow weary
Floating down the tide of Time".

We always closed with "Good-Night". Then teams were unblanketed and we started home singing all the way. My brother and I went upstairs by the light of a grease lamp and tumbled into bed in a fireless room of the old log house.

I now have comforts and conveniences which I never dreamed of then, but I would give them all up if I could go back and live it all over again.

John R. Steele.

What Shall We Believe?

IN Pennsylvania Farmer of January 19 Mr. Zinn discredits rye as a cover crop because the bacteria necessary for breaking down this rye cannot get a sufficient amount of nitrogen out of the rye to maintain their bodies while doing the work and must draw from the soil, thus rendering the soil less productive. He recommends legumes to be turned under instead of rye, with which I think all will agree, provided the legumes will grow on the soil.

I am wondering if the same objection would not apply to the legumes if turned under. If a heavy crop of any kind is turned under it will not grow a good crop until it decays.

A number of years ago a farmer of my acquaintance proposed to turn a heavy crop of clover under and plant to corn. I told him that I feared his corn would be a failure but asked him to let me know the result of his experiment. The result, as he reported it to me, was that he did not grow ten bushels of corn to the acre.

I know a farmer who turned an old worn-out field that would not have grown any profitable crop of itself. He sowed it to buckwheat early in the season with a light application of fertilizer. This was turned under when it began to ripen and when it grew up was turned again and a winter cover crop put on it. With fertilizer he grew a good corn crop and put the land to wheat the next fall with an application of lime and fertilizer. The result was that he grew an excellent crop of wheat while his neighbors failed on wheat that year.

Should Be Plowed Early

Prof. Hunt says, in "Cereals in America": "On account of its hardiness and its ability to grow on poor soil, rye makes a good crop to grow for plowing under to increase the organic matter in the soil." He says further on, "Care should be taken, however, to plow the rye under early in the spring before it has made too much growth, lest it exhaust the moisture from the soil and thereby reduce the subsequent crop."

Granting that this new theory is correct and that the bacteria does draw on the soil for nitrogen and thus render the soil temporarily less productive, it seems to me that if a legume cannot be grown we might afford to allow the soil to furnish some nitrogen to add humus to the soil. We have been taught that the breaking of the connection with the subsoil is the cause of soils being rendered less productive by turning under heavy crops, and since both legumes and non-legumes seem to act much the same way it looks as if neither furnishes sufficient nitrogen for the decomposing bacteria, if the theory is correct.

I note that Mr. Zinn has two witnesses to the success of sowing alfalfa with wheat. I think the season and the locality would have something to do with the success of this method. I saw alfalfa in Fairfax county, Va., blooming in August. It was from two to three feet high. The owner told me that this was the result of his sowing herds grass (redtop) and alfalfa with his oats the spring before. He also said that he had never sown alfalfa before on his farm and that he had not inoculated the seed. I would not have expected success with alfalfa under these circumstances. A. J. Legg.

Cross and Gentle Bulls

THE Pennsylvania Farmer in reporting casualties from cross bulls does a splendid service in refreshing the minds of stockmen of the great danger in not using precaution in handling them.

One of the safest things on the farm is a cross bull. With him you are always on guard and don't take chances. The most dangerous thing is the pet bull that you lead around with a string, he is the fellow that will take you unawares.

On the farm are many accidents that seem unavoidable, but it seems so useless to be hurt by a bull. I am careful to have our boys read of all accidents reported in Pennsylvania Farmer caused by careless handling of bulls.

Norman C. Maule.

Lancaster county, Pa.

Taught 30 Years in County

WHEN I began teaching school in the year 1899, I received the commodious sum of $20 per month, and at that time we had a five-month term. That aggregated me just $100 for the term. Besides this, we were compelled by law to attend some teachers' institute within the state for five full days without any compensation whatever.

Of course, cost of living was then not so high as it is now, but still we were not fortunate enough to get our bed and board free of charge. The prevailing price for board then was $5 per month.

In those days we were licensed to teach in the public schools by the County Superintendent of Schools and two assistants who held a number one certificate. These three persons prepared the examination questions, held the examination, then graded the manuscripts, and issued the following certificates: first grade, second grade, and third grade.

The teachers were paid according to the grade of their certificates as follows: first grade, $25; second grade, $23; and third grade, $20 per month. Because of the meager salary many persons chose some other vocation that commanded a higher salary.

I met with one of my old teachers several years ago, and asked him why he gave up teaching school. He answered, "I would have starved had I kept teaching." Today he is a good salesman, and of course has plenty of money at his command. I have known some former teachers who have spent a great deal of their life work in the school room, and when life's pilgrimage was over they had not accumulated wealth like the Goulds, Vanderbilts, Rockefellers or Ford. The fruit of their work has gone out and has proved an asset to mankind. "A good name is rather to be chosen than great riches."

Since thirty years ago a great many changes have taken place. Higher wages are paid and longer school terms inaugurated. So today we have teachers who are still looking for the job of teaching, but when the schools are all taken up of course they must seek other employment.

Teaching today in Pendleton county, W. Va., ranks well among the other occupations.

I have attended thirty consecutive teachers' institutes at Franklin, W. Va., without a mark or blemish to my record.

I am also teaching my thirtieth consecutive year in the schools of my native county. During my period of teaching I can find but three full days of substitute teaching—one for me, one a year did I lose less than five months, nor more than two months.

John Dahmer.

The Strenuous Producer

THE farmer wants more money for his product so that he can produce more to earn more money to help him sustain his rightful position as an American citizen. Surplus or no surplus he's just the same as any other manufacturer. He has the factory and the equipment and he's going to keep it in shape and produce to the best of his efficient ability.

Production is his existence. Produce he will, come what may. And, although he may diversify his product in order to enrich his soil and to obtain better prices for his product, forget not that the ultimate aim of the good farmer is increased production for increased earnings; has been, now is, and evermore will be.

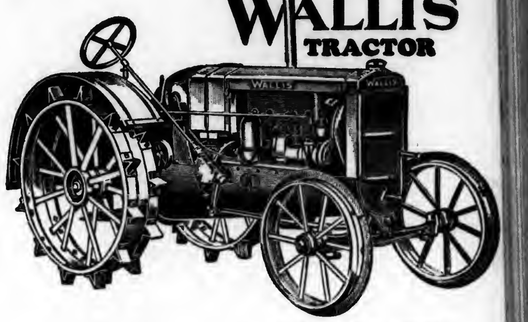
Two blades of grass now grow where one grew before, and one may be surplus; that's his business. He'll risk it. Bumper crops may mean bumps for the agriculturist; he'll chance them. Whatever steps are taken towards agricultural aids must ever hold in consideration the fact that the farmer assisted by legislation, organization, science and improved machinery will be constantly and consistently laboring to produce more and more and his production, at its source can never be controlled.

S. H. Green.



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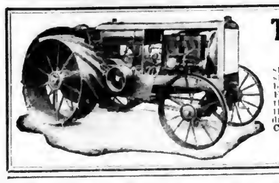
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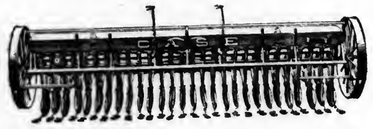
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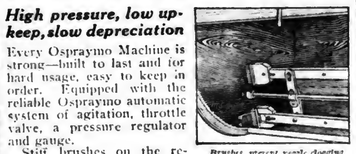


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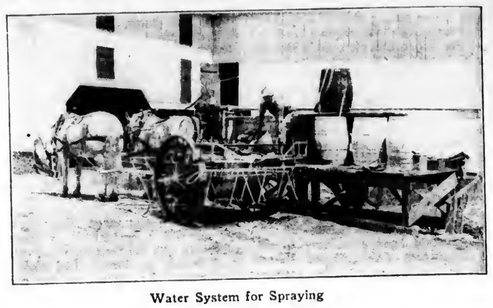
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Water System for Spraying

Waterproof Concrete and Stucco

By R. U. BLASINGAME

THE popular belief that it is necessary to use some add-mixture in order to make concrete waterproof is an error. To make concrete waterproof is a simple matter. Impervious aggregate (stone and sand) suspended in a water cement paste, which in itself is impervious, insures water-tight concrete.

An impervious water cement paste is made with 6¾ gallons of mixing water per bag of cement. The 6¾ gallons of water includes the moisture in the aggregate, especially sand, and for such mixes amounts to about 1¾ gallons. Hence only 5¼ gallons of water should be added at mixer per bag of cement.

It is understood that this concrete must be kept damp for at least three days after placing in order that the water, mixed for hydration of the cement, does not evaporate. In order that the aggregate (sand and stone) be suspended it is necessary that the concrete be plastic and workable and flow readily into all corners of the form. If too much aggregate is added to the impervious paste it cannot be suspended, and if too little aggregate is used segregation will result.

Faulty Construction

Dampness in residences is usually the result of faulty construction. Oftimes masonry walls are plastered direct, furring and lath being dispensed with. This usually results in dampness due to the condensation of moisture on the inside. Walls are cold and the interior of the house is warm —the result being precipitation on the interior surface. This is true in all types of masonry with the possible exception of cinder block masonry.

In some localities it is the practice to place stucco on lath without the use of a water-proof paper between the sheathing and the lath. This is quite apt to result in dampness particularly if the stucco is of poor quality. If the stucco, however, is made according to the American Concrete Institute's standard specifications, and proper opening details are used, the job will probably be satisfactory even though the paper has been dispensed with. In the case of poor stucco work it is possible to use both colorless and colored waterproof paints—either water paints or oil paints. Such materials are made by several companies. Silicate of soda is often effective as a waterproofing agent on stucco.

Use of Water Glass

Sodium silicate (water glass) is extensively used as an adhesive in commercial manufacturing. It is also recommended by the manufacturers for use in curing fresh placed cement. In lieu of moist curing it does not, however, show as good results as curing with water. When used as an add-mixture in concrete its only function is to glue the cement, sand and stone together and show a slight, high, early strength due to the gluing action. Tests at the Structional Material Research Laboratory show that silicate of soda as an add-mixture reduces the strength of concrete at later ages.

Silicate soda does have an important use as a hardener for concrete floors which are soft and dusty due to improper construction and lack of sufficient water curing.

Several applications of silicate solution are applied to such floors until all the pores are filled. The resulting floor will be satisfactory although it may be necessary from time to time to apply the silicate.

Water System for Spraying

MANY potato growers have found that they can pump water for spraying potatoes cheaper than it can be hauled in the sprayer. A small, inexpensive pump can be placed at the stream, spring, pond or well, and a pipe line laid on top of the ground running up to the potato field.

The illustration shows a water system of this kind used by Mr. C. A. Keppler, one of the four-hundred bushel potato growers in Centre county, Pa. On the lower platform Mr. Kepler has several barrels containing copper-sulphate or bluestone and slaked lime. He can dip the copper-sulphate and lime out of the barrels and pour it into the sprayer.

This platform is built at the height of the axle of the sprayer. Adjoining this platform is another which is built a little higher than the tops of the barrels on the lower platform. On this higher platform a barrel or tank is placed which receives the water from the pump. The water flows by gravity from the higher platform into the copper-sulphate and lime barrels, therefore requires no handling. And also, the water will flow from the barrel on the upper platform into the sprayer by gravity.

Different conditions require different types of pumps. Pumping water is very much cheaper than hauling.

The Exploding Wedge

A MANUFACTURING company has announced the invention and perfection of what is known as the "exploding wedge". This device is used to split logs. The wedge is first driven into the log and then loaded with a little less than two ounces of black powder. This amount of powder will cost about two cents. Then a fuse is located in the powder and is set off by lighting the fuse with a match just as is commonly done when using dynamite. The wedge is provided with an exploding chamber which allows the full force of the exploding powder to split the log. One of the leading manufacturers of explosives has approved of this device for splitting logs.

R. U. B.

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Bend — twist — stretch — rub — pound! All the friction and the thousand strains that you would give to a rubber boot or overshoe in months of roughest wear. are given by testing machines in our factory, in hours — even in minutes!

A SECTION of the rubber that makes the sole and heel of a boot is put into one machine. It is rubbed to and fro at terrific speed. Not a hundred times an hour, as you might rub it in use. But a hundred times a minute!

A strip of the rubber that makes the leg of the boot is stretched—stretched — stretched. This is to make sure it is really "rubbery"—elastic yet strong. In a few seconds it is given more pulling and stretching than you would give it in a month.

Another piece of rubber such as goes into the toe and instep is twisted —bent—twisted again and again, until it's strained far more in ten minutes than you would strain it in ten months.

You would be astonished at these tests. It's as if a giant farmer put on a pair of Goodrich boots and—like the giant who walked seven leagues at a step—strode through a whole year's wear in a single short afternoon.

These tests assure you of good value when you buy Goodrich footwear. Look for the name Goodrich. It is plainly stamped on all our boots, overshoes and rubbers—the honor mark of a great company.

From sturdy boots, overshoes and work-rubbers for men and boys to dainty stylish Zippers and rubbers for women and girls, the Goodrich line of tested rubber footwear meets the needs of every member of your family. *The B. F. Goodrich Rubber Company, Akron, Ohio.*



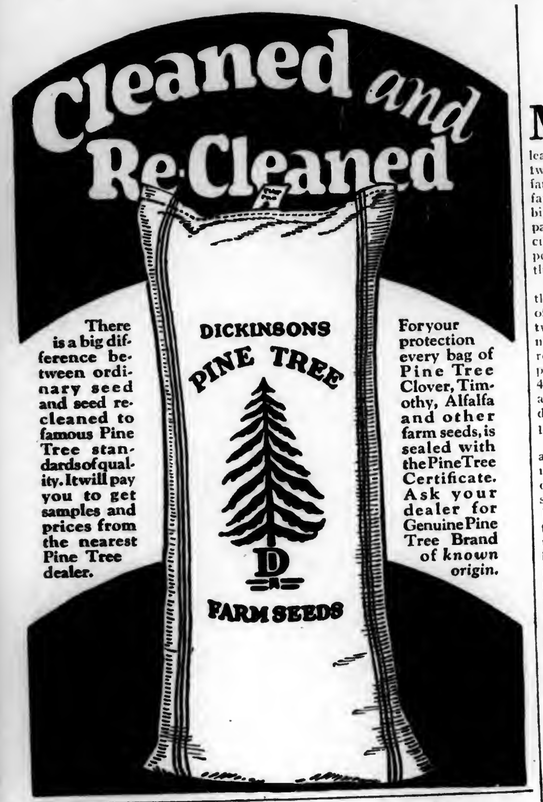


A favorite with farmers — this brown Goodrich boot with white sole. Sizes, boys' to men's. All lengths, knee to hip.

This sturdy Norka comes in black with white or brown sole. Unrivaled for heavy wear.

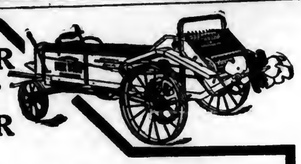
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Woodbine Farm Sold

By W. D. ZINN

MANY of our readers will be surprised at the heading of this article. My father died in 1876, leaving to his seven children and widow two farms, one called the River Hill farm containing 138 acres and the home farm containing 154 acres. Woodbine consists of 93 acres which was part of the 154 acres. But for a security debt of about $3,000 my father's personal property would have more than paid his debts.

The river hill farm was assigned in the partition of the two farms to two of the heirs, they being required to pay two-sevenths of my father's indebtedness. The home farm was given to the remaining five heirs, but from these parcels was cut off the widow's dower, 45 acres including the house, and in addition one-seventh of my father's indebtedness was charged against each parcel of land.

My youngest brother was given 25 acres which was by far the most valuable part of the farm. This brother died while a boy and his share was sold in front of the court house door. It brought $901 and the writer became the owner. This meant if the entire farm of 154 acres had been sold it would have brought $4,500 subject to the widow's dower. The taxes on this entire farm were $20.79 in 1876. In 1928 the taxes on Woodbine alone were $181.50.



The question in which most of my readers are interested, no doubt, is what Woodbine brought. It was sold for $25,000, including the farm machinery. This was estimated at $1,000. It was worth more than this to the purchaser, but it is doubtful whether it would have brought this at auction, for most of it had been in use from ten to twenty years.

Reasons for Selling

This farm was not sold on the spur of the moment. Wife and I had been discussing the advisability of doing so for several years. We have only two children and neither of them would ever want it for a home.

The purchaser when dealing for the farm said as one of his talking points that he could not make six per cent on the money invested in the farm. In reply I stated that I had over $11,000 invested in property in town on which I got no dividend in money, but I got a large dividend in pleasure in living in a home with all the modern conveniences. Deducting the value of this property, $15,000 as a home from the $25,000, he would be able to make a very large percentage on the investment. This property had lost its value to me and my wife as a home and therefore we believed that the sale value invested in government bonds would bring us more revenue.

There was another very substantial reason for selling the farm. Ever since we left the farm the buildings and fences had been gradually going down. This is not said as a criticism against those who have been renting it, as no renter will keep up property like the owner who is going to live there. Things look pretty and [illegible] hunt. I have frequently said that it was a difficult matter to [illegible] and that was an [illegible]

Sentiment

Say, says one, "I wouldn't have thought you would have hated to sell the farm that his grandfather and father had owned and that he was born and reared on." He is telling the truth. I confess that I kicked the sheets a few nights after the deal was consummated but before the deal was made it was carefully considered and we thought it then and we still think that it was the wise thing to do.

The old saying is if one makes a good deal the other must be the loser, but this was not the case in this deal. My good neighbor, Lloyd Burner, was the purchaser, and let me say to his credit that he paid cash or its equivalent for the farm. He has got a great bargain in this farm, for it takes him off a very bad dirt road that he cannot drive a car over in the winter and places him on a paved road and in one of the most up-to-date, modern country homes to be found in any rural community. On the other hand it was a good deal for the writer, for it gives him as much income as he could have had from the farm and at the same time relieves him of a lot of worry.

A great many farms are being sold today to pay off the mortgages on the same and for fear that some of my readers may think this farm was sold for that reason I want to say that we have no creditors, though at one time our land and personal property would not have paid our debts. We still have two farms of over five hundred acres in both and that will give us an opportunity to be kept busy which we shall always crave.

From a letter written by a Pennsylvania friend I copy the following: "I have been reading your writings for 19 years and I want to say that I am a better farmer because I have read after you." The greatest joy I am getting out of life today is not the fact that I am out of debt, though I do appreciate that, but it is the hundreds of letters like the one from which the above clipping is made. I hope now to be able to give more time to serving my friends. We have on the farm 130 cattle and these will be sold at public acution on Thursday, March 28th.

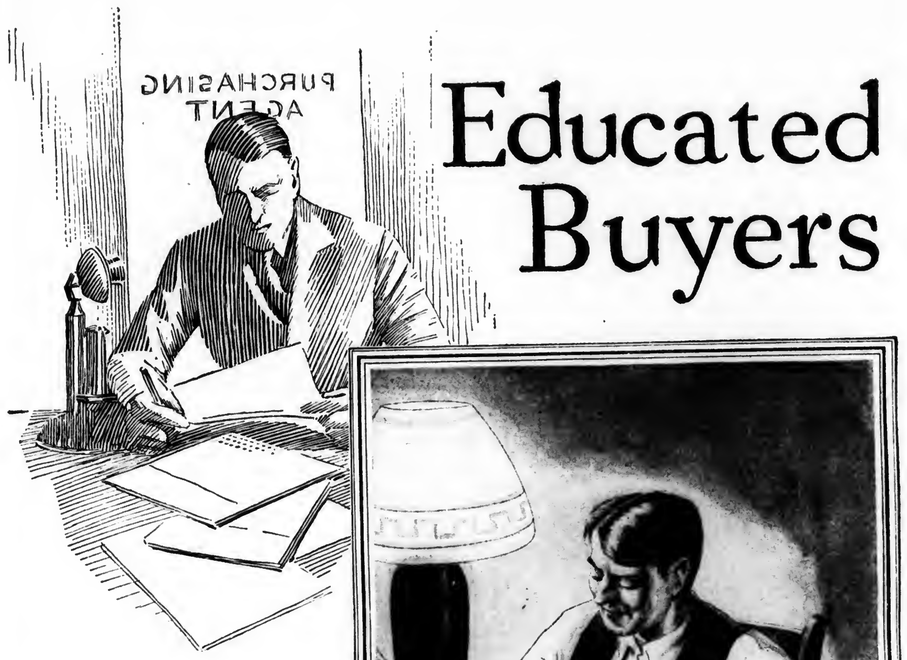
Marl or Ground Limestone

A West Virginia reader asks me to compare marl with ground limestone. The value of any form of lime depends primarily on the percentage of calcium carbonate it contains and its fineness. That is to say, if marl and ground limestone containing the same percentage of calcium carbonate and were equally fine one would be worth just as much as the other.

In former years ground limestone was coarser than marl, but that is no longer true. Some lime plants grind the stone into powder, just as fine as any marl, but all plants do not do that. One reader says he can buy lime marl for $1.80 per ton and ground limestone as fine as powder for $5, and asks which he should buy. I am unable to answer the question without knowing how coarse the marl is. If the [illegible] is [illegible] I would guess the marl was the cheaper assuming, of course, that the calcium carbonate were the same.

Harland C. Thatcher Dead

THE death of Harland C. Thatcher removes from Berkeley county, W. Va., one of her most progressive farmers, dairymen and fruit growers. A quarter of a century ago when the writer first went to Berkeley he met the Thatcher Bros. and at once formed a friendship for them that has remained [illegible] These boys were [illegible] every good [illegible] I can remember that I ever attended a meeting in this county at which I did not meet the Thatchers. If I return to Berkeley I fear I would find so many of my old friends gone that I would almost feel I was [illegible] strangers. I have fond recollections of my many happy visits to Berkeley county.



Educated Buyers

PROFESSIONAL buyers for big business institutions have to know value. They spend millions of dollars and they must get their money's worth. That's what they get paid for.

To know value, these men must study constantly, read catalogues and specifications, collect samples. Guessing loses money and they cannot afford to take a chance.

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A good place to begin studying quality is in the advertising columns of this paper. Here you find sound, tried concerns who not only have something good to sell, but who are willing to place their story before the public. An advertised product must be good. The advertisers in the columns of this paper are sound and trustworthy and their goods give you your money's worth.

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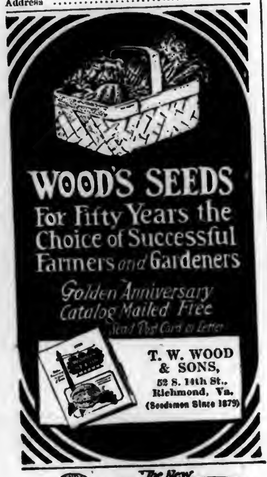
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Unfermented Apple Juice

By S. W. FLETCHER

DURING the recent Horticulture Week at State College, Howard Ingerson of Chardon, Ohio, manager of the Bingham Orchard, gave his experience in the preparation of unfermented apple juice. He finds it profitable to use all his cull apples for this purpose. By a cull he means only small or off-color stock, not fruit with rot or worms. Cider made from rotten or wormy fruit will not keep. Any salable fruit that will not bring over seventy-five cents a bushel at the farm is converted into juice. The best drops go into the fresh fruit market. The apples are stored tree run (rots and worms out) in a common storage; they are sorted and the culls made into cider through the fall and winter, as the trade demands.

The first principle in making high-quality cider, or unfermented juice, is cleanliness of fruit and of apparatus, in all operations. Old pomace or mould will destroy the flavor and affect the keeping of the juice.

The apples are first washed under a high-pressure spray. From the press, the juice goes to large storage vats for settling. This is a very important point, which has been overlooked by many who have attempted to make unfermented apple juice.

Must Settle before Pasteurizing

If the fresh juice is pasteurized at once it will be clear for a while, but is almost sure to become cloudy. It should settle for three or four weeks. This means either that a refrigerated room is available, to keep the juice from fermenting, or that the pressing is not done until cold weather. In warm weather it is desirable to keep the temperature of the storage room at twenty-eight degrees. Mr. Ingerson finds it more practicable to defer pressing until cold weather.

After settling, the juice is siphoned off into a 200-gallon mixing tank, provided with a steam jacket and agitator. To each two hundred gallons of juice is added forty pounds of a very finely divided clayey product, somewhat similar to chalk, called supercell. This is inert material and does not flavor the juice; it acts merely as a filter.

The juice is heated to 160 degrees, with agitation at all times. It is then pumped to a filter press, which is a series of wire mesh dividers with heavy canvas cloths over them. The juice is pumped through the supercell layer, or filter cake, that accumulates on these cloths, until it is perfectly clear.

While still at a temperature of 160 degrees, it is put in bottles or jugs, which previously have been sterilized with live steam at 180 degrees for fifteen minutes. The jugs are sealed immediately, and laid on their sides in storage.

The loss from fermentation has been less than two per cent. The juice can be kept in storage for sale the next summer and fall, but it is not wise to keep it over to the second season, as it loses color and becomes cloudy. Shipment may be made in cases that hold four gallon jugs or six half-gallon jugs. It is customary to charge twenty-five cents for each jug, to be rebated on return.

The cost of Mr. Ingerson's outfit, which has a capacity of one thousand gallons a day, was around $15,000, to which should be added the cost of the building which was $8,000 more. It takes care of the cull fruit of an orchard of 40,000 trees. This is a very heavy initial investment; the overhead is a large item in the cost of making unfermented cider.

He finds that he can sort, wash, press, pasteurize and bottle for four cents a gallon (for labor only) when using not less than 1,000 bushels of apples at a run. Gallon jugs cost eleven cents each by the carload. The smallest outfit available for a fruit grower costs about $1,500, to which must be added the cost of housing, power and steam.

Average Profit

Mr. Ingerson finds that he cannot get seventy-five cents a gallon for unfermented juice, wholesale, as he had hoped, when fresh cider can be bought for fifty to sixty cents. He now sells for fifty cents wholesale and sixty cents retail, which gives a reasonable profit. A fair statement of cost per gallon is:

Overhead	3-10 cents
Labor	4 cents
Package	14 cents
	21-28 cents

This gives a net of twenty-five to thirty cents a gallon. With three gallons of cider per bushel of apples the net is around seventy-five cents a bushel for the fruit.

Pasteurization does change the taste of the cider; it cannot truthfully be claimed that it has the same flavor as fresh cider. Nevertheless, people will buy it readily, at sixty cents a gallon, when fresh cider is not available, but prefer fresh cider when it can be had.

The farm manufacture of unfermented apple juice, in the opinion of Mr. Ingerson, is profitable only for fruit growers who already have a good market for fresh cider. They will find it best to make most of their cull apples into fresh cider in season, and to use the pasteurized product to supplement the fresh juice, and extend the season. His advice is, "Never pasteurize cider if you can sell it fresh from the press."

Flavor and Aroma

The sale of unfermented apple juice, however, cannot be expected to increase rapidly until a means is found to make the product taste like fresh cider. Possibly the "vacuum" process will accomplish this. It is the heat that removes the flavor and aroma of the fresh cider, and a high temperature is not as necessary with the vacuum process.



Recently there has been patented a method which first removes the flavor and aroma of the cider then pasteurizes the juice, after which taste essence is put back. These methods, when perfected, may displace the present process.

People are getting tired of the worthless carbonated "pop;" the time is ripe for an expansion of the fresh fruit juice market. The citrus industry already has made considerable headway in the soda fountain trade. Pasteurized cider can be carbonated, but this is seldom practicable; it cannot compete in price with the synthetic carbonated drinks.

There is need of a practicable method of concentrating apple juice, so that it can be shipped at less expense; the present cost of containers is too high. "Cider sugar" is now on the market, but it does not carry the flavor of the apple juice as well as sugar that has been concentrated from more acid fruits, as the orange, lemon and loganberry. The whole field of horticultural by-products is in a transition stage.

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The Market Place

By W. R. WHITACRE

A NUMBER of vegetable growers who read The Market Place a few weeks ago have written to me and asked for more information concerning the cold storage of celery. In order that I might give reliable information I called on Chas. K. Hallowell, county agent of Philadelphia county, and questioned him as to the practices of the growers in this section.

One question that was asked was, "What variety of celery is grown for storage?" The leading growers in the neighborhood of Philadelphia have found the Golden Plume to be best suited for storage and for their conditions. A little Easy Blanching has been grown and put in storage but generally the Golden Plume has proved more satisfactory. One important point is to get a good reliable strain of Golden Plume, as there is a wide difference and the results might otherwise be disappointing. There are a number of seed houses that have a strain that has proved satisfactory and I will be glad to send their names to any one who desires this information.

To Blanch Celery

"Does the grower you mention bleach the celery before storage or could this be accomplished during storage with ethylene gas?" The grower I mentioned and most others who I know about bleach the celery in the field while it is still growing, with boards or paper. If soil conditions are favorable it is sometimes bleached by hilling with earth.

Ethylene gas has been used to ripen tomatoes and some other products and has been fairly satisfactory, but while experiments by growers in this section show that it will bleach celery it does not improve the flavor the way the older methods do. The celery remains stringy and has that green flavor.

It is very important that the celery be quickly moved from the field to the storage. No more than 24 hours should pass before it reaches the storage house after it is taken from the field. One thing to remember is that cold storage cannot improve the celery in any way and it must be in good shape when it goes in. The bleaching should be done shortly before the celery reaches maturity while it is still growing and in this section they count on ten days to two weeks for the bleaching process.

Small Open Crates

"Is any dirt fitted with the roots?" The dirt is knocked from the roots so that only a small amount adheres. The celery is packed in small open crates such as New York state celery is shipped in the rough. They should not be too large and the protruding stalks or leaves should be cut off so that there will be a circulation of air when it is stacked in the storage. When packing the celery in the crates remove any dead or decayed leaves, as this helps control disease.

The crates are stacked in the storage with two-by-four pieces between the layers of crates and with about four inches clear all around. This allows the air to circulate freely.

"Is there any provision for moisture to compensate for that lost by transpiration?" In the modern storage houses there is a system of humidity control that regulates this. The moisture should run higher than for most farm products, as the celery will wilt if it is too dry. Soaking in water when it is brought out will bring it back but this takes time. The growers in this section recommend a temperature of 30 to 31 degrees while in the storage.

When the growers are ready to market this celery they take it from the storage, wash, trim and bunch it in the usual manner. This is often done right at the storage house.

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A complete assortment—hardy and northern-grown

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Save Money on Berry Baskets and Crates. Buy at factory prices and WINTER DISCOUNTS. Write for free catalog NOW.

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The BERLIN FRUIT BOX CO.
Berlin Heights, Ohio

STOP!

Do you realize the seriousness of the clover seed shortage? Market firm—Spring prices probably higher. Can supply you at right prices with the best to be had in Domestic Clovers, re-cleaned, highest purity and vitality. Delays are costly—Write today—NOW!

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Our 18th Annual Bargain Book of guaranteed berry plants, fruit trees, ornamentals, and bulbs, including MASTODON Everbearing Strawberry, sent free. Wholesale prices SPECIAL, 250 Mixed Gladiolus (bulblets) postpaid for 25c. J. N. Rokely & Son, Box 4, Bridgman, Michigan

The Land Seal Stays on Tree

KELLYS' Certified True-to-Name Fruit Trees

Honest Value at Fair Prices

The only safe way to buy trees is from an old established concern with a nation wide reputation for giving a dollar for dollar value.

The Kelly tree owners in your neighborhood will tell you whether we are fair and square. We will be glad to send you their names.

Write for the 1929 Catalog—showing fruits in colors. We have no agents—you deal direct with us. Address

Kelly Bros. Nurseries
629 Cherry St.,
Dansville, N. Y.
Established in 1869

Good seeds grown from Selected Stocks

New crop, tested seeds sure to produce. Sold for 59 years to satisfied customers. Prices reasonable.

FREE extra packages with every order.

FREE—Large catalog with hundreds of pictures of vegetables and flowers. Send your own and neighbors' addresses TODAY.

R. H. SHUMWAY
141 S. First St., Rockford, Ill.

When writing Advertisers please mention The Pennsylvania Farmer.

Sash House Construction

By GILBERT S. WATTS

"PLEASE tell me how to build a sash house?" writes a subscriber. Sash houses vary greatly in details of construction. They are becoming increasingly popular for starting seedlings and plants because heat may be supplied more economically by stoves or a furnace than by manure, and because heat, moisture and ventilation may be controlled more exactly and with less labor.

It is impossible in the space available in this department to go into all the details of building a sash house. Any one handy with carpenter's tools should experience no serious difficulty in working out the minor construction problems that will arise. The writer has two sash houses both of which are perfectly satisfactory and which exemplify two common types.

Sketch No. 1 illustrates the essential features of the smaller and more simple one. This house runs nearly east and west. The board wall at the north side is covered with a layer of cheap

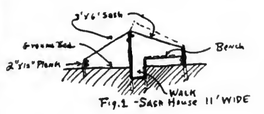


Fig. 1 - Sash House 11' Wide

building paper and over this a layer of inexpensive roofing paper. The ridge is ordinary two-by-four inch stuff with two-by-four inch chestnut posts supporting it at intervals of six feet.

On the south side the sash slope more steeply down to a low wall made from two-inch planks. These sash are nailed or screwed in place. On the north slope, however, every third sash is hinged at the eaves and when lowered is fastened at the ridge with ordinary hooks and eyes such as are used on screen doors.

To provide ventilation the hinged sash are raised from one to twelve inches at the ridge and are supported on wooden blocks. In windy weather each is tied in position with a strong cord. No slide bars are used in this house.

Sketch No. 2 shows principal details of the last sash house that I built. The two rows of sash next to the ridge are nailed in fixed positions. These never are moved. Slide bars are provided, however, for the two outside rows of sash. As many of these sash as may be required are slipped down to provide ventilation, in fact they may be removed entirely if desired. When this is done soil, flats and plants may be put in the house or taken out with the



Fig. 2 - Sash House 21'6" Wide

minimum of labor if space has been reserved for a driveway on both sides.

The smaller of these houses is heated by a hot water system hooked up to a small second-hand boiler. There are three lines of two-inch pipes on the north wall, the top one feeding the two lower ones. Another two-inch line flows out along the center posts and returns through two two-inch lines along the south wall.

The larger house is heated by steam which is supplied from a second-hand upright boiler. There are six lines of 1¼-inch pipes in this house, a flow line going out along the intermediate posts on each side and returning in two lines along each of the outer walls. In the exposed locations this might not be enough pipe. Both of these houses are about 90 feet long. In relatively short houses numbers of growers have secured satisfactory results from one or more stoves.

As soon as a sash house is placed in operation secure a good thermometer and hang it not too far above the level of the plants. Proper temperatures simply cannot be maintained by guess.

* * *

A NUMBER of subscribers wish to know the best varieties of various vegetables. It is indeed a question to know what to buy when one looks through the average seed catalogue and is confronted by dozens of variety names in connection with almost every vegetable. Tests right on your own land are the only means of determining positively what varieties are best but one cannot try them all. Certain standard varieties, however, have proved widely adaptable.

As a guide I can do no better than turn to records of my seed orders and set down the names of the varieties which have proved most satisfactory.

Asparagus.—Mary Washington.
Beans.—Snap Green: Bountiful, Stringless Green Pod. Full Measure.
Snap Yellow: Webber Wax, Sure Crop Wax, Curivaled Wax.
Dwarf Shell: Dwarf Horticultural.
Pole: Kentucky Wonder (Green), Golden Cluster (Wax).
Bush Lima: Sieva (Early Small), Fordhook, Dreer's.
Beets.—Early Wonder, Crosby's Egyptian.
Cabbage.—Early: Golden Acre, Copenhagen Market.
Midseason: Enkhuizen Glory.
Late: Danish Ball Head, Short Stem.
Carrot.—Chantenay (Early), Danvers Half Long (Late).
Cauliflower.—Snowball (for both early and late).
Celery.—Golden Plume (early and fall). Easy Blanching (early and fall). Fordhook or Emperor (late fall and winter). Giant Pascal (late fall and winter).
Swiss Chard.—Fordhook.
Sweet Corn. Whipples Yellow. Golden Bantam, Stowell's Evergreen.
Cucumber.—Early Fortune (earliest slicing), Long Green (main crop), Snow's Pickling.
Egg Plant. Black Beauty.
Endive.—Green Curled.
Kohl-Rabi. Early White Vienna.
Kale.—Dwarf Green Curled Scotch.
Lettuce.—Grand Rapids (leaf), Black Seed Simpson (leaf), New York (Iceberg) for heading.
Muskmelon.—Golden Champlain (small), Bender's Surprise (large).
Onion. Ebenezer sets to make mature onions, Riverside Sweet Spanish (sow seed to grow plants to set out), Southport White Globe (sow seed outdoors to make bunching onions), Mountain Danvers and Ohio Yellow Globe (to make ripe onions from seed).
Parsley. Dwarf Green Curled.
Parsnip. Model, Hollow Crown.
Peas. Dwarf-Alaska, Pedigree Extra Early (smallest small podded), World's Record, Thomas Laxton, Laxton's Progress, Laxtonian (Blue Bantam), Improved Stratagem for latest, Late Telephone (climbing), Sugar Peas (edible pods), Mammoth Melting Sugar.
Peppers.—Early Giant, World Beater.
Pumpkin.—Winter Luxury.
Radish. Round Scarlet Globe, Scarlet White Tipped, White Box, Long White Icicle, Cincinnati Market (red).
Raspberries.—Black: Cumberland.
Red: Cuthbert.
Rutabaga. Purple Top Yellow.
Spinach. Long Standing Bloomsdale (earliest), King of Denmark (second), New Zealand (summer spinach), Virginia Bright Resistant (fall).
Strawberries.—Howard 17 (Premier), Chesapeake.
Squash. Golden Summer Crookneck, White Patty Pan or Scallop, Boston Marrow, Blue Hubbard.
Tomato. Bonny Best (early), Matchless or Matchless (late).
Turnip.—Purple Top White Globe.

ONE of the principal measures before the New Jersey legislature is a so-called "Honest Pack" bill which would provide that the face of any package whether a closed or open container, should represent the average of the produce in the entire container. Last year a similar measure was defeated. This fast fill is was discussed throughout New Jersey, and the farm groups now agree on the measure. B.

To Get Set for the 1929 Season

By H. C. KNANDEL

IT WON'T be long until the chick season of 1929 will be in full swing. Now is the time to make definite plans for a successful season. In the first place, what is the condition of the breeding fowls? The care which these fowls receive will, in a large measure, determine the brooding results of 1929.

It has been our experience that hens which lay heavily just prior to saving hatching eggs usually give a large number of strong healthy chicks. Some people believe that fowls should have a long rest before the breeding season. To this we will partially agree, but the length of that rest and the treatment which the birds receive during this period are of great importance.

After a hen has finished her laying year, which is normally in September, October or November, she should be allowed to molt and rest. However, during this resting period the hen must grow a new coat of feathers. This takes energy. After this period of inactivity, the fowls should be brought back into egg production.

It is not economically sound to allow hens to loaf on the job three or four months in order to produce chicks from them during the breeding season. This practice is not warranted. Hens which have had a rest of two months should be ready for another year's production.

Hatches are always highest when the breeding hens are in heavy production. All the hen's machinery seems to be in good working order with the result that the process of reproduction takes place normally. Breeding hens should by all means be in heavy lay by February 1st. By heavy lay we mean 35 to 50 per cent production.

Don't forget that the male birds need special attention. When allowed to run with the flock throughout the entire day they may in time become thin. It is a good plan to pen up the males once daily for a few hours and provide them with ample food and water. This will permit them to keep in good flesh.

In the case of the heavy breeds, it will be necessary to start saving hatching eggs as early as the middle of February in order that two or three batches may be completed by the first of April. It is well to remember also that hatching eggs should not be held longer than ten days. Seven days holding is better. When eggs are held they should be turned several times daily. Commercial poultrymen place the eggs in a regular 30-dozen egg crate, place a block under one end and then turn the crate end for end and side for side. By this method many eggs are turned quickly.

Don't forget high-priced eggs are produced from early-hatched pullets. Early-hatched pullets are hatched as chicks in February, March and April. Hatching eggs must, therefore, be set in February and March. The time is short. Are you set for the 1929 chick season?

Trenton Baby Chick Show

WINNERS at the Annual Baby Chick Show held in Trenton during Agricultural Week were as follows: First and Sweepstakes, Wene Chick Farms, Vineland, N. J., S. C. W. Leghorns; second, Red Top Farm, C. T. Darby, North Branch, N. J., S. C. W. Leghorns; third, and best heavy breed, Wm. Roch, Columbus, N. J., Jersey Black Giants; fourth, Dembro Poultry Farms, Sewell, N. J., S. C. W. Leghorns; fifth, Forsgate Farms, Jamesburg, N. J., Barred Rocks.

The State R. O. P. Association donated the Sweepstakes Cup and the Trenton Times donated winners cups. All exhibits ranged between 90 and 97 points, as judged by Prof. Thompson and Prof. Platt, which indicates the high quality of New Jersey Certified and blood-tested chicks.


Dear Sir: FARMERS UNDER PAPER
Here in one of the centers of the truck-growing industry, and a specialty in melon culture, but at this time the sales arrived in in rail cars, everybody's fruit seems to at certainly at about two cents a one. Melons, priced two cents last week to only worth a franc to Paris, therefore, still make a gain of two cents a melon over a franc and a half to Paris. Under the old system the cost of the harvest, all direct labor for cost were from $67 trimming melons in the field, not counting the cost of harvest here, could be supplied by the farmer, and cultivate he could not mention this the cultivator, and we do not presume that fertilizer, which is equally applicable in your section. Your method I am going to try as soon as the Mulch Paper I am going to get there is no use with none start the crops earlier, for it is on account of the cold nights that we could not start the crops earlier with safety. Mulch Paper is designed to do and once with safety. Mulch Paper is designed to do and once with safety. Mulch Paper is designed to do and once

Valuable Book FREE

Learn how to make your poultry *pay Extra* PROFITS

Our new book contains information which vitally affects your profits in poultry keeping. It explains the great importance of calcium. It tells why PEARL GRIT *makes* and *saves* money for you. We'll gladly send you the book if you'll mail the coupon.

Your birds need PEARL GRIT *now.* This is the season of increasing egg production. You must guard the health and vitality of your layers. They'll slump or break down unless you supply them with the calcium which PEARL GRIT provides in the most economical, most effective form.

Build for Future PROFITS

PEARL GRIT gives potency to breeding stock. It supplies the calcium which must be stored in the egg to help nourish the chick germ during incubation. A larger percentage of eggs will hatch if you feed PEARL GRIT to your breeding stock. And the chicks will be bigger, stronger, livelier. Since your profits for another year depend on the chicks you succeed in rearing, be sure to get your mated birds in good condition by feeding PEARL GRIT now.



If you have any trouble in securing PEARL GRIT from feed dealers, let us know. We'll see that you are supplied.

. . . AND MAIL THE COUPON FOR THE BOOK TODAY

Pearl Grit Corporation
3316 Wayne St., Piqua, O.
Send me your free book "The Poultry Raiser's Pay Envelope", and give me the names of dealers who handle PEARL GRIT.

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Address .....
Post Office ..... State .....
Tell us your dealer's name and address

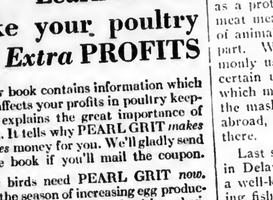
now $100

DICKELMAN Metal Brooder House

Now you can buy a 500 chick size metal brooder house for only $100. The DICKELMAN plain wall metal house gives safe, sanitary housing for your chicks at very low cost. It is rat proof, fire proof, properly ventilated, prevents smothering and is the **strongest** and **best** metal house built except our corrugated house, which sells for slightly more. Easiest and quickest erected. Use a DICKELMAN this year—you will raise **more** and **better** chicks. Write for further information.

DICKELMAN MFG. CO.
Forest, Ohio
Box 65

Patent No. 1,670,392
Large 500 Chick Size



Metal Brooder House
150 Chick Size $30
Larger sizes at correspondingly LOW PRICES. Equipped with all Modern and Practical Features necessary to GUARANTEE success in raising Baby Chicks. Send for our SPECIAL PRICES and Booklet FREE. Investigate TODAY.
Dept. 13 London, Ohio
The Thomas & Armstong Co.
Buckeye Corn Crib—Cribs-Feeders-Metal Silos

FAIRMONT'S BETTER PURE FLAKE BUTTERMILK
EASTERN DISTRIBUTORS CARLOADS WEEKLY. ALWAYS FRESH. WE QUOTE DELIVERED. GREENCASTLE, PA.
FAIRMONT CREAMERY CO.

POSITIV-LAY Used in mashes by 21 State Poultry Experts
The Oyster Shell Products Co., Phila., Pa.

Fish Meal in Poultry Ration

By R. L. SCHARRING-HAUSEN

AN interesting development in the feeding of poultry is the use of fish meal in the dry mash as a protein supplement, replacing the meat meal commonly used as a source of animal protein either in whole or in part. While fish meal is not so commonly used as meat meal, it possesses certain unique and valuable properties which make it a desirable ingredient of the mash. This material is much used abroad, and is very well thought of there.

Last summer while on a poultry tour in Delaware and Maryland I talked to a well-known poultryman who was using fish meal in his mash, and when I asked him how he like it he spoke very well of it indeed.

Fish meals on the market for poultry feeding purposes fall into two general classes. The first kind is made from waste scraps at fish packing plants, while the second is made from the whole fish after the oil and water are extracted for other purposes.

A Little Iodine

There is no doubt that the second sort possesses more valuable properties than the first, containing minute traces of iodine, which is an element important in poultry feeding, and is used as the basis of several worm remedies as well. In addition, meal made from the whole fish contains valuable extracts and vitamins from the livers and other internal organs, giving it the qualities of cod-liver oil, of course in less degree.

Properly made fish meal is made from pure and fresh materials, and when so made, with the oil all extracted, there is no danger of imparting a fishy taste to either eggs or flesh.

The process of catching the Menhaden from which the whole fish meal is made is rather interesting. Schools of these fish are found at certain seasons off the coast of our Middle Atlantic states. These fish are netted by special fishing boats, taken as soon as possible to the factory on shore, cooked and pressed in powerful presses to remove the oil and water. The residue is then dried by steam and later ground into the fish meal of commerce. This drying renders what little fat and oil remains in the residue harmless in so far as any danger of causing a fishy taste in poultry products. Fish which have spoiled are made into fertilizer, and are never made into meal for feeding purposes.

Recommended Mashes

Poultrymen and investigators who have fed fish meal, among them the government farm at Beltsville, recommend the following mashes, among others, as giving good results:

For chicks: 30 lbs. ground hulled oats, 30 lbs. corn meal, 30 lbs. alfalfa leaf meal, 40 lbs. wheat middlings, 40 lbs. wheat bran, 20 lbs. powdered buttermilk, 10 lbs. meat-grade fish meal, 10 lbs. bone meal.

Growing mash: 30 lbs. alfalfa leaf meal, 40 lbs. corn meal, 40 lbs. wheat bran, 40 lbs. wheat middlings, 20 lbs. powdered buttermilk, 20 lbs. high-grade fish meal, 10 lbs. bone meal.

Laying mash: 40 lbs. each of corn meal, bran, middlings and ground oats, 50 lbs. high-grade fish meal.

In adding fish meal to the ration, whether as a protein supplement where home mix is used, or whether to replace meat scrap either in part or altogether, all changes should of course be made gradually in order to avoid any upset to the birds—precaution which it is always best to take in making any change.

An analysis of a well-known brand of fish meal is as follows: Protein 55 per cent, fats 4 per cent, fiber 2 per cent, mineral matter 15 per cent. The mineral matter is largely the ground-up bones of the fish.

Nest Box Notes

THE little article about the Farm Cat has brought out quite divergent views from readers as to pussy's usefulness against rats and mice. Both sides have ample historic precedent to support their contentions.

In ancient Egypt the cat was worshipped as divine, while during the Dark Ages in Europe she was supposed to be an ally of the Evil One, and a popular pastime was to catch cats and roast them alive, especially on All Hallows Eve, when they were supposed to be especially malign. In modern times we have the old maid of funny-paper fame who keeps forty cats opposed to the person who has such a strong aversion to cats that he cannot remain in the same room with one.

The truth of the matter is that cats, like persons, have their individual traits and characteristics, so that it is unsafe to generalize about them. Some are inveterate ratters and mousers, while others prefer feathered prey. It's all in the cat.

* * *

THERE are many good makes of coal-burning brooder stoves on the market. Most of them are reasonably priced and it is not necessary to pay top-notch prices to get a satisfactory stove. Some of the mail-order houses

Friendly Talks

By Edgar L. Vincent

I AM not of those who believe this old world of ours is coming to an end today or tomorrow. In fact, it seems to me that nobody has any accurate idea when that great event will take place.

There will be men and women here when you and I have done our work and gone on. The question that really concerns us is, what will these people who come after us think of you and me? Will they say, "He was no good"? Or will they speak in subdued tones when they tell one another that we helped to make the world a better place in which to live? Just here we are every last one of us interested.

Take it in the matter of raising boys and girls, for example. It gives me much pleasure when I grow a good crop. If I can beat myself, I like it. If I could be sure that my farm was getting better, so that by and by when sundown comes for me folks would say, "The old place grew better every year he was on it," I would feel that my work on earth had not been in vain.

Lives Not in Vain

But far rather would I have my friends and old neighbors say, "He raised a fine lot of children." If they reasoned and respected my boys and girls I should know that I had done something for the lasting good of humanity.

Only one other thing would I look on as being more to be desired than what I have just said and that would be to know that my own boys would say, "I had the best father who ever was on the face of this earth," or that the girls could declare that "Mother was the best woman who ever lived."

What will the men and women of tomorrow think about you and me? If they can only say, "He was a good farmer and a fine man," it will be reward enough. Our lives will not have been spent in vain.

More Chicks will be Chickens when fed on Ryde's



Startrite Chick Food

THIS safe, natural, easily digested complete food will raise every normal chick, proper care being given. A pound will raise a baby chick well past the danger period. Don't strain tender sensitive digestive organs of baby chicks by using heavy fibrous feeds which causes disease. Use "Startrite" and you start them right.

After six weeks feed *Ryde's "Hav-to-Grow" Chick Mash with Buttermilk.* Combines the best growing feeds, correctly balanced with necessary minerals and buttermilk.

To make that hen "lay an egg a day," feed *Ryde's "Hav-to-Lay" Egg Mash with Buttermilk.* It supplies egg-making elements for greater egg production in one economical, convenient-to-feed food.

Use Ryde's for Right Results

Ryde's Feeds are constantly tested for best results. Better results cannot be had at any price. Get the genuine and be assured of entire satisfaction. Complete feeding directions included in every bag.

FREE The interesting instructive Ryde Chick Game which includes play board, spinner and model chicks, will be sent free (worth 75c) upon receipt of name and address. Include 10c to pay postage and packing. Address **Ryde & Co., Mfrs., 5434 W. Roosevelt Rd., Chicago, Ill.**



REVOLVING HOVER with HINGED SECTION
DIFFUSIVE HEAT DOME—SAVES LABOR
SAVES CHICKS
AMERICAN COAL BROODER
BURNS HARD OR SOFT COAL OR GAS



Dependable—economical—great coal capacity. Needs little attention. Hover revolves at touch of hand. Hinged section raises permitting quick, roomy access to brooder or any part around stove. Drafts automatically regulated. Proper brooding temperature maintained. Diffusive heat dome scientifically spreads heat where it is needed. Best for hens, ducks and turkeys. Shipped direct or see your dealer. Actual capacities: 300 chicks $18.50; 500 ch cks, $19.50; 600 chicks, $24.50. Dealers write for proposition.

WISHBONE BLUE FLAME OIL BURNER
Every chick gets the right amount of heat and fresh air. No pre-heating. Red blue flame at touch of match. Flame can't go out unless you put it out. Set it and forget it. No valves, bends or strainers to clog. No noise, no odor. Best for hens, ducks and turkeys. Actual capacities 50 to 100 chicks, $12; 100 to 350 chicks, $18; 400 chicks, $19; 600 chicks, $22.



Write to Dept. 13
AMERICAN INCUBATORS, INC. New Brunswick, N. J.
AMERICAN and WISHBONE
Better Built MAMMOTH INCUBATORS

8 x 8 ft. Dry Front House $49



YOUNG'S Portable Poultry Houses

Why Bother to Build?

When you can obtain an up-to-date, Young's Home from our factory, for less than the price of lumber would cost you at retail.

Exactions fits perfectly; no carpentering; no waste. Approved sheathing, high-grade roofing. Painted inside and out. Ready to erect.

FREE CATALOG of Poultry Houses, Pigeon Houses, Rabbit Hutches and Dog Kennels.

E. C. YOUNG CO., 95 Depot Street, Randolph, Mass.

By This Vitamin D Discovery Pratts Again Revolutionize Chick Starting

Raising *perfect chicks* in a dark room



Poultrymen! Read every thrilling detail of the most startling development affecting your business in years. Now for the first time, a starting food is so enriched in growth Vitamin D that it raised perfect chicks in a dark room! No matter if sunlight is deficient in Vitamin D, mid-winter chicks won't suffer. This new discovery guarantees them all the nourishment of June sunshine.

Doomed to a Life of Darkness!

Never to know the health-giving light of the sun. Deprived of all light that held a trace of Vitamin D rays,—that mysterious element necessary to proper development of living bone and tissue.

Under these purposely abnormal and severe conditions, one group of chicks in the laboratory went to pieces. You'd expect it. But another group thrived! Developed perfectly! At eight weeks were twice the weight. Twice the size. Yellow legs. Red combs and wattles. Full, strong bone formation. Normal and healthy in every respect. Actual photographs proved it.

Both groups were fed identical food the food heretofore admitted the finest in the world for baby chicks. But there was one difference. And that difference represents the greatest advance in poultry raising in years.

Making Up for Nature

New methods in chick raising demanded this new way of feeding them. Vitamin D didn't get important until artificial methods deprived chicks of a natural supply. When chicks were hatched according to Nature, they got Vitamin D according to Nature. June-hatched chicks in a June-bright sun get all the Vitamin D they need. But today they're hatched in the cold dark days of winter and early spring. Indoor brooding, confined quarters and forced growth make Vitamin D most necessary just when sunshine is least available. And without Vitamin D, chicks can't assimilate from their food the minerals needed to build strong bone. Nor do they develop the vitality, digestion and disease resistance so necessary to modern poultry methods. For authorities agree that unless cod liver oil of the proper quality is added fresh and in quantities sufficient to spoil the keeping properties of the food, it is useless.

Pratts Enriched in Vitamin D by Entirely New Process

Now for the first time and by an entirely newly invented scientific process, a baby chick food is enriched by enough Vitamin D to prevent rickets and leg-weakness; promote bone growth, digestion, health and resistance to disease. Now for the first time, ONE FOOD supplies every nourishment needed to develop bone, muscle, nerve, feather and laying ability. A COMPLETE food that absolutely wipes out any possibility of internal breakdown due to feed. A food so rich in growth and Vitamin D that it raised perfect chicks in a dark room.

Completely Suited to Modern Poultry Raising

What food could be better suited to the needs of modern poultry raising? Here is a starting food more than equal to the unusual demands of new methods. Its base ingredients have always been the finest sources of energy that money could buy; painstakingly selected—mechanically pre-digested—skillfully blended.

Ground hulled oats; dried buttermilk; cooked wheat; sterilized bone meal; ground whole corn; wheat middlings; epsom salt; ground millet, rape, alfalfa leaf and blossom meal. And when chicks come through the baby stage with flying colors because of Pratts, most poultrymen prefer to depend on PRATTS BUTTERMILK GROWING MASH to get mature layers at least expense.

Now the perfect start is insured! Regardless of weather, season, or growing methods. The new-day starting food that suits the new-day practices. No wonder it is every year the largest selling baby chick food in the world!

More Than Ever Insist on the Original Baby Food for Baby Chicks

Of course, good feed dealers always carry Pratts. They know it pays them when chicks pay out for you. Insist on the one starting food sufficiently enriched in Vitamin D.

If you don't know the name of your Pratt dealer, write us. In answering, we will mail free an informative booklet —"Raising Baby Chicks."

PRATT FOOD COMPANY
Philadelphia, Pa.

Pratts

BUTTERMILK
BABY CHICK FOOD
Growing Mash Laying Mash
AMERICA'S QUALITY FEED LINE



Bone Structure of VITAMIN D GROUP at end of 8 weeks



Chick No. 313. Weight 34th day 231 grammes. In 22 succeeding days gained 153 grammes. Regular black line denotes heavy deposit of bone making calcium. Note: normal narrow cartilaginous head of tibia bone.

Bone Structure of CONTROL GROUP at end of 8 weeks



Chick No. 337. Weight 34th day 141 grammes, and down with rickets. In following 22 days gained only 25 grammes. Irregular black line denotes low deposit of calcium, severe rickets and soft cartilaginous head of tibia bone.

WEEK	VITAMIN D PEN	CONTROL PEN
Start	Averaged 1-25 oz. heavier than control pen	Xray shows rickets starting
2nd Week	About 1-25 oz. heavier than control pen	Rickets developing fast.
3rd Week	Slight gain in size over control pen	25% down with rickets
4th Week	Average 1 oz. heavier	All down with rickets but one
5th Week	Substantial gain	
8th Week	Double in weight since 5th week Av. weight 12 oz. Mortality—none	No gain since 5th week Av. weight 6 oz. Mortality—64%

These Carload Dealers Recommend Pratts

PENNSYLVANIA
Keystone Flour & Feed Co., Pennsylvania.
Alex. Williamson, Pittsburgh, Pa.
Binks Grocery Co., Pittsburgh, Pa.
H. R. George Hdwe. Co., Mt. Pleasant, Pa.
Maloney's Feed Store Meadville, Pa.
Costaw Bostert & Sons, Johnstown, Pa.
Westminster Supply Co., Erie, Pa.
Morrison Brothers, Bellevieu, Pa.
Wilmerding Feed Co., Wilmerding, Pa.
Johnston & Smith, Wilkinsburg, Pa.
Hardt Brothers, Wildwood, Pa.
Farmers Milling Co., Washington, Pa.
A. P. Bree, P. O. McKeesport, Versailles, Pa.
C. F. McConaughy, Vanclia, Pa.
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J. F. Malone, New Alley, Pa.
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I. W. Snyder & Co., Pittsburgh, Pa.
C. Kellner & Son, Pittsburgh, Pa.
Option Feed Co., R. F. D. 8, Pittsburgh, Mt. Oliver, Pa.
Monaco Roller Mills, Monaco, Pa.
Watson & Stewart, Grove City, Pa.
J. H. Hoffer, Litzenler, Pa.
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Homestead Fr. & Pro. Co., Munhall, Pa.
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J. W. Nelson, Greenville, Pa.
H. H. Park, Gibsonia, Pa.
National Fl. & Fd. Co., Fayette City, Pa.
Nickle Plate Flour Mills, Erie, Pa.
Howard Gilbert, Dickerson Run, Pa.
Castle Shannon Sup. Co., Castle Shannon, Pa.
Barnhart & Klinger, Butler, Pa.
W. J. Stitley, Bruceton, Pa.
Breth's Fed Store Turtle Creek, Pa.
John Lechman & Co., Braddock, Pa.
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Mauser Mill Co., Allertown, Pa.
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Lincoln Brothers, Spring City, Pa.
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WINTER WONDER LAYERS



E. E. Ely, N. Y., writes Nov. 22: "Will want 1,000 chicks in April. The 2,000 from you did fine. They surely were a dandy bunch. I have not seen any pullets that come up to ours and everyone thinks they are **wonderful.** 40% are now laying." On Dec. 18 Mr. Ely wrote again: "They are improving every day. **Laying fully 50%.**" Double inspection of eggs for size and weight for years means Sunbeam Chicks are **bigger when hatched,** healthier and quicker growers. **Weigh 11 to 12 lbs. per box at 100 when hatched.** Ideal Climate. Foremost Prize-winning and bred-to-lay strains. Ohio Rigid **Accreditation** insures Pure Bred Standard Bred. Our own **superior** breeding, care and expert culling better still. Guaranteed 100% alive and true to breed. **Prizes offered to buyers. BIG DISCOUNTS** for orders now. Delivery when wanted. **Free** illustrated catalog. **Prices Low.** We ship C. O. D. Get Winter Eggs with **Sunbeam** Winter Wonder Strains.

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HILLPOT Quality Chicks

Leghorns Rocks Reds Wyandottes

Let The Hillpot Low-Egg-Cost Breeds Make Extra Profits For You This Year

The flocks from which your Hillpot Quality Chicks come have been tested out on the one sure basis of profit-production—low-egg-cost.

These special low-egg-cost breeds are, undoubtedly, one of the most attractive values in the poultry market today. At a price no higher than that of many chicks of merely average quality, you can buy these big producers that are so easy to raise, that mature so quickly and lay so heavily that you will find your egg-cost cut to a new mark.

and remarkable low figure, while the fine, big, uniform eggs command the top price in the select markets.

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It gives the actual experience of successful poultrymen with Hillpot Quality chicks; describes each breed; tells our guaranteed plan; contains important poultry data, house plans, etc.

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Chicks with an official heavy-laying ancestry

Most baby chicks are bought for the ultimate source of egg production. The sooner a pullet starts laying after she is mature the greater will be her egg yield and the cheaper will be the eggs she produces, providing she comes from a heavy-laying ancestry.

Kerr's chicks are bred to lay. They have an exceptional egg-laying inheritance based upon four generations of public egg-laying contest winnings. These winning records are as high as 294 eggs in White Leghorns, 280 in R. I. Reds and 277 eggs in Barred Rocks.

The type, constitutional vigor, livability and rate of growth of Kerr's chicks are strictly in keeping with their unusual inheritance for egg production. Both utility and special matings chicks furnished from flocks that have passed the blood test for Bacillary White Diarrhea.

Write for booklet with prices, giving illustrated account of the Kerr way of producing living, profitable chicks.

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HERE: NEARLY EVERYONE RAISES Full Blooded "AMERICAN" Quality Chicks.

	50	100	500	1,000
American or English S. C. Wh. Leghorns	$4.75	$13.00	$62.00	$120.00
Hollywood White or Brown or Buff Leghorns	7.25	14.00	67.00	130.00
Tancred White Leghorns, Anconas, Barred Rocks	7.75	15.00	72.00	140.00
Tancred White Leghorns, Anconas, Parks' Rocks	8.25	16.00	77.00	150.00
R. C. or S. C. Reds, White Rocks, Black Minorcas	9.25	18.00	87.00	170.00
White Wyandottes, Buff Orpingtons, Black Minorcas	11.25	22.00	105.00	200.00
Brahmas, Columbian Rocks, Blue Andalusians	12.25	24.00	115.00	220.00

Light Mixed $8.00 a hundred. Mixed, any breeds, our selection, $10.00. Heavy Mixed, $12.00 a hundred.

Get our NEW CATALOGUE.—It proves to you the SUCCESS our Customers have with our chicks. Breeders culled and Bred for High EGG PRODUCTION in Winter when eggs are demanding large premiums. Reference Curwensville National Bank. 100% Live Arrival. Dependable Service, order Early.

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NATIONAL "SUPERBRED" CHICKS—500,000 Super-Quality Chicks for 1929



Insure your future poultry profits by ordering NATIONAL SUPERBRED CHICKS NOW.

	25	50	100	500	1000
S. C. White, Brown & Buff Leghorns	$3.50	$6.75	$13	$62	$120
Tancred & Hollywood White Leghorns	3.75	7.25	14	67	130
Barred & White Rocks, R. I. Reds	4.25	7.75	15	72	140
Black Minorcas & Anconas	4.75	8.50	16	77	150
White Wyandottes & Buff Orpingtons	4.75	9.00	17	82	160
Silver Laced Wyandottes	5.00	10.25	20	97	190
White Minorcas & Blue Andalusians	7.00	12.00	23	120	230
Jersey Black Giants	7.00	13.50	26	130	250
Mixed or odds and ends	3.00	5.00	10	50	100

Send for our Free Catalog with prices on 4 chicks from our SPECIAL MATED FLOCKS. All chicks sent prepaid by either Parcel Post or Express. 100% live delivery guaranteed. Bank references on request. Write us. You will save money by ordering Superbred chicks NOW.

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YOU NEED THIS CATALOG!



TEN CHICKS FREE

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Every hatch in our hoveline is handled and a record kept. Our flocks are inspected in its every respects trained and authorized by Ohio Poultry Improvement Association. Write today for free catalog and special plan. Sixteen Breeds. We have limited number chicks from which R. O. P. pedigreed stock. Write today.

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Buy your stock, eggs and baby chicks from breeders whose flocks have been culled and certified for Standard qualities as well as production. Send for list of breeders and hatcheries.

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BUY $ HUBER'S RELIABLE CHICKS

Ten Free Chicks —On orders booked before March 15th, we give 10 chicks free with each 100 ordered.

When we say RELIABLE—we mean RELIABLE in every way. Breeding stock of high-est type. Many of 19 years of careful development. Special attention paid to health of our flocks and records kept. **CATALOG FREE—CHICKS SENT C. O. D. IF YOU WISH.** Write for details—get our illustrated catalog which tells all the story. Our prices reasonable. A book on Raising Chicks worth many dollars given free with each order of $10.00 or more. Big discount for early orders.

HUBER'S RELIABLE HATCHERY, N. Main St., FOSTORIA, OHIO

CLIMB ABOARD OUR CHICK SPECIAL!

SATISFACTORY CHICKS

	25	50	100	500	1000
S. C. Wh., Br., Bf. and Bl. Leghorns, Shepgard's Anconas	$4.00	$7.00	$12	$59	$115
Buff, Wh. and Bl. Rox, Bf. Orp. Reds, Bl. Minorcas	4.50	8.00	15	70	135
Barron Wh. Leghorns, Wh. Wyandottes, Bf. Minorcas	4.75	8.50	16	75	145
Ex. quality Wh. Wyan. Reds, Buff, Wyckoff Wh. Leg., Wh. Min.	5.00	9.50	18	85	160

Heavy Mixed 50, $6; 100, $11.50; 500, $55; 1,000, $105. Light Mixed 50, $5; 100, $9.50; 500, $45; 1,000, $85. Black Giants 100, $20. Wh. Pekin Ducklings 25c each. 100% Live Delivery Guaranteed. **FREE** BEAUTIFUL 4-COLOR CATALOG

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WITH EACH 100

10 FREE CHICKS ORDERED BEFORE MARCH 1st.

Don't miss this chance to get a start with Wolf's extra quality pure-bred high producing stock. Every breeder inspected on free range and health of chicks is re-sponsible for highest quality. **GET OUR CATALOG AND PRICE LIST** safeguarded. Tells about prizes won by our birds. Read about Mary Reneed who made over $1,000 profit in one year with birds of our breeding. All leading breeds. Prices very attractive. Chicks shipped C. O. D. Write today. Too picking stopped instantly with Wolf's "No Pick." Order box today. $1.00 postpaid. Satisfaction guaranteed or money refunded.

WOLF HATCHING & BREEDING CO., Box 43, GIBSONBURG, OHIO

Chicks C.O.D. $1 Down

LET us ship you our chicks, $1.69 with order, balance C.O.D. Our chicks are from some of Ohio's best flocks that have been carefully culled for type, color and egg production. 100% live arrival. PRICES DELIVERED

	50	100	500	1000
LEGHORNS, WHITE, BUFF and BROWN; ANCONAS	6.50	$12.00	$57.50	$110
ROCKS, BARRED, WHITE, BUFF and PARTRIDGE; R. I. REDS and W. WYANDOTTES	7.50	14.00	67.50	130
S. C. and R. C. REDS, B. ORPINGTONS, S. L. and W. WYANDOTTES	7.50	14.00	67.50	130
HEAVY MIXED 100; H. J. GIANTS 150	7.50	14.00	67.50	130

Order direct or send for Illustrated circular.

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10 CHICKS FREE with each 100 ordered-Early

Write for details our free chick plan —Ohio Accredited Stock. Better than ever at many shows from National down. Developed for many years for high egg production. Free range flocks in best of health. 13 breeds. Catalog free. Low prices quality considered.

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Schweglers' "THOR-O-BRED" BABY CHICKS

"LIVE and LAY"

OUR breeders are bred for high egg production. White, Brown and Buff Leghorns, Barred and White Rocks, R. I. Reds, Anconas, Black Minorcas, Buff Orpingtons, White Wyandottes and Silver Laced Wyandottes. 100% live delivery guaranteed. Write today for FREE CHICK BOOK.

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23 NORTHAMPTON, BUFFALO, N.Y.

BABY CHICKS

FROM HEAVY LAYING FREE RANGE FLOCKS

	50	100	500	1,000
Wyck. & Tancred Strs.	$6.50	$12.00	$57.50	$110
Barred & White Leghorns	6.50	12.00	57.50	110
B. C. Brown Leghorns, R. C. Reds	6.50	12.00	57.50	110
S. C. Rocks & Reds	7.50	14.00	67.50	130
S. C. Buff Orpingtons	7.50	14.00	67.50	130
Assorted Chicks	5.00	9.00	42.50	80

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PROFIT BRED CHICKS



County Line chicks are from proven producers. They can be secured in five breeds, S. C. White Leghorns, Rocks, Barred and White Rocks and White Wyandottes. All from range reared healthy bred to lay parents. Send for folder which gives prices and information every poultry raiser should know.

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ZELLER'S EXTRA QUALITY CHICKS from Large Type S. C. White Leghorns, Tancred strain, production bred matings $10 per 100; $27.50 per 250; $50 per 500. Also quality Rocks and reds. Early hatch. Order today. Circular free.

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BABY CHICKS

13 Leading Varieties—White Leghorns, Black Minorcas, Rocks, Reds, Wyandottes, Hamburgs, Speckled Sussex, Buff Orpingtons.

$9.00 per hundred and up.

Free Catalog and Price List.

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BABY CHICKS

Per March and April Delivery. 100% live arrival guaranteed.

	25	50	100	500	1000
White Leghorns	$3.50	$6.50	$12.00	$57.50	$110
Barred Rocks	4.00	7.50	14.00	67.50	130
Rhode Island Reds	4.00	7.50	14.00	67.50	130
Silver Laced Wyandottes	4.50	8.50	16.00	75.00	
Light Mixed	3.00	5.50	9.00	42.50	80
Heavy Mixed	3.50	6.50	12.00	57.50	110

These chicks are hatched from healthy free range stock. Write for Catalogue.

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Special Discounts on Quality Chicks. LISTENFELT HATCHERY, Louisville, Penna. Per Order Early. Write Now.

Chicks (Investigate before you Invest)



MONEY SAVING COUPON FREE. Write for our early order coupon. Saves money. Fine chicks with special breeding and pedigreed males behind them. If you want real producers chicks with special breeding and pedigreed males behind them. If you want real producers we have them. We can fill your requirements if you will let us know what you want. Write us today. It will help you make more money from your poultry plant. Write to us if you have a poultry problem and we will give our best advice and help you. Catalog is Free

Write Today—We Can't Tell the Whole Story Here.

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Buy C·M·L Chicks

C. M. L. CHICKS Cost no more than ordinary chicks from the average hatchery and the quality is far better. We have specialized for years in the following LEGHORNS, Imported direct from Barron, Pedigree 285 to 311. BARRON S. C. W. LEGHORNS, BARRED ROCKS, WHITE ROCKS, REDS, WHITE WYANDOTTES. Our BIRDS have ample range which insures large, hardy chicks. They are carefully selected and mated. They mature early. Our fine quality chicks can be had at a price that will surprise you. Get our low prices. They will interest you. Write today for FREE catalogue.

C. M. LONGENECKER, Box 45. ELIZABETHTOWN, PA.

Baby Chicks from High Egg Laying Flocks



11 years reliability. Satisfied customers our specialty. Prices reasonable. Write for catalog and price list.

BUCYRUS HATCHERY CO., Box 415, Bucyrus, Ohio

BABY CHICKS

	25	50	100	500
Wh., Bl., Bf., and Br. Leghorns	$2.75	$5.50	$10	$50
Rocks, Reds and Wyandottes	3.50	7.00	13	65
Heavy Broilers	2.25	4.50	8	39

Twenty four page catalogue free. 19 years in business. Dozen tested flocks. Postage paid. 100% delivery.

JOHNSON'S HATCHERY, ICKESBURG, PENN'A

Chicks

S.C.W. & Br. Leghorns $14.00 per 100
Assorted chicks 12.00 per 100
S.C.W. Leg. Tan. Str. 12.00 per 100
Special price on large lots. 100% live delivery. Prepaid. Order from ads or circular free.

Chester Valley Hatchery, R 2, McAlisterville, Pa.

May We Send You A COPY OF THE 1929 EAGLE NEST CATALOG FREE?

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100,000 White-Brown Buff Leghorns CHICKS SHIPPED C. O. D. Send No Money

PURE STRAINS—Tancred, Hollywood Barron, American S. C. White Leghorns; Brown and Buff Leghorns. Eggs and Chicks produced from some of the finest matings in Pennsylvania. Breeders Specializing in High Egg Production. Dependable Chicks for Commercial Poultrymen, 100% Live Arrival. Dependable Service. Place orders early. Send No Money—Chicks Shipped C.O.D. Catalogue

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CHERRY HILL CHICKS

	100
S. C. W. Leghorn—Wyckoff Strain	$12.00
S. C. Everlay Brown Leghorns	12.00
Barred Rocks—Wm. Mace's Select	14.00
S. C. Rhode Island Reds	12.00
Mixed or Broiler Chicks	9.00

In less to 500 lots, 1c less. In 1,000 lots, 2c. Chicks sold 2% over 100 chicks sold. Prepaid. 100% live arrival guaranteed. Parcel Post prepaid (book by Express, order direct from this ad or write for free circular.

CHERRY HILL POULTRY FARM, Wm. Mace, Prop. McAlisterville, Pa.

WHITE CAMPINES

Greatest All-Year-Round Layers

Superior to Leghorns in egg production, winter and summer. Hardier, more vigorous, and profitable. Write for catalog. Another Pa. flock of 84 hens had an average of 198 eggs in a year. Still another 210 Leghorns had 285% production in Dec. and 37% production in Jan. while 243 White Campines had 42% production in Dec. and 70% in Jan. CATALOG FREE; stamps appreciated.

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BARRON LEGHORN CHICKS

From Large Type Barron English S. C. White Leghorns. Hens weigh up to 7 pounds. Extra Quality Chicks from free range selected stock any week after Feb. 11th at $16 per 100, $77 per 500, $150 per 1000. 100% Live Arrival Guaranteed. 10% books order. Catalog Free.

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PENN'A CHICKS

have vim and vigor hatched by men with 18 years experience, from culled flocks. Prepaid and 100 per cent guaranteed. S. C. White and Brown Leghorns, 11c. Rocks, 12c. Reds and Minorcas, 14c. Mixed Broilers 9c each. $40 per 1,000. Circular free. Our slogan, Service after Delivery.

THE PENNA. HATCHERY, Liverpool, Pa.

BABY CHICKS	Tancred Str. Wh. Leghorns	$12 per 100
	Common Wh. Leghorns	11 per 100
	Barred Rocks	14 per 100
	R. C. Reds	14 per 100
	Heavy Mixed	12 per 100
	Light Mixed	9 per 100

200 lots 2c less—1,000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for free circular.

C. F. LEISTER, McAlisterville, Pa.

HERBSTER'S QUALITY CHICKS

Barred Rocks, R. I. Reds and White Leghorns; good, strong, livable chicks, true to breed, which develop into profitable birds. Get our low price and catalog. Hatch all year.

HERBSTER'S POULTRY FARM, (Formerly Brookfield Poultry Farm.) Box 171, McClure, Pa.

CHICKS	S. C. Reds	Barred Rocks	White Leghorns
Light Mixed	$1.00	$7.50	$14.00
Heavy Mixed	4.00	7.50	14.00
	3.50	6.50	12.00

500 lots 2c less, 1,000 1c less. Free Range 100% Delivery. Circular.

W. A. LAUVER, McAlisterville, Pa.

COCOLAMUS HUSKY CHICKS

	25	50	100
Tancred-Sealshi S. C. White Leghorns	$3.50	$6.50	$12
Tancred Strain Brown Leghorns	3.50	6.50	12
Park Strain Barred Rocks	3.60	7.50	14
S. C. Black Land Reds	4.00	7.50	14
Mixed Broilers	2.50	5.00	9

Special prices on 500 and 1,000 lots, all heavy laying free range flocks. Free circular or price list.

COCOLAMUS POULTRY FARM, Cocolamus, Penna.

LONG'S LARGE TYPE ENGLISH

S. C. White Leghorns of highest quality, bred-to-lay from two year old hens. Barred Rock, Reds and mixed chicks. Write for free catalog and low prices. 100% live delivery guaranteed.

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Chicks, Barron Eng. White Leghorns

Tancred Leghorns, Barred Rocks, Light & Heavy Mixed at low prices. 100% guaranteed. Free Circular and Price List.

TWIN HATCHERY McAlisterville, Pa.

Baby CHICKS

Barred Rocks, Red Rocks, Red ... Leghorns. Circular free. Prepaid. Live delivery guaranteed.

ROOKVILLE HATCHERY, Rookville, Pa.

RIVERSIDE POULTRY FARM ... Bred Baby Chicks ... Barred Rocks, White Rocks, White Leghorns, Buff Leghorns, Reds, Anconas, Minorcas, Wyandottes, Orpingtons. Write for free price list.

RIVERDALE POULTRY FARMS, Riverdale, N. J.

420 Eggs in July from 45 February Hatched Pullets



You Can't Beat "Kerlin Quality", S. C. White Leghorns for Early Laying—and Long Continued Winter Egg Production

Farm women are successful with "Kerlin-Quality" Leghorns. They just can't help it. For Success has been bred right into Kerlin Leghorn Chicks for 29 years.

Mrs. C. H. Conklin, Durham, N. C., on Oct. 12, 1928, wrote: "I must write you about my success with Kerlin Chicks bought in February. They arrived in perfect condition—strong—healthy—and full of pep. I raised 45 fine pullets which began laying July 2nd. They have more than paid for themselves already. In July I got 420 eggs, nice large white ones. Got 45c a dozen for them. Their production increased every month. I have raised White Leghorns for 20 years, but never found any to compare with 'Kerlin-Quality'."

K. N. Tracy, Hampstead, Md., made $2492.90 profit from 1,000 Kerlin Chicks by the time the pullets had had one year. Mr. F. E. Dixon, Hazard, Ky., trapped four Kerlin pullets that averaged 273 eggs each. In four winter months, December, January, February, March, his 55 pullets laid 4,316 eggs.

Mrs. H. Crossland, Bristol, Pa., writes: "I am the talk of this town as I am getting so many eggs —and so many neighbors are not. They ask me, 'What is the Secret of Your Success?' I tell them 'Kerlin-Quality'."

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Yes! *"Kerlin-Quality"—300-Egg Blood Line* Chicks are truly bargains. Their cost is low. The quality is high. The net profit per bird so big. Over 50,000 satisfied customers have proved it.

Mountain bred. White diarrhoea free. Strong, sturdy, healthy. 29 years breeding for perfection. Big beautiful birds. World's Great Egg Producers.

Vitality Supreme
Many customers raise 98% to maturity—pullets laying 60% at 6 months old. Customers obtain flock averages of over 200 eggs.

Order Now!
For early fall eggs and big winter profit. You can't get better chicks, anywhere —regardless of price.

Get Your Chicks From the Finest Breeding Establishment in Pennsylvania.
We're right near your home. Your chicks will reach you within one day from time they are hatched. 100% live delivery guaranteed. We have supplied Pennsylvania and all other states for 29 years with highest quality chicks at lowest prices. Buy from Kerlin this year—and you will make no mistake.



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Big White Eggs, that command Premium Prices. Customers report pullets eggs weighing 26 to 28 oz. to the dozen.

Big Free 4-Color Catalog
Tells how you can make biggest profits in the chicken business. Describes World's Greatest Layers. Quotes low prices on highest quality baby chicks and stock. Send for it today. BIG DISCOUNT on orders placed now—for delivery when wanted.

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FOR GREATER PROFITS Hatchery Chicks

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Shipped C. O. D. Free Circular.

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BIG CHICKS from High Record Matings



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260-320 eggs S. C. White Leghorns. **Also Special Tancred Matings** and 15 other varieties. Wh., Br., Bl. Leghorns; Anconas; Wh., Bf., Bl. Minorcas; Wh., Bf., Rocks; Wh. Wyandottes; S. C. & R. C. Reds; Orpingtons; Jersey Bl. Giants. Write today for free catalog before you buy. **Prices low.** We add good genuine personal service to each customer. **Satisfaction Guaranteed.** 28 years shipping chicks to satisfied customers. **FREE! 1000 Chicks** in 1929 for best photos of Flocks or Flocks.

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Barred Rocks	6.50	12.50	60.00
Wh. and Buff Rocks	6.50	12.50	60.00
S. C. and R. C. Reds	6.50	12.50	60.00
S. C. Bl. Minorcas	7.50	14.00	67.50
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White Rocks	14	67.50	130
Owens' R. I. Reds	14	67.50	130
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White & Barred Rocks	3.50	6.75	13	63.75	120
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Mixed chicks, all breeds	2.75	5.25	10	48.50	90

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BABY CHICKS

	50	100	500	1,000
White Leghorns	$6.50	$12.00	$57.50	$110.00
S. C. R. I. Reds	7.50	14.00	67.50	130.00
Barred Rocks	7.50	14.00	67.50	130.00
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R. Rocks & R. I. Reds	4.00	7.50	14.00
Heavy Mixed	3.50	6.50	12.00
Light Mixed	2.75	5.00	9.00

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From Laggers to Layers

THERE are times when birds are getting everything they require in the way of feed and housing, and yet do not lay as we would like to have them. Perhaps the pullets are a little slow in getting into heavy production, or we have late-hatched pullets at this time which are now full grown but not laying heavily, or we have hens which have passed through the mold but which have apparently no interest in the nest box. These birds all need something to give them a start and, provided, of course, that they are capable of being started, there are a few tricks in feeding and handling which will soon get them to work.

It is of course important to remember that in a general way grain makes flesh and mash makes eggs. Accordingly, the more mash we can get into our birds the more eggs they will lay. However, in getting them to lay we must also remember that they must be kept up to good body weight by the use of grain or they will break down and lay very poorly. It is by varying the proportion of mash and grain fed that the expert feeder starts his birds to laying, gets good production and continues to get it.

In order to start the lagging birds it is essential that they eat a large amount of mash. One of the most important ways of doing this is to see that they have ample hopper space. In one of my pens which is doing very well I have 36 running feet of hopper space for 200 birds. One foot of space for every six or eight birds will give all a chance to get enough mash during the day.

As a further inducement I am heartily in favor of giving a moist mash at noon. Mix up laying mash with milk or water, adding parings or other kitchen wastes if you have them, giving a quantity which the birds will clean up in fifteen or twenty minutes, but not enough so that the birds will stuff themselves and remain dopey the rest of the afternoon. They are very fond of wet mash and it is possible to feed too much.

Grain at Night

Mash consumption can also be largely regulated by grain feeding. The birds relish grain more than mash and, if given their fill, will put on flesh instead of laying eggs. I always give my birds all they will eat at the afternoon feed, with just a little over to start them off in the morning, but give them very little when I make my first rounds or omit the morning grain altogether. This induces a heavy consumption of mash during the day, while the full grain feeding at night keeps them in good shape. Of course, when birds are laying heavily, it is then necessary to feed more grain or even to feed a fattening mash at noon.

Another important thing to do is to give green feed regularly, not in large amounts, but enough to regulate the birds and keep them in health. Not over five pounds per day per hundred birds is the rule.

Still another thing to watch out for, is the oyster shell supply. It is absolutely essential that the birds have free access to shell or limestone grit if they are to lay, and yet many farmers neglect to supply anything of the sort, and still wonder why they are not getting eggs.

Last of all, look to the water supply. Laying birds drink a great deal of water, in order to moisten the mash and grain they eat, and the egg itself contains a large percentage of water, and when they are without a full supply at all times production is bound to be affected.

These points I have gone over, all in the nature of homely wrinkles, will get the eggs if carried out in practice, provided the birds have what they require in housing and management otherwise.

R. L. S.

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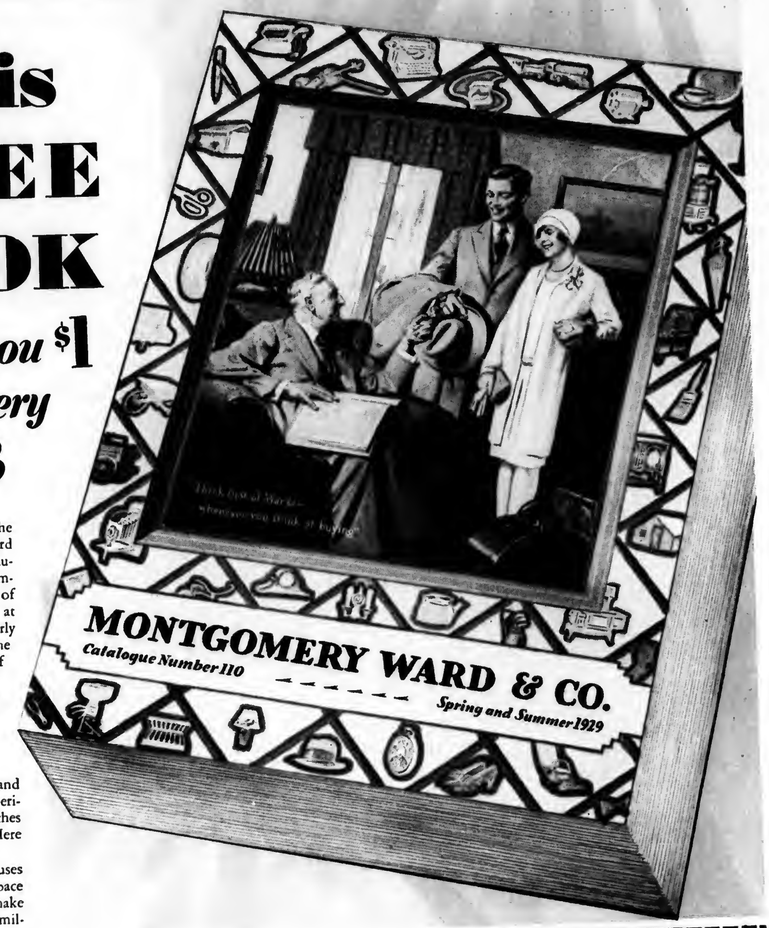
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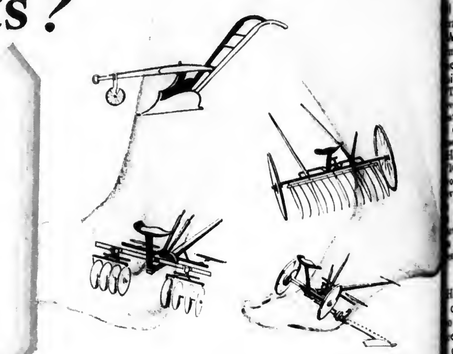
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This explains longer wear

In the "U. S." Blue Ribbon Testing Laboratories a machine presses the sole against swiftly revolving emery—very much like holding a boot against a grinding wheel. The soles in some brands of rubber footwear chafe away at the rate of 4-5" per hour. The standard of "U. S." Blue Ribbon Rubber is 1-5" per hour. No wonder many farmers say these amazing Blue Ribbon boots outwear others!

The 300-Farmer Test

All told, Blue Ribbon footwear must pass 12 laboratory tests. On top of that, 300 farm workers help us check up Blue Ribbon wear in the hard grind of actual service. They wear cross-mated boots—a "U. S." Blue Ribbon Boot on one foot and a competing boot on the other. By watching these results we make *certain* that Blue Ribbon Boots outwear others!

Make this test yourself

Twist a "U. S." Blue Ribbon boot. Then let go and watch it snap back! It's as live and elastic as a rubber band. You can stretch a strip cut from the upper more than five times its own length! Where constant bending cracks inferior footwear *this rubber stands up!*



"U. S." Footwear for the Whole Family



1. You will recognize the super-quality of these "U. S." Blue Ribbon Boots the instant you see and handle them. Notice the liveness of the uppers and the tough, oversize soles. Every point where wear is greatest is heavily reinforced by from 4 to 11 layers of Blue Ribbon rubber. Made with gray soles and red or black uppers.

2. The "U. S." Blue Ribbon Walrus (all-rubber arctic) is the most useful shoe on the farm. Slips right over your leather shoes. Kicks off in a jiffy. Washes clean like a boot. Made with gray soles and red uppers. 4 or 5 buckles.

3. This "U. S." Blue Ribbon Giant Bootee has a white upper and a black extension outside. Made with 6 eyelets or 4 eyelets. Exceptionally well reinforced and shaped to the foot for longer wear and greater comfort. Other bootees with red or black uppers and red, gray or black soles.

4. Gaytees is the trade-marked name of the new tailored overshoes made only by the United States Rubber Company. Beautifully designed. New styles, new patterns, new fabrics. Smart as a Paris slipper.

See them! Also a complete line of overshoes with Kwik-glide fasteners.

Of course, for women's use around the farm, nothing will ever beat the trim "U. S." cloth-top, buckle galosh.

5. "U. S." Blue Ribbon Boots are made in three lengths—knee, medium, hip. They have gray soles and red or black uppers.

6. You'll be glad to wear this sturdy, good-looking arctic anywhere. The "U. S." Portland (galosh has a long-wearing gray or red sole and finest quality cashmerette upper. Fleece lining for extra warmth. 4 and 5 buckles.

7. "U. S." Blue Ribbon Rob Roy thigh, lace boot. A light weight, gray soled, red or black upper, high lace all-rubber boot. Plain vamp; corrugated toe. Made snug at the ankle and snow-excluding. 2 heights, 10" and 15".

8. "U. S." Rubbers are made in whatever type you prefer—storm, high-cut, footholds, for heavy service or dress.

9. Keds are the most popular boys' and girls' shoes in America. Made only by the United States Rubber Company. They give barefoot freedom—encouraging the foot to healthful exercise—yet afford the protection you want.



FREE BOOK! *The Care of Farmers' Feet*

Every farmer who wants comfortable, healthy feet should get this free book. Written by Dr. Joseph Lelyveld, Podiatrist, Executive Director of the National Association for Foot Health, it discusses such problems as bunions, corns, ingrown nails, chilblains, callouses, fallen arches, how to care for itching feet, and many precautions that lead to health and comfort for those feet of yours.

It also tells how to greatly increase the life of your rubber footwear by following a few simple rules. Write for "The Care of Farmers' Feet." Address United States Rubber Company, Dept. 102, 1790 Broadway, New York.



"U.S." BLUE RIBBON heavy footwear

Blue U.S. Ribbon

The Ancients Talked Weather—

(Continued from page 5.)

in use down to the advent of the ral Free Delivery.

While they knew the stars, as no mer today knows them, they gov-ed their work by them. Pliny is itive that

"The proper time for sowing depends in ery great degree on the stars. It is of t importance then to ascertain the ex-days of the rising and the setting of e constellations."

However he admits

"it is an arduous attempt and almost ond all hope of success to make an en-vor to introduce the divine science of heavens to the uniuformed mind of rustic, still with a view to the vast tical results as must be derived from kind of knowledge I shall make the empt."

Difference of Opinion

He grants there is some difference opinion as to those "exact days"; some uncertainty about the influ-e of the stars. Yes, once he seems despair of explaining the "divine ence" to his "rustics". But after all goes back to his stars and tells how Democritus who was the first to com-ed that close affinity which exists be-en the Heavens and the earth, finding researches slighted by the more opulent his fellow citizens and pressaging the price of oil which was about to re-upon the rising of the Vergiliae bought all the oil in the country which was at a very low figure from the ex-ation of a fine crop," and "vast riches ed in upon him apace."

In short Democritus cornered the rket. So "watch your stars" urges naturalist especially

the Milky Way. It is the emanations this that supply their milky nutri-t to all branches of the vegetable rld. If then at the moment of the ris-and setting of these constellations the soft and pure, transmits these genial milky emanations to the earth the will thrive apace. But if the moon her chilling dews the bitterness ed infuses itself into these milky se-ons and kills the vegetation at its h."

So even though one was not a dairy mer he must keep track of the Milky y. While as for the Moon—it was ersally known then, and a genera-n ago was still known in America, at some things must not he done en the moon was growing in size. antastic these ideas," you say. Many them were. Yet it should be re-mbered there was more reason for tching the stars in those days when e undertaker and the life insurance ent did not distribute printed calen-rs to remind men that life was fleet-g. While, if fear of what might hap-n at certain changes of the moon led m to suspend work, they probably d a much needed rest.

A Government Function

Altogether then the ancient farmers re fairly alert as to what to expect the weather line. But some of them d not stop with that. If the Greek d Latin farmers had grown rather nservative, in other parts of the rld some control of the weather was ll considered possible. Indeed when en now we jestingly blame "the ather man" at Washington for the wers that interfere with the Sun-y School picnic, we are doing what ry likely our dim forefathers did in nest in days when managing the ather was often one of the prime nctions of the government.

It was the king's job to look after e weather; not merely to predict it t to provide it. He was supposed have magical power to turn on the when it was needed and turn it when it wasn't, or arrange to have rned off. And if he fell down on job, why, evidently his magical wer was declining; he had better re-from office. And retirement in ese times meant retirement. They ver came back—in this world.

Naturally with their crowns and ptres thus at stake the great art of

(Continued on page 48)

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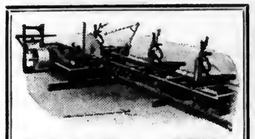
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The Farm Home

Picked Up and Jotted Down

By GERTRUDE S. STEWART

MRS. JOHN M. PHILLIPS of Pittsburgh stirred the hearts of every one at the Pennsylvania Farm Products Show as she urged that we have greater love for folks and our homes. "Do something for some one every single day of your life," she left with us for a motto this year."

She regrets that "sentiment" has disappeared from the lives of so many. Sentiment is a precious thing—cherish it. Back of all sentiment is boundless love. Do something unusual to make your home more precious to you and the community. Plant trees, shrubbery, perennial borders of everlasting flowers. Build a fine enclosure about that old well, and make of it a joy forever. Cling to the fine old things about your place and enhance their beauty.

* * *

A woman—Mrs. North Shellenberger, of McAlisterville, Pa., was crowned Queen of poultry workers for the year 1928. This means that she had the highest known percentage of hens laying above 200 eggs during the 365-day contest. We women all congratulate her, and rejoice in her outstanding achievement.

* * *

Four vocational schools of Pennsylvania made exhibits. Unionville girls have already learned how to be good mothers, and properly take care of babies.

Four splendid ideals were displayed not only by posters, but by an actual baby doll in the setting of the real baby. 1. Let me sleep. 2. Clothe me comfortably. 3. Keep me clean. 4. Feed me regularly. The babe was shown sleeping in his own bed, with soft, lightweight, but warm bed coverings; windows wide open.

Clothing of proper weight and fabric, as well as good patterns, was on display, showing not only what the girls have learned, but what they can make. The baby's bath tub and other bath supplies made another good picture lesson. Supplies needed for the bottle-fed babe finished the illustration.

The Orangeville vocational schools illustrated an ideal farm home, with most attractive grounds. Two placards give forth this truth:

House.—A product of human handicraft.

Home.—The creation of heart.

Do you live in a house or a home?

* * *

In many homes, the kitchen sink should be the healthiest factor, for so many minerals and other food essentials are simply poured down daily.

Pauline Rohrs, Food Economist.

* * *

The State Health Department continues its warfare against the prevalence of disease caused by imperfect water supply. A safe well has these six features:

1. A water-tight cover.
2. Water-tight joint between cover and pump.
3. Waste water trough of proper length.
4. Surface sloped away from well
5. Water-tight wall or pipe below the surface.
6. And is tested at intervals.

If you have never seen the State Tank Bulletin, write to Pennsylvania Department of Health, Bureau of Engineering, Harrisburg, Pa., and get one. It will help to keep your water sanitary—your water supply safe.



The "Better Halves" of the Master Farmers of 1928

Standing, left to right: Mrs. E. S. Ferry, Mrs. Harrison S. Nolt, Mrs. Paul Willits, Mrs. Edison M. Hay, Mrs. L. Otis Cockran, Mrs. C. B. Snyder.

Seated: Mrs. Amandus Larson, Mrs. Ray F. Brown, Mrs. William G. Mendenhall, Mrs. Clarence H. Smith, Mrs. William J. Clayton. Those unable to be present when this picture was taken in Harrisburg were: Mrs. Frank P. Willits, Mrs. S. S. Lehman, Mrs. Clifford E. Snyder, Mrs. Oliver A. Newton, Mrs. Warren C. Newton. A group picture of the Master Farmers of 1928 appears on page 5.

At an electrical demonstration, the value of good cooking kettles for all kinds of stoves was brought out. Choose pans with straight sides, flat bottoms, and tight lids. The reasons every one knows. For the oven, casseroles with tight-fitting covers are most desirable.

Make frequent use of your waffle iron. Any batter can be baked in it—try short cakes, corn bread, etc.

The Better Halves Club

Master Farmers—1928 and 1929

The wives whose husbands were given the Master Farmer award for 1927 gave the wives of the 1928 group a royal welcome into their club. The two groups met informally in the parlors of the Penn-Harris on Thursday afternoon, January 24, and a jovial social time was enjoyed.

Mrs. Robert Brinton was re-elected president, and Mrs. Frederick Taylor will again be the secretary. Two new offices were established—two vice-presidents, with Mrs. Eugene Stapler and Mrs. Harrison Nolt elected to these positions.

These women represent a real live group. It takes cooperation and many splendid qualities to walk in step with Master Farmers.

"What many call LUCK
Is simply PLUCK.
And doing things over and over.
Courage and will, perseverance and skill
Are the four leaves of GOOD LUCK'S Clover."

Trees for the Farm Home

By HEPSY NEFF

ONE need not travel many miles, even in prosperous rural sections, to note the few farm homes that have gathered the beauty and blessing of trees about their doors. Yet few of these barren, barn-like homes are more than a mile from acres of woodland where trees and shrubs may be had for the asking.

One of the happiest memories of childhood is going with my father and brothers to the "sugar bush" where two hundred sugar maples were tapped each spring, everything to be done. Such exciting days they were, the [illegible] the sugar kettle, [illegible] to the new brick a dozen or more of the choicest young maples were taken from that same wooded forty and planted in the large yard which is the privilege of every farm home.

Late winter planting became a habit with us, even the scraggy thornapple finding a place near our window. If there were any failures from our transplanting I have forgotten them. Even a seedling maple no bigger than a [illegible] pulled up in the woods [illegible] loving personalities but carries its superior advertisement to all who see it. If there is any other means of proving lovers of real beauty and homes of shams the world has not yet found it.

Later experiences with rocky and shaded soils taught us the use of dynamite even in planting fruit trees. A crowbar is sunk two feet in the ground, a bit of dynamite planted in the bottom of the hole, the earth tamped lightly about the fuse and the match is a two-by-four foot hole. When it is cleaned and refilled with rich soil a fruit tree grows like Jack's bean stalk. I have seen fruit trees so planted grow and bear when like others without the use of dynamite, in the same soil dwarfed and died.

We who are on the sunset slope of life owe it to our children to make them as beautiful a world as our fathers left to us. That will be a task worthy demands the best we have. If we make it as our fathers met their task our country will climb to ever greater heights. By so much as we fail individually and collectively, we block the wheels and shut off the power.

"WHY is it that has saved he most steps while doing work during the past year?"

The question was a subject for a call at Grange and about 40 members present their answers.

"Next" said the Lecturer to a man who was over sixty years old and had long a 65-acre farm with very little help.

"My head saves me the most steps in the week" and then the rest all agreed that he didn't have a pretty good "old saw" after all. The old man's head will make your head save your heels if you don't be forgotten. C. S. S.

New Uses for Rag Rugs

By HILDA RICHMOND

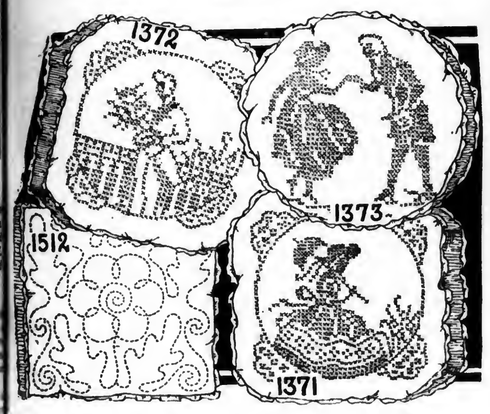
WOVEN or crocheted rugs made of cotton rags are very nice for the bath room and for bedrooms, and they are also useful in other places. When the rags are cut fine and sewed without knots and uneven places they make a durable fabric that holds its shape for years. Many weavers will furnish the strips in yard-wide size, or narrower if desired. Sometimes a wider rug can be had in the woven ones, while in crocheting they can be made of any width in sections and sewed together.

A smooth, well-woven rug makes a good silence cloth for the dining table covered with a length of old counterpane or white outing. The ends can be tied or hemmed, and the whole makes a protection for the table top from hot dishes while silencing any rattle of crockery. By having the strips woven the right size and whipped together good covers can be made for bed springs, and also for mattresses of the white or blue and white rugs. Often the springs make marks on the mattress in spite of the muslin slip, so a heavy cover is a fine asset.

A rug made of silk stockings dyed, or in light colors, is a good thing to place on a couch to protect the leather or other covering. Fringed and made nicely it is a thing of beauty. Two strips sewn together will make a nice rug for the children to sleep on when they camp out in the tent on the lawn, or a covering for the cot on hot nights. A little boy complained that the cotton blanket on his cot in camp made him rise next morning looking like a waffle, but a good rug will keep the wire from imprinting itself on the flesh and still not be too warm to sleep on.

Several thicknesses of rug slipped into a case of bright cretonne will save discomfort in porch furniture and can be kept cleaner than cushions. In camping a heavy dark rug made of old wool trousers and coats is ideal to spread on a cot or on the ground for sleeping and saves the blankets.

Hints for Spring Fashions



Quilted and Cross Stitch Pillows

Design No. 1512 is a quilted pillow. This comes with the wadding and voile with Rayon top and back. The price is only 75 cents. With wadding and voile and Rayon satin top and back, $1.50. Rayon or satin can be had in the following colors: Rose, blue, maize, green and lavender.

The cross stitch pillows, designs 1371, 1372 and 1373, are new and very much in demand. These can be had in either coral, blue, maize or lavender, stamped on a fine count tubfast fabric. The price of any of the cross stitch pillows is only 50 cents.

Send your order, enclosing coin, to Embroidery Dept., Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

For the Wardrobe

No. 3330—Monogram sports dress. Designed in sizes 16, 18 years, 36, 38, 40 and 42-inch bust measure. Size 36 requires 2¾ yards of 40-inch material with 2½ yards of binding. Emb. No. 706 (blue or yellow) costs 15 cents extra.

No. 3044—Easy to Make! Designed in sizes 16, 18 years, 36, 38, 40 and 42-inch bust measure. Size 36 requires 1¾ yards of 40-inch material with 3¼ yards of lace.

No. 3405—Novel one-piece dress. Designed in sizes 6, 8, 10, 12 and 14 years. Size 8 requires 1¾ yards of 36-inch material with ¾ yard of 36-inch contrasting and 4¾ yards of binding.

The spring Fashion Magazine will help you in preparing your spring wardrobe. If you order a pattern at the same time, the price of the book is only 10 cents. Send order and money to Pattern Dept., Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.



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Just mail coupon or postal and we'll send you, absolutely FREE, any *one* of these lovely patterns and our marvelous Spring and Summer Style Book and Family Outfitter. This offer is made to introduce to you the Chicago Mail Order Company's money-saving yard-goods department, where you can buy anything from a yard of muslin to the best fancy and plain silk. Don't fail to take advantage of it. Choose pattern you want; give us number and size. Send coupon or postal NOW—pattern and catalog are FREE.

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There are 274 pages—many in actual colors and rotogravure. Dresses, coats, millinery and women's and misses' shoes, men's and young men's suits, furnishings, work clothing and shoes—children's apparel of all kinds, and a complete line of underwear, hosiery, corsets and furnishings, as well as many useful articles for the home. SATISFACTION GUARANTEED. Get *this money-saving* Style Book *and fashionable, easy-to-make pattern free. Coupon is handy, or a postal will bring them to you.*

FREE — Send Coupon

Popular

F-136FW9592
A trig little two-piece outfit, equally "at home" on sport occasions or on the street. Small view shows style of dress. May be made in ensemble effect of one material, or dress may be made of one fabric, coat of another, velvet or velveteen being particularly smart for the coat in the latter case. Sizes 14 to 20 years, and 36 to 40 inch bust. Size 36 requires 3½ yds. of 36-inch material for dress, and 2¾ yds. of 36-inch material for jacket.

Select Pattern You Like Best

Mail the Coupon, and the Pattern and Our Latest Style Book Will be Sent You FREE!

Back

Back

F-136FW9593
Enthusiastically accepted by women who desire the most becoming lines. "V" line at front, crushed belt, "kick" pleats, slightly full sleeves with tight cuffs. Silks, wash fabrics, or woolens all work up splendidly in this design. Size 16 to 20 years, and 36 to 44 inch bust. Size 36 requires 3¾ yards of 36-inch material, and ¾ yd. of 36-in. contrasting.

Easy to Make

FREE — Send Coupon

F-136FW9576
Charming afternoon or street frock. Its shawl collar is one of the newer style notes; raglan shoulder and bell sleeves are unique. Front pleats make movement free. Very good in silks, wool fabrics, or practically any materials. Sizes 16 to 20 yrs., and 36 to 44 inch bust. Size 36 needs 3¾ yds. of 36-inch material with ½ yard of 36-inch contrasting.

FREE — Send Coupon

Very Neat

F-136FW9584
A cleverly designed frock—featuring the popular jacket or vest effect at front only. A thoroughly individual tailored style particularly good in woolen fabrics, silks and materials with considerable body. Note diagonal placement of pockets. Sizes 16 to 20 years, and 36 to 44 in. bust. Size 36 requires 4 yards of 36-inch material, and ¼ yard of 36-inch contrasting.

F-136FW9588
This demure frock for the school miss fittingly adopts the popular, eternally youthful Peter Pan collar. Soft shirring at waist, and bows at ends, are other youthful notes. A style that lends itself equally well to any fabric, and is appropriate for dress or everyday wear. Sizes 6 to 14 yrs. Size 8 requires 2¼ yds. of 36-inch material, and ¾ yard of 36-inch contrasting.

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Have a Heart--Valentine Party

A VERY important rule for the girl who is planning a Valentine party is to know her games thoroughly before the evening of the party arrives. Have all paraphernalia of your evening's entertainment at hand. Use a whistle for getting attention if your crowd is very large. Above all, don't allow the evening to drag.

The Invitation

On heart-shaped cards, write these words:

"Have a heart and accept my invitation to attend a Valentine Party on Thursday, February 14th, eight o'clock."

Grand Opera: Line up the guests for partners in a grand march, informing them that they must remain partners for the entire evening. Have a number of paper hearts hidden all over the room. As soon as a heart is found, the finder must sing the scale to his partner and he cannot pick up the heart until his partner has also found a heart and sung the scale. Better not invite those who are musically inclined.

The Artist: One at a time each one is blindfolded and given a piece of red crayon. He is to draw a heart on a large sheet of paper, signing his name at the bottom. The one drawing the most perfect heart might be given a prize.

A Telegram: Each couple is given a piece of paper and told to write a telegram with the initials V A L E N T I N E as the beginning of each word, in regular order. These are collected for reading; the prize going to the couple turning in the best telegram.

A "Pep" Game

Cherry Race: After this, perhaps it would be best to have a stirring game. Guests are divided into two equal lines. The first one in each line is given three or four large cherries which he is to carry on the back of his hand. When the signal is given, these first two contestants with cherries on their hands race to the goal and back, and give their cherries to the next runner who does the same thing. If the cherries roll off the runner must pick them up unassisted.

Word Hunting: Complimentary words which could be used in making up valentines are written on small red hearts and hidden all around the room. Prize goes to the first one who finds enough words to make a logical valentine message.

Refreshments: If you are carrying out your color scheme in red and white, you might have cherry jello moulded and topped with whipped cream, heart-shaped cookies with a candy heart on top, candy and nuts. Or, you might have heart-shaped sandwiches of white bread cut very thin, filled with ground ham mixed with salad-dressing, grape juice, red and white mints and fondant colored with red vegetable coloring, apples and nuts.

Valentine Specialties

If the hostess does not mind a little extra work, I would suggest the following recipe. As to a name—there isn't any, but it belongs to the ice-box pudding family. Dissolve one box of jello in the usual way and when it is about ready to congeal, whip with an egg beater until it is the consistency of whipped cream. Have ready one-half pint of whipped cream, mixed with several tablespoonfuls of pulverized sugar and one-half teaspoonful vanilla. Mix the jello and whipped cream together until smooth. Line a deep pan with split lady-fingers; pour the mixture over the cakes, using about one-half; then another layer of the cakes and jello and place on top in squares in the order you expect to cut the pudding, unsalted pecans. Put in a cool place for twelve or more hours. Cut in squares. This serves six persons. You will need about three dozen ladyfingers.

As for candy, this recipe for peppermint drops might come in handy. Two cupfuls sugar, one-half cupful boiling water, two teaspoonfuls marshmallow creme, enough peppermint extract to taste. Boil sugar and water until it will form a soft ball in water. Add marshmallow creme, and beat until thick and creamy. Drop on waxed paper.

Every one knows how to make fondant, but have you ever tried caramel fondant? Three cupfuls of sugar, two cupfuls milk, one teaspoonful vanilla, one cupful nuts. Caramelize one cupful sugar and when nicely browned add one cupful of the milk. Stir until dissolved. Add two cupfuls sugar and one cupful milk and boil until it forms a soft ball in water. Remove from fire, add vanilla and nuts. Beat until creamy.

In case you don't have good luck with your sea foam recipe, try mine. Boil three cupfuls of brown sugar with one cupful of water until it hardens in water. Take from the stove and add vanilla flavoring with the well-beaten whites of two eggs and one cupful of English walnuts. Beat until thick enough to drop from a spoon on buttered plates.

Fruit Punch

This will serve twelve persons. Juice of ten lemons, one small can of chopped pineapple, sugar to taste. Add enough cherries to color punch and slightly flavor.



How to Decorate

VERY little time is required to plan a valentine party, for almost everything one could wish in decorations may be had in paper. The illustration shows a table with a cloth and napkins of crepe paper all ready decorated with cupids and hearts galore.

For a centerpiece, a little Jack of Hearts is ideal. And this may be easily made. Jack's face is made from two circular pieces of cardboard 8"x10" in diameter. Paste them together with wire between, and allow the wire to extend about five inches below. The face is drawn on both sides with ink and a generous dab of rouge makes the nose and cheeks. A frill of crepe paper and a huge heart form the hat. The head is mounted with a ruff at the neck, on a wire globe or if desired, to a square paste box. In either case, Jack's body is but a covering of gay crepe paper and he is securely fastened to a paper mat. His head and the ruff lift up on a gummed tape hinge little favors of valentines may be tied away inside. Cardboard hands, frills at the wrists are pasted on each side.

The nut cups are made from clowns cut from crepe paper mounted on cardboard and fastened to red paper cups with wire.

Valentine aprons and caps may easily made too. The aprons are simply large hearts cut from doubled crepe paper and pasted to gathered skirt sections. And to make a cap, cut a piece of pink or red crepe paper to fit the head and gather on the top. Paste the joining, and add a lace paper doily with a cardboard heart in the center of either side. A jaunty streamer on one side of the cap makes a pleasing addition.

If you are interested in a Gala book of instructions and suggestions for decorations, games and making of centerpieces and favors of all kinds, send ten cents with your name and address to Dept. 229, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Legend of Saint Valentine

February's winds are piping,
Airy flakes are floating down,
Yet he knows the path he's taking
Through the country or the town.
Cheerful, smiling saint, I'm thinking,
Be the weather foul or fine;
Bringer of glad gifts, we hail him!
Faithful old St. Valentine.

MANY years ago there lived a kind old man named Valentine. He was so kind and tender-hearted that he did not like to see any one suffer or be lonely, so Valentine went about leaving food on the doorsteps for the hungry and clothes for the poor. For the lonely, he left pretty cards, cheery messages and bright letters and, in the spring and summer, flowers and pretty bits of nature and in the fall bright seed pods and brilliant leaves. Valentine never forgot the children. He was never too busy to answer their many questions or to give them a helping hand with a heavily-loaded wagon, a broken skate or a bruised finger.

Though none ever saw him place his gifts on their porches, every one knew that the man with the kind face and the patient voice was the mysterious messenger. So the years passed by, and Valentine grew older and older, his hair turned white, his face wrinkled and his legs began to ache from his long journeys and heavy loads.

Then there came a day when Valentine found that he could not leave his comfortable little home, and he had to put down the great sack of things he had strapped to his back. "And such a dreary day, too!" he murmured sadly as he glanced out at the dark skies and the brown-gray world as it lay in bareness about. "What will Mother Stack do without her bread and Cora Dean without her milk? Dear me, I just must go!" Once again Valentine strapped the heavy bag on his back and started for the door, but before he could reach it his legs began to cramp, and he sank down on the nearest chair.

"This will never do," declared the old man, and again unstrapped the sack from his back and began taking out some of the parcels. "I will make two trips today," he stated, "If I can no longer carry it all at once." And once more the bag was put in place on his back, but this time Valentine could not even rise to his feet. For a long time he sat there, great tears dimming his eyes as he thought of the many empty door-steps.

He Finds a Way

As day after day passed and Valentine could no longer go about he grew very heavy hearted and he wondered how he could help the people whom he loved so much. Then one day his face glowed with his accustomed smiles and tenderness. "I have it!" he cried about to himself. "I still can send them cheer by the postman." In those days few people got mail, and it was very hard and costly to send even letters by mail, and no one thought of sending heavy parcels or even small ones.

After that Valentine sent out many cheery messages, which he continued doing until his death on the 14th of February. All the people he had been so kind to said that he was a saint, and ever afterwards the 14th of February has been known as St. Valentine's Day, and all kinds of love messages are sent. So those messages that are not sent in love are a disgrace to the kind old man who wanted every one to be happy.

For the Dull Moments

If some time is used in arranging next game, fill in with these:

Light a candle and place it on a table and see who can stand farthest away and blow out the candle. Not as easy as it sounds.

* * *

Distribute rubber bands of equal size to everyone. Then tell all to stretch the bands as far as possible. With the aid of a tape measure it will be determined who has stretched the band farthest.

* * *

See who can compose the best limerick line poem in ten minutes. Decision as to winner can be reached by ballot.

* * *

See who can compile the greatest number of words ending in "ness" in fifteen minutes.

February is gray and chill,
The dripping boughs are bare.
But there's a message from the hill,
A whisper in the air.

At your window there's a bird,
There's a bird at mine;
A little while ago I heard,
Be my Valentine.

—Nancy Byrd Turner.



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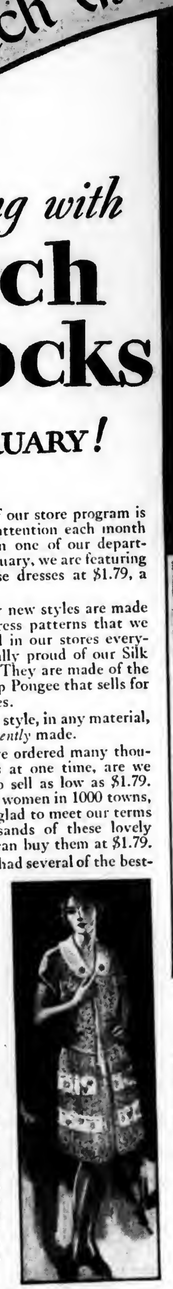
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(RIGHT) LOVELY SPRING-LIKE FROCK OF SMALL-FLOWERED *print in green and two shades of rose on white. The straight back and the smart front fullness of its skirt give it a crisp, youthful jauntiness. One of a great number of delightfully feminine styles—all at the remarkable price of $1.79.*

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Overalls and Socks

OUR part in the matter of what the men buy and wear for out-door work consists in keeping the garments washed and mended, but usually there is opportunity to suggest a wise choice when purchase is to be made. Where prices run from one to two dollars, it is unsatisfactory to get the cheapest grade of overalls and jacket, for they are apt to be reduced to rags the first time they are washed, and rarely are worth mending after the second laundering; indeed one cannot even cut good patching material from these sleazy garments.

What thrifty farm woman does not make a practice of salvaging what good, sound patches she can from overalls about to be consigned to the rag bag? I keep a generous roll of these patches in the drawer where the work clothing is kept. It is constantly giving off the long strips needed to replace the worn knees of another garment, and then taking on more pieces as something is discarded; so the roll of patches is perpetual, though so often used. For the plan of the patch, a good, straight piece covering all the worn area of each leg is better than several small patches, and they should be on the right side of the garment.

Sock Mending

It is probably true, as my husband says when I urge a visit to the wash tub on the part of the suit he is wearing, that "washing is harder on them than wearing", but they are not to escape on that account. With a power washer, now rather generally in use, this damage from the board is eliminated. If the old-fashioned method of washing is followed it is easier to get these heavy, much soiled garments clean if they are laid on the board and the soil removed with a scrubbing brush and plenty of soap. Cleaned this way, there is not the great amount of damage to the suit. Hung flat and smooth on the line, they will dry in good shape and need little ironing; then for the patching!

In mending socks an important point is avoiding rough and clumsy seams or other careless work which may cause discomfort to the feet of the wearer. A wool sock needing a new heel may have one cut from a folded piece of patch material, one end of the fold rounded off and the side sewed over and over in a seam, the little pocket-like piece then slipped over the sock heel and hemmed in place. Turn wrong side out, trim ragged edges of the worn heel and sew the edges of the hole down with a short darning stitch which will make the repaired heel smooth and comfortable.

Heavy cotton socks are more durable than wool and as they are very moderate in cost it is a waste of time to transform them into specimens of the mender's art; but a large hole may be quickly mended by sewing on the wrong side a shaped patch of an old lisle or cotton stocking and then on the right side darning coarsely over and through this. The result is a more comfortable mend than an ordinary darn would be. Who does not know the trial of foot-discomfort?

Farm Woman.



Mrs. S. J. McIntyre, Gibsonia, shown above preparing the holiday bird, although only sixty, has a family of fifty-six, counting thirty-three grandchildren and one great grandchild. Mr. and Mrs. McIntyre have never moved from the farm where they started life together.

Salads for the Appetite

The following is a cabbage and carrot salad which I have found every child to like as well as the grown-ups.

Take one head cabbage, six carrots, one stalk celery and one medium-sized onion. Cut the celery into small pieces and run through the food chopper. Sometimes I add to this a red and a green sweet pepper. Mix with this the following: One-half cupful vinegar seasoned with salt, pepper and sugar to taste.

Serve on crisp lettuce leaves with the following dressing:

Juice from a can of pineapple. Add one cupful of water, bring to a boil and thicken with two tablespoonfuls corn starch and yolks of two eggs. Add a pinch of salt and sweeten to taste. Cool and place on top of salad just before serving.

* * *

I make an egg salad as follows: Nice to serve at Easter time.

Use any quantity desired of shredded cabbage and pineapple or shredded carrots and peppers. Dissolve one-half package of gelatine in one pint boiling water. Add two tablespoonfuls vinegar, sugar, pepper and salt to taste. When cool, but not set, mix in vegetables and pour into shallow pan to set.

Have ready half as many hard-boiled eggs as you wish to have plates of salad. Peel and cut eggs lengthwise. Press down into the salad mixture and leave to cool. When ready to serve use a spoon to lift out each egg half with the surrounding salad. Place on crisp lettuce leaves and top with either whipped cream or pineapple dressing.

* * *

I find my family never tires of my recipe for stewed cabbage and are always pleased no matter how often I serve it.

The first and most important. I shred a head of cabbage real fine on a ten-row square tin shredder. Put the shredded cabbage into a stew pan with about a pint of water, one tablespoonful salt, one tablespoonful sugar and one teaspoonful celery seed. Just before serving add one tablespoonful of butter. When the water is well taken up add one tablespoonful of strong vinegar and serve hot.

Nora Kelly.

Chocolate Apple Sauce Cake

One-half cupful shortening, one and one-half squares chocolate, one teaspoonful soda, one cupful brown sugar, one and one-half cupfuls apple sauce, one and one-half cupfuls flour, one teaspoonful cinnamon.

This cake is delicious and always appreciated when eggs are scarce. Cream the sugar and shortening. Add applesauce and melted chocolate. Sift together the flour and soda with cinnamon. Add a little at a time. Beat well and bake in loaf pan in moderate oven. If you want this cake extra scrumptious, add three-fourths cupful cut dates and one-half cupful select nut meats. Yum! Yum! Betsey Ford.

* * *

Honey Raisin Tapioca

One cupful tapioca, four cupfuls water, one-half teaspoonful salt, one cupful honey, one egg yolk and one-half pound seedless raisins washed.

Soak tapioca in two cupfuls water for two hours. Add two more cupfuls water and cook until clear and soft. Remove from fire, add other ingredients and cook 15 minutes longer. Serve with a fruit whip or whipped cream. The white of the egg may be beaten, mixed with three tablespoonfuls sugar and used for a meringue.—From Honey recipes, G. B. Lewis & Co.



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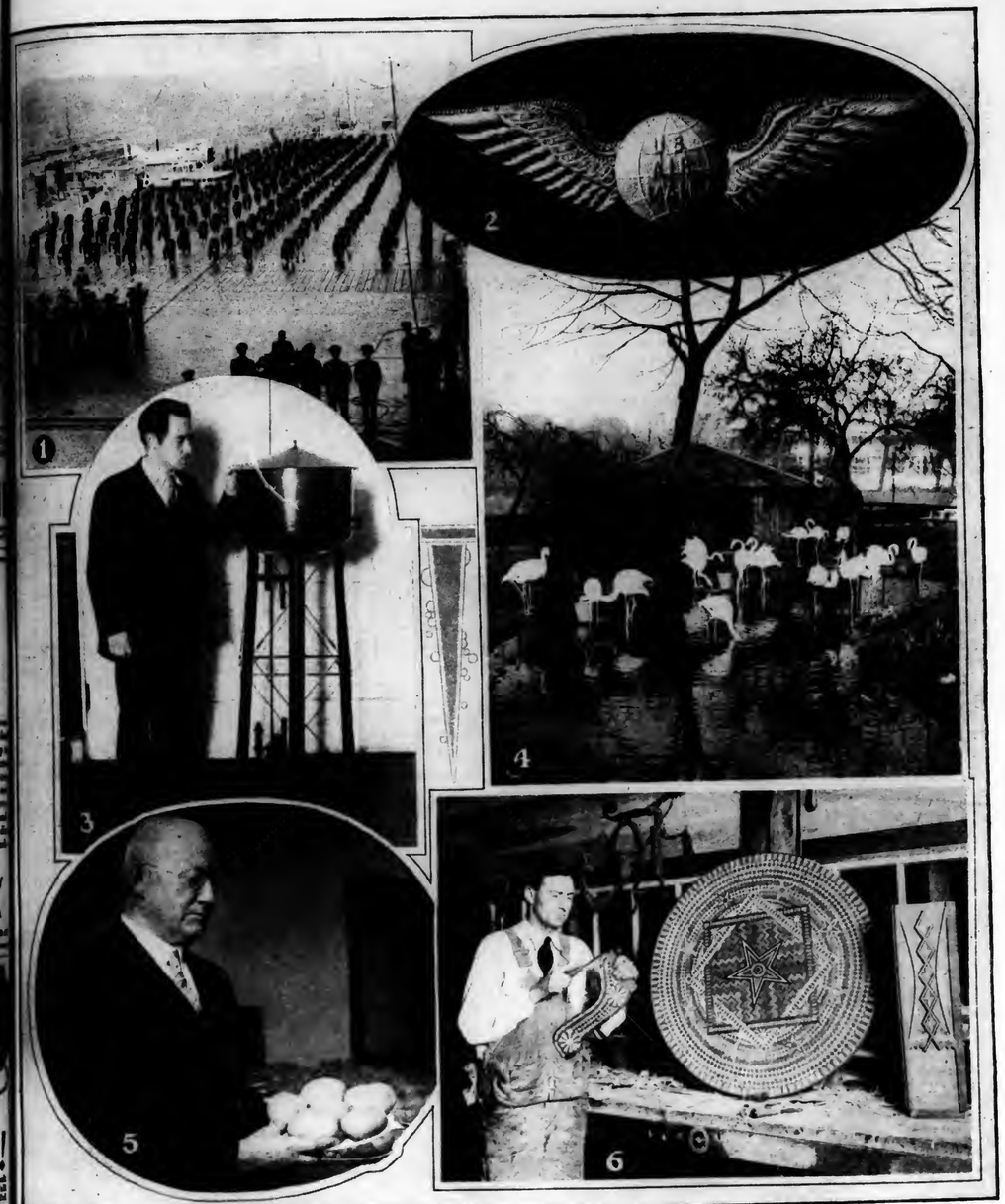
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PASSING EVENTS IN PICTURES



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1. An impressive view of the setting-up exercises—to the music of the band—aboard the giant aircraft-carrier, U. S. S. Saratoga, which is on its way to the Canal Zone for the fleet maneuvers. This group calisthenics takes place each morning.

2. First and exclusive photo of the design for an insignia to be worn by all air mail pilots, which was accepted January 19 by the Post Office Department at Washington. The design is the work of Col. L. H. Britten of the St. Paul Northwest Airways.

3. A detailed study of the wind pressures and strains exerted thereby on tall steel water towers are about to be made by engineers of the U. S. Bureau of Standards at Washington. A model tower as large as a man will be placed in the Bureau's huge wind tunnel and breezes as high as 70 miles per hour turned on it.

Byron H. Monish of the Bureau is seen with the model tank.

4. "Daddy Long Legs" at the London Zoo. Photo shows the long-legged flamingoes getting their afternoon meal in their winter quarters at the London Zoo pound. The reflections in the water make their legs seem even longer (as if they aren't long enough).

5. Uncle Sam's scientists of the Department of Agriculture at Washington are proudly exhibiting a new variety of potato which they believe has most of the diseases and blight which prey upon the tuber crop licked.

Dr. William Stuart of the Department, who took an active part in developing the new spud, is seen with a few of them.

6. Photo shows Frank Ferris, Olympia, Washington, with the remarkable inlaid table-top which he has completed after 14 years' work in his spare time. The top is composed of 5,793 bits of wood from nearly every country in the world—including a piece from an old Chinese smuggling junk of the Yellow Sea. Note the Rising Sun designs made of Japanese wood. Ferris is now working on the legs.

In Enemy Country

By James Willard Schultz

(Copyright, 1928, by James Willard Schultz)

Synopsis

Many Swans, a Sun medicine man, Lone Woman, his wife and Bear Plume, their son, who tells the story, have left the lodges of their own Blackfeet tribe and after perilous adventures, have joined the enemy tribe, the Crows. Lone Woman and Bear Plume cannot understand the move and Many Swans' only explanation is that he has done some secret wrong and must be punished. Bear Plume and Black Elk, son of Chief Dusty Bull, pledge everlasting friendship. Comes a day when Many Swans gives a feast and smoke to Dusty Bull, Long Bow, Low Horn, an aspiring leader, and other chiefs and warriors. Low Horn tells a tale of bravery and killing but is exposed as a liar by Many Swans and is severely punished by his own people. Lone Woman is warned that the disgraced chief has sworn revenge. Many Swans leads the Crows in battle against the Assiniboines and in the absence of the warriors, Bear Plume and Black Elk are required to provide meat for the families. Food becomes scarce and the boys start out on a secret journey for game. They are surprised and captured by the Spotted People and learn their captors are seeking a sacred white buffalo. In the camp the boys are given places of honor but plan to escape at the first opportunity. Bear Plume, Black Elk and a Spotted People brave, Fish Robe, are sent by Otter Head, the Chief, to bring in the white buffalo. Misfortune stalks the undertaking: Fish Robe's horse is bitten by a snake and Black Elk's horse must carry double. They flee from the fierce Snake men; Fish Robe is slain and the other two escape to a sheltering coulee and returned to camp under cover of night. Bear Plume prepares to carry out his promise to Sun of sacrifice of his body.

"YOU can make your sacrifice here. Tomorrow, the Spotted People will begin building their lodge for Sun—we had ours just before we came here—and during the ceremonies I will myself help you to carry out your promise," he said. And I gladly accepted his offered aid.

So it was that, during the following four days, I witnessed the sacred ceremonies of the Spotted People, and found them very different from those of my own tribe. True, they build a big lodge, something like our Sun's lodge, but the ceremonies attending it were very strange; principally concerning a buffalo skull, which they ornamented with paints and little bunches of various plants, and a large wolf skin, which they painted with strange figures in different colors. It represented, Morning Eagle told me, ancient First Wolf, wisest and most powerful of all the animal gods.

On the morning of the last day of the sacred lodge ceremonies, wearing only my breechclout and moccasins, I went into the lodge with Morning Eagle, and he there cut two long parallel gashes through the skin of my left shoulder, two through the skin of my right shoulder, and to the strips of skin between them attached a rope. The other ends of the ropes were then tied to the skull of a buffalo bull, and I went outside the lodge, dragging the skull, calling to Sun that I was giving him of my body, and praying him to give me and all of my people long life and happiness. All that day, by jerks, by short runs, I tried to free myself from the skull, but the skin strips would not break. The pain was dreadful; worse and worse as night drew near. The people pitied me; prayed for me; told me to keep up my courage. At last, as Sun was setting, Morning Eagle sat upon the skull, called me to his side, told me to run off as fast as I could go. I did so, and lo! at the sudden tightening of the ropes, both of my shoulder skin strips broke and I fell flat upon the ground, and died. And when I came alive again, there I was upon my own couch in Otter Head's lodge, and Lance Woman, bending over me, was smearing my torn shoulders with marrow grease.

So did I fulfill my vow to the great Traveler-of-the-blue.

WHEN my sacred wounds healed so I could again wear a shirt, I joined Black Elk and Lone Antelope in hunting and in herding our horses; and in the times when we had a plentiful supply of meat on hand, I frequently visited Morning Eagle, to talk with him of many things in my own language. Much he told me of far trails of his tribe, to the east and south, trails that they would never again travel because of the ever-increasing advancing whites. And always he would end his tale by saying: "Lose we now this last part of our once almost endless Buffalo country, then will come the end of us, for the Spotted People and the Parted Hairs!"

I very much wanted to see the fort that the white soldiers were building, somewhere above us; from afar, watch them at their work; and more than once asked Morning Eagle to take me there. Always he replied; "You shall see those white soldiers and help us fight them, when the Parted Hairs arrive."

Black Elk and I often talked together about that coming fight, and finally we thus decided: We would see it, but ourselves have no part in it, unless by some chance we should be also attacked by the white soldiers. We made, too, another plan for the future: as soon as the big fight ended, we should return to our own people. Otter Head and his women, Morning Eagle and others of the two camps, were so good, so kind to us that we should not hurt them in any way; upon leaving, we should go with only our very own horses.

The Parted Hair tribes were located somewhere in the Big River country, well below the mouth of Elk River. They now sent messengers frequently, to tell the Spotted People and the South Big Bellies to have patience and await their coming, and to say they were still constantly hunting, in order to obtain more guns and gun food for the coming fight with the soldiers. Days passed; days and days and even moons, and still they did not come; and some of the young men of our two camps, becoming impatient, and disregarding the orders of their chiefs, sneaked off at different times and killed a few of the soldiers whom they surprised at some distance from their fort. Black Elk and I became impatient at this delay in the coming of the Parted Hairs; more than once we made plans to return to our own people, but always decided to remain just a little time longer, in order to see the great fight with the whites. More than once, during this long wait, our two camps moved to fresh hunting country, and at last, when winter was really come, we located on Muddy Creek (Now named Lame Deer Creek), and not far below the walled coulee in which Black Elk and I had taken refuge from the Snakes.

At this place, on a not very cold day, there came Eagle told ... valley of S... Creek, was ... diers' fort, ... the flat, the ... Hairs formed ... with the Big ... on their ... the Spotted ... men on this ... Morning Eagle ...

ever, left his party and came over and joined ... Head, Black Elk, and me in the line of the ... People. Rode out then from the line of the ... Hairs a man of appearance so strange that ... out my surprise; for he wore the dress of a ... his head was bound with a piece of black ... leather, and of weapons he had not even ... He was, so Morning Eagle told me, the most ... erful Sun priest of all the Parted Hairs tribe ... it was said by some, was half man and half ...

This strangely-clothed sacred person rode ... the ridge and over it out of our sight, but ... came charging back, blowing now and then ... bone whistle. Halting then in front of our ... he said to the chiefs—so Morning Eagle ... "I have ten soldiers, five in each hand; do you ... them?"

A chief answered him: "Look at us, so ... many we are. Do you think ten soldiers can ... us? No, they are so few, we do not want them."

Again the person rode up the ridge, blew ... whistle, signing to Sun to pity him. He was ... a longer time, and came hurrying back and ... the chiefs: "I now have ten soldiers in each ... Will you have them?"

Answered a Parted Hair chief, greatest of ... chiefs there assembled—Black Shield was his ... "No, we will not have them; they are not ... for the great number of us here."

Off went the queer person again, zigzagging ... the ridge, blowing his whistle, calling upon ... pity, for help; and when he returned, he ... to Black Shield: "In my right hand I have ... soldiers; in my left hand, twenty. How about ...

Not enough for the many of us; we need ... than that to pay us for going on and fighting," ... Shield replied.

A FOURTH time the Sun priest went up ... ridge, out of our sight, and was gone a ... time. He returned as fast as his horse could carry ... sprang off and slapped the ground with both ... shouting: "Now I have more than a hundred ... diers——" What more he said was lost in the ... of the great assemblage of warriors there.

they were satisfied with his offer, and many of ... ran and struck the ground about him with their ... sticks. I thought then that the chiefs would ... lead on for the attack on the soldiers' fort, ... After some talk, they led us back to our camp ... mouth of the little creek, and there held a long ... cil with the dressed-like-a-woman Sun priest. ... then sent for ten young men, two from each of ... five tribes, and ordered them to go at once ... far end of the ridge overlooking the soldiers' ... remain there all night, and in the morning, ... discovering what the soldiers were doing, send ... some of their number with reports of it. ... Eagle was a member of this council, and that ... before we slept, he told me that the plan was ... some way to decoy the soldiers out from the ... and then attack them.

The night was very cold, as there was some ... upon the ground and the wind from the north ... were all up before daylight, and while the ... prepared the early meal, the men put on their ... clothes and saw that their weapons were in ... order. We left camp soon after Sun appeared ... large number of the Parted Hairs now on foot ... again went up to the foot of the big ridge. ... to us there two of the young men scouts, ... ported that a few of the soldiers, with horse ... wagons, were coming toward the other end of ... ridge, evidently to get firewood. The chief ... once ordered a few of the mounted Parted ... to go and attack them, hoping that the rest of ... soldiers would then come out from the fort, ... in some way ambushed and killed.

We remained there at the foot of the ridge ... a long time, hearing now and then the ... far-off shooting, and once the whoom! of a big ... in the soldiers' fort. The day was all the time ... coming colder, and we feared that we should ... if we did not soon make a move. At last some ... the scouts hurried to us and said that a number ... mounted soldiers, and, after them, a number ... foot, had left the fort and were approaching ... other end of the ridge. At that, the chiefs sent ... men to entice the soldiers to come up onto the ... and along it. A little later, when it was learned ... the soldiers were really on the ridge and coming, ... Parted Hairs on foot were ordered to hide ... selves in the grass on the flat, and the ... Parted Hairs were told to conceal themselves ... tween two little ridges to the east of the big ... The Spotted People and the Big Bellies were ... to hide themselves upon the west side of the ... We were there well concealed in a growth of ...

tour Parted Hairs, and the news that they brought caused great excitement in our camps; three tribes of them were encamped on Tongue River, and they awaited our coming, to go on and fight the white soldiers. It was late in the day when the messengers arrived, and, after eating, they took their back trail to inform their people that we would join them as soon as possible. Night had come when we set out for Tongue River. We numbered nearly all of the fighting men of our two camps, and many women. Both Lance Woman and Good Singer insisted upon going with Otter Head, to see the fight and do all that they could for our comfort. We traveled all night long, except for one short rest, and it was not until near the middle of the next day that we sighted the great camp of the three Parted Hair tribes. Its size astonished me; a multitude of people were there; as many as were all the tribes of my people, and yet these were but three tribes of their kind; all of them together, how very many they must be, I thought.

Just as though we were going to fight, we charged down upon the big camp, and then, after friend had met friend, our chiefs ordered us to go a little way down the river and make a camp of our own. Later on, after the chiefs of all the tribes had held a council together and decided upon what was to be done, the Spotted People and the Big Bellies, all of them dressed in their war clothes, mounted their horses, and, singing their war songs, rode twice around the camp of the Parted Hairs.

On the following morning, camp was broken and we all moved up Tongue River to the mouth of a small stream putting into it that was named, so Morning Eagle told me, Crows-Standing-Off Creek. So was it that, as we rode along, I saw that which surprised me: for all their hunting, the Parted Hairs had but few guns. Compared with my own people, they were poor, indeed, nine out of ten of them being armed only with bow and arrows. I talked with Morning Eagle about it, and he said the reason was that down whence they had come furred animals were not plentiful, and, anyhow, the white traders there had not many guns to sell.

Early the next morning, all of the men put on their war clothes, and a beautiful sight they were, especially the Parted Hairs in their war bonnets that hung down their backs to their very heels, and streamed out behind them as they rode. Leaving the camp, and some of the women to remain in it, we rode up the creek and up its right fork, coming to a halt on a flat prairie at the foot of a steep ridge that was a divide between this tributary of Tongue River and Sweet Pine Creek, running into Powder River. At the other end of this ridge, Morning

pines. In this great crowd of the two tribes, Otter Head, Morning Eagle, Black Elk, and I remained close together, with Lance Woman and Good Singer close behind us. The presence of the women now worried Otter Head; he told them, two or three times, to leave us, to go back to camp, but they only shook their heads, would not move.

After a long wait, when again near freezing, we saw a Spotted People chief, named Big Nose, coming along the ridge, riding a big black horse, and following him came the mounted soldiers. He turned and charged back at them, pretending that he wanted to prevent them pursuing his fleeing people. They fired many shots at him and he came on again, passed the line of us, the soldiers ever following, first those on horseback, and not far back of them the others who were on foot. I had a good view of them as they passed. In their lead was their chief, in his hand a big knife longer than my arm, and on either side of him a man in the clothes of a beaver trapper. The soldiers were all dressed alike in blue-cloth clothes, and their caps were blue, with shiny leather fronts. They were hairy-faced, fierce-appearing men, and seemed to be eager to press on and make a big killing of the owners of that rich buffalo country. I remembered all that I had been told of their killing of Spotted People women and children; knew that, if they could, they would kill the two good women behind me, and I turned all hot inside with hatred of them.

TIME and time again Big Nose charged back at the soldiers and I marveled that some of their shots did not pierce his body. At last the mounted soldiers, well ahead of those on foot, arrived at the foot of the ridge, started out upon the flat, and the Parted Hairs there hidden in the grass arose and attacked them. At the same time the Parted Hairs east of the ridge, and we upon its west side, charged the soldiers on foot. I fired my gun at one of them; he did not fall. I stuck the gun under my belt and got out my bow and some arrows and fired at others of the soldiers, but whether I myself killed any of them, I was never sure; like a swift-moving cloud were the arrows that were being fired at them. Slow they were in reloading their guns and firing at us, but their aims were true, and many a one of our side went down, to rise no more. Close beside me Otter Head tumbled from his horse, called for help, and Black Elk and I got him up before me on my horse and took him back to his women. There was a hole in his breast; he died as they lowered him to the ground. We helped them lift his body upon one of their horses, so they could take it to some safe place for burial, and then went to fight again. But the fight with those soldiers on foot was ended; all of them were dead, and the victors were stripping them of their guns and other possessions.

The mounted soldiers, when attacked by the Parted Hairs in the flat had retreated to the top of a steep hill a little east of the big ridge. All of the warriors of the five tribes there attacked them and they slowly moved back, from the hill up onto the ridge, where were some very large rocks, and there they made their last stand. One by one they fell; their horses got away from them. They fought well to the very last, killing a number of our party and wounding others, among them that brave Big Nose. He died two days later. We made a count of the killed; they were eighty-one white men, and, of our party, sixty-two. The fight lasted but a short time; it was no more than the middle of the day when it ended.* Taking with us our dead for burial, we returned to our camp at the mouth of the little creek. There was much singing of victory songs, as well as wailings of women for their dead. It was thought that the few white soldiers remaining in their fort would abandon it, and not again attempt to take that buffalo country from those who owned it. Well, they did withdraw from it for some winters. But, haiya! There, where once I camped and hunted with the Spotted People and the South Big Bellies, are now fire-wagon trails and many towns of the whites, and of the great herds of buffalo that there we lived upon not even one old bull survives.

On the morning after this big fight, the Spotted People and Big Bellies separated from the Parted Hair tribes, and trailed back to their camps on Muddy Creek. Upon our way there Morning Eagle told Black Elk and me that, now that Otter Head was dead, Lance Woman and Good Singer would live with their relatives, so we must make his lodge our home.

"Friend," I said to him, "we have been too long away from our own people, from our fathers and mothers, who are daily mourning, thinking that we are dead. We feel that we must return to them, make glad their hearts. And now that we have risked our bodies in helping you fight the white soldiers, think you that there will be any objections to our going?"

"No, you are free to go," he answered. And after some thought, he went on: "I will tell you now what your good friend Otter Head more than once said to me about you two. He said: 'These other-tribes youths, they are good, they are brave. As though they were my very own sons, I love them. But this I know: I cannot always keep them here with me. The time will come when they will feel that they must return to their own people. I shall tell them that they are to go whenever they please, but that, when they do go, I and my women go with them, so that we may be ever near them, our almost-sons'."

Came back to me then the many times I had seen Otter Head lovingly, sadly looking at us: he had all the time known our hearts. Truly, deeply, I mourned the end of that good man.

Three days after our return to Muddy Creek, we made known our decision to go to our own people. Mourning as they were over their great loss, Lance Woman and Good Singer felt still worse when we told them that we must go. But they were brave about it; they insisted that we must have, each of us, ten of their horses besides those already given to us. Also, they gave us soft-tanned robes, pouches of dried food, fur moccasins and fur mittens, and pack-saddles on which to load the presents. Then, in the evening, we were called to a feast and smoke with the leading chiefs of the two tribes. They said to us, Morning Eagle and the old Crow woman interpreting, that they were proud of the help that we had given them in fighting the white soldiers. They were sorry that we were going to leave them, and hoped that at some future time we should return. They then handed us two pipes and two pouches of nahwatosis,† to be by us given to the chiefs of the Crow and of the Blackfeet tribes, charging us to say that they sent them as peace offerings, and hoped that the Crows, the Blackfeet, and the North Big Bellies would soon name a place where the Spotted People and the South Big Bellies could meet them and make a lasting peace, and at the same time agree to fight all attempts of the whites to take from them their buffalo plains.

So was it that, on the following morning, Black Elk and I parted from our good friends, and, with our many horses and other rich presents, struck off down Muddy Creek, and then down Rosebud River,

† Nahwatosis is the Blackfeet word for nicotiana quadrivalvis, a narcotic plant still cultivated by the Blackfeet, at Gleichen, Alberta, but now used only for ceremonial smoking. It was largely cultivated by all the Northern Plains tribes until real tobacco became obtainable from the early fur traders.

* This was the so-called Fort Phil Kearney fight, December 21, 1866. Soon after it occurred, all soldiers were withdrawn from this part of the country, which was, by ratified treaty with the Cheyennes, Arapahoes, and Sioux tribes, Indian country which the government had agreed not to invade. A good account of the fight, from the point of view of the Cheyennes, is to be found in Dr. George Bird Grinnell's story, "The Fighting Cheyennes," page 221.



The Cheerful Plowman

EXTREME CARELESSNESS

THE woman who comes home to wash and brings her little child has left him by that tub, by gosh, where suds are steaming wild. I've preached before, I preach again, about such careless ways, strange practices of dames and men since early Trojan days!

Each day when I pick up my sheet to read the flare-head news, I get cold tremors in my feet. I take malignant blues, for always on the big front page I see where tiny tot left playing where big kettles rage with water piping hot has done the thing that any child is sure to do, I know, upset those kettles duly filled, in twenty jerks or so!

My paper tells a tale tonight; just forty miles from here a little rascal, cute and bright, just cutting teeth, I fear—but that's too sad for me to tell, I'll let you guess the truth! But listen, adults lecture well about the ways of youth; they tell how careless boys and girls can be when driving cars, they tell about the reckless whirls they cut along the bars; they warn them by the shades of John to stop and watch their gait or they'll soon have big pinions on and fly around in state.

They tell them that not only they are placed in jeopardy, but every one along the way is endangered, don't you see. Oh, yes they rave about the youth with careless, reckless trend, they even weep big tears in truth and warn them of their end; when this is done they go back home, just like this woman here, and fill a boiler up with foam when little kids are near! Grown folks are never reckless, no, just young folks tempt the Fate—that babe's too close, so I must go, I do not dare to wait!

J. E. T.

in quest of our people. We found them not on that river, so turned up Elk River, and on the fifth day of our search we saw smoke rising in a bottom of that river, not far below the mouth of Bighorn River. We passed through the timber at the lower end of the bottom, saw that there were two large camps in it, and Black Elk signed to me: "The Mountain Crows are again with us; that upper camp is theirs."

That made me think of the Mountain Crow, Low Horn, my father's enemy. What had happened between them during my absence? I wondered. I felt very anxious about it; feared that perhaps my father was dead. But when we had gone a little farther up the bottom and farther out from the river, lo! I sighted his buffalo-painted lodge; it was proof that he lived. How glad I was! I began singing a victory song. I had right to do it. Snakes I had killed, and white soldiers had I fought. Black Elk joined in the song, and the people heard us, came hurrying from their lodges, and watched our approach. We entered the camp circle and saw, standing between their two lodges, my father and mother and Dusty Bull and his women. The people made way for us; came crowding after us to learn what we had done. Our mothers pulled us from our horses, crying, laughing, calling over and over our names in praise. Our fathers embraced us. We all went into Dusty Bull's lodge, and Black Elk and I told a little of that we had seen and done during our long absence.

SAID Dusty Bull, when we told of the fight with the white soldiers and of the peace pipes that we had in our packs: "Enough of this now. It is of great importance. I shall call a meeting of chiefs, here in my lodge, tonight, and then you will offer the pipes and tell us all about it."

Helpful hands had unloaded our horses, cared for them, and placed our belongings in our lodges. Queerly smiling, my father lifted the door curtain of our lodge and told me to go in. I entered. Lo! tied to the lodgepoles above his couch, beside the roll of his sacred pipe, there was a neatly folded and bound white buffalo robe!

My father enjoyed my surprise. We sat down, and I asked: "Did you kill the animal? Was it a cow? Did you find it away off to the south?"

"Yes," he replied to all three questions. I then told him that the cow had been seen by parties of the Spotted People and the South Big Bellies; that many had hunted for it; that I myself had sought it. And then I asked: "That Low Horn, what about him?"

"Dead!" he signed, and motioned me to move over, sit beside him. I did so, and he whispered: "We were successful in our raid against the Assiniboines. We killed seven of them and captured a number of their horses. When we returned, I learned that some of the Crow hunters had seen a white cow, somewhere at the head of Tongue River. I was grieving about you. I thought that you were dead, and I did not care what became of me. That Low Horn had come down from the mountains and was visiting in this camp. I gave out that I was going alone in search of the white cow, knowing that he would take my trail. Wise he was, as cautious as a mountain lion trailing a deer, but before night I got a glimpse of him, following me. I rode into the head of a long coulee and stopped. He thought that I had gone down it, and so came on. When he was close to me, I charged out at him. He turned his horse about and tried to escape, never once attempting to stop me with an arrow. Why, he never drew his bow from his case! All that he did was to urge his horse on at its utmost speed, and, closing in on him, I put an arrow deep in his back! And another one in his horse! And there I left them, gave them to Sun. I went on and on, and after many days discovered the white one on a stream that these Crows call Muddy Creek, and there killed it."

"On the head of that creek, near a little hill, is where the cow was last seen by the South Big Bellies, by a war party of them. There it was that I killed the two Snakes; we must have missed meeting there by only one or two days," I said.

"Yes, yes. But Sun prevented, had other plans for you: that coming fight with the white soldiers. I am glad that you took part in it," he answered.

Much more talk we had, and then attended the council of chiefs. There Black Elk and I produced the peace pipes and sacks of nahwatosis, and gave the messages of the Spotted People chiefs and the chiefs of the South Big Bellies.

Said and signed my father, taking up one of the pipes: "The North Big Bellies are the allies of my people; with the South Big Bellies we have always been friendly. With the Spotted People we have no real quarrel. In behalf of my people, I accept this peace offering."

Said Dusty Bull to him: "As your heart tells you, so must you do. We do not blame you that you accept the pipe."

The other pipe remained upon the ground in front of Black Elk. He urged his father to accept it, telling how very good the senders of it had been to us. Followed much argument about it, and at last the decision was left to Dusty Bull.

(To be continued.)

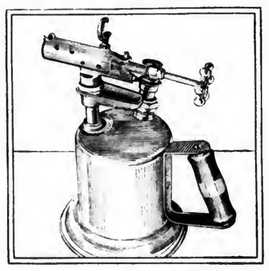
Will Ritchey

says he's put off getting a blow-torch long enough

WILL RITCHEY'S "flivver" threw a fan blade the other day. It cut a couple of holes in the radiator which Will had to solder. He didn't have a blow-torch, so he heated the coppers in his kitchen stove. By the time he'd get one out to the car it was almost cold. He had a hard time fixing that radiator. But he'll never have such trouble again. Will's going to get a Clayton & Lambert blow-torch when he goes to town this week.

Even if you never have to do that same job—think of the ways *you* could use a Clayton & Lambert. The winter's not over yet. Any of these mornings you may find your water pipes freezing. Then a Clayton & Lambert can more than save its cost in piping bills, by thawing them out before there's any damage done.

There are so many other ways in which a Clayton & Lambert pays for itself. When the kitchen sink gooseneck clogs—light your Clayton & Lambert—shoot the flame into the pipe and it's clear before you know it. If you want to burn brush off the old wood lot, use your Clayton & Lambert. And you can use a Clayton & Lambert to clean grease from the axles of your car. Or to heat up the intake manifold on your tractor. There's any number of troublesome jobs that are easier done and quicker done with a good blow-torch. Look at the list. It was given to us by farmers who use their torches in all the ways mentioned.



Here are some actual farm uses for blow-torches. Farmers are continually telling us some new uses. Drop us a line and tell us what you do with your blow-torch.

Thawing frozen pipes
Providing heat for camp stove
Heating glue pot
Cleaning engine
Repairing automobile radiators
Splicing steel cable with solder
Melting metals
Treating old beehives (inside)
Burning brush while clearing land
Repairing gasoline stove cans
Loosening rusty bolts and nuts
Soldering electric wiring
Loosening old spouting
Killing tent caterpillars
Starting back-fires during forest fires
Starting engines in cold weather
Heating for bending piping
Loosening soldered articles
Bending metal
Painting signs on cottages
Use for light at night when soldering
Cleaning gooseneck in sinks
Starting hard coal in furnace
Singeing dressed poultry
Heating wax for grafting trees
Melting old inner tube to make gum to put on slipping belts
Wood finishing
Lead and wax filleting
Shaping steel plates (small)
Taking off press-fit bearing easily. For this, heat all around bearings
Removing kingbolts
Heating metal for boring wood or a softer metal
Heating flux solder in radio work
Loosening rusted-in wood or machine screws to facilitate removal
For babbitting and for shrinking collars or other parts on small shafting
Charring wood

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DETROIT, MICHIGAN

Walker in England

FROM London we started for Hereford, the finest wool-producing section of England and an old wool marketing center. We discovered that we passed through Stratford-on-Avon and could drop off there for a few hours, so decided to see the spot. We were met near the station by a man who was a very good guide, at least that was his recommendation of himself, and he promptly took us in hand. He did not get into his stride until we came down by the old grammar school Shakespeare attended as a boy, but then he certainly sat down in his hopples and began to pace.

"What is this place?" inquired my wife, pointing over to the right side.

"H'on your left—hexcuse me loidy—h'is the school were the h'immortal Shakespeare woin't we'n ha boy. You could go h'in if yer was h'allowed, which will be next Thursday h'at two ho clock."

"But this place," again began the better half.

"Begging the loidy's pardon. H'on yer right is the 'ome of Mary Corrally (Marie Corelli)."

"That is a quaint street," suggested the Mrs.

"Mary Corrally—hexcuse me loidy—was a great h'authoress. You maybe 'card of 'er? We're she doied they created 'er, burnt 'er ye know, and put 'er hashes 'hin han h'ern an' burried 'er with h'an 'owly h'angel a sittin' on top o'er."

"That is rather"—started in my wife when again our guide got started.

"H'if the loidy will hexcuse me for h'interruptin'—beggin' the loidy's pardon—this is the way to the choich we're they burried 'im. Nearly h'all the people burried there 'ave been dead for some time. Some of them from sixteen hunnered 'an smunbinan. Them as died later not so long. Shakespeare and 'is wife ere in the choich 'an it 'ill cost ye a sixpence to go in by ringin' the bell 'ere."

A Remarkable Man

So you see we know all there is to know about the place. It cost me two bob to get the above information, but it was worth it. I had met a man who could out-talk a lady.

The country is very nice, gently rolling land with only one high range of hills around Malvern on the trip across. We noticed many hop fields and truck gardens, mostly cabbage and cauliflower, or root crops at this time of year.

Nearly all the fields are so plowed as to form beds some two rods in width crowned at the center and sloping to the sides. This is no doubt for drainage purposes, as the pasture fields were frequently so treated. Many of these plots of one to two acres were being hand-spaded as many as a dozen men being seen working on one plot.

Long rows of buried turnips or cabbages flanked the barn yards, and cattle were seen everywhere. A considerable amount of cross-breeding is being carried on in both sheep and cattle and I was somewhat disappointed in the mixture of breeds. One thing, however, was apparent. That was the flocks, even though cross-bred ones, were uniform in type and were evidently being bred with some specific thing in mind rather than the heterogeneous messes we so often find at home.

Another thing that impresses me is the large amount of land devoted to permanent pasture. One would naturally expect to find a more intensive cultivation of the land, but good grass seems to be the mainstay of the British farmer.

Today, Dec. 14th, we are in Hereford and an inch of snow on the ground, while a mixture of rain and snow is rapidly making the streets a mess of slush. I had expected to take a run around the country, but the roads are no doubt in bad shape so may not make it. This is the home of Hereford cattle and Ryeland sheep with the Shropshires just north of us, so you can see why I wish to see the country and its stock.

Dec. 27th.—Almost two weeks have elapsed since my last notations were made and this must get into the mail tonight. Time goes very rapidly when one is busy.

Our trip to Hereford was in some ways a disappointment. The gentleman with whom I had an appointment not only failed to meet me as arranged, but neglected to send a substitute, so the business had to be undertaken from another angle. The Christmas Fat Stock show was on, however, and we slushed around the pens one day talking to a few approachable individuals. I have heard a lot about English reserve towards strangers and now I know all about it. My experience is that the majority of them will talk freely, provided they are talking about something that interests them or expounding how much better everything British is than anything produced elsewhere, but aside from that they are poor conversationalists.

All Kinds of People

The well-bred stare one reads about in English novels impresses me more as a vacant stare implying the loss of functioning powers of that organ known as the brain. I have heard a lot about American boasting, but we never get it down to the science the Englishman has. They begin very early in life. For instance, a little boy was talking against the Jews when his mother said, "Don't you know Christ was a Jew?"

"No I didn't," the lad replied. "But anyway God is Church of England."

Naturally there are exceptions and we have met some delightful people, but even they deery the lack of courtesy towards strangers here and also the effort of the vast majority to escape work of any description. I have listened to many conversations between parties at hotels, etc., and about 99 per cent of them have to do with horses, dogs, cricket and golf. The remaining one per cent is used in calling each other by their nicknames.

Our route from Hereford led to Leeds through Sheffield. Leeds is the great wool manufacturing center of England and Bradford near it is noted for its top-making establishment, and between the mills and the Technical Universities a busy time was had. One thing that struck me forcibly was the amount of shoddy going out of these places to the United States. England is not rich enough to wear shoddy, so we are getting it. Business was slack just now, as the holiday season is on, and the trade is looking forward with its usual pessimism to the coming year,

(Continued on page 49)



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PENNSYLVANIA FARMER has for some time been negotiating with the Federal Life Insurance Company for a policy that would give the farmer greater protection—protection while operating farm wagons, mowers, binders, plows and other farm machinery engaged in his regular farm work. We are pleased to announce that our negotiations have been successful. In fact we have secured a better policy for the money than we had hoped. We are, therefore, proud of our success in being able to offer this wonderful policy to our readers for their protection. Every member of the family between the ages of 10 and 70 years may secure this policy for only $2.00 per year for each policy. The only requirement is that some member of the family be a subscriber to PENNSYLVANIA FARMER.

Read What This Policy Pays

Part I-(a) For loss of life by wrecking of steam railroad passenger car, steamship or steamboat, for loss of hands, feet or sight (as specified in policy) the company pays..... **$10,000.00**

(b) For loss of either hand or foot or sight of one eye as a result of accident specified in paragraph (a) of this part the company will pay..... **$4,000.00**

Part II-(a) For loss of life by wrecking of any passenger street car, elevated or underground railroad car or any public omnibus, taxicab, auto stage or passenger elevator; hands, feet or sight (as specifiedin policy) the company will pay **$3,000.00**

(b) For loss of either hand or foot or sight of one eye under Part II-(a) the company will pay..... **$1,200.00**

Part III-(a) For loss of life by wrecking of any horse-drawn or motor-driven car or motorcycle or by being accidentally thrown therefrom, including accidents causing death or disability while operating **Farm Wagons, Mowers, Binders, Plows** and other **Farm Machinery** which is motor driven or horse drawn; hand, feet or sight (as specified in policy) the company will pay the sum of..... **$2,000.00**

(b) For loss of either hand, foot or sight of one eye under Part III-(a) the company will pay the sum of..... **$800.00**

Part IV-(a) For loss of life by being struck, knocked down or run over while on public highway or by being struck by lightning, cyclone or tornado, collapse of outer walls of building, the burning of any church, theatre, library, school or municipal building; hands, feet or sight (as specified in policy) the company will pay..... **$1000.00**

(b) For loss of either hand, foot or sight of one eye under Part IV-(A) the company will pay the sum of **$400.00**

Part V-(a) For loss of life as a result of riding as a fare-paying passenger in any airplane, aquaplane or dirigible airship (as specified in policy) the company will pay the sum of. **$500.00**

VI For a period of 13 weeks for all injuries sustained in the manner described above and as specified in policy, this policy pays under Part I **$25.00 weekly**; under Part II, **$15.00 weekly**; under Part III. **$10.00 weekly**; under Part IV. **$7.00 weekly**; under Part V. **$5.00 weekly.**

Fill Out This Application

Notice Not more than one policy can be issued to any one person, but any or all members of a reader's family may each secure one.

Application for $10,000.00 Travel-Accident Insurance Policy issued to readers of PENNSYLVANIA FARMER, Pittsburgh

Print each name and address clearly and carefully. Illegible names will delay the delivery of your policy.

PENNSYLVANIA FARMER
Insurance Department, Pittsburgh, Pa.

I am a reader of PENNSYLVANIA FARMER, more than 10 years of age and less than 70 years of age, not crippled to the extent that I cannot travel safely in public places, and hereby apply for a $10,000.00 Farmers Special Accident Policy in the Federal Life Insurance Company issued thru PENNSYLVANIA FARMER. Enclosed is $2.00 (two dollars).

Full name ..... Age .....
Print plainly and carefully

Postoffice ..... State .....

R. F. D. ..... Occupation .....

Full name of beneficiary .....

Relationship of Beneficiary .....

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A Gehl cut 19.26 tons per hour with only 13.26 H. P. elevating 35 feet and running 605 R. P. M.—the lowest power of any cutter in test. It will save you time, labor and money.

Year after year Gehl light-running big capacity performance stands unchallenged. Its low speed reduces vibration, makes it the smoothest running cutter made. All steel construction, enclosed gears running in oil, heavy-duty ball-bearing pressure lubrication, with gun steel boiler-plate fly-wheel that can't burst, give it remarkably long life free from trouble. It is absolutely self-feeding.

AUTO-TYPE GEAR SHIFT for changing length of cut. Wonderful no-choke blower fills highest silo with low speed—3 H. P. up runs a Gehl. Dealers everywhere. Write for literature and name of dealer near you.

Electric power users.—Write for information about running a Gehl with a 2 H. P. motor. 238

Gehl Bros. Mfg. Co., 428 S. Water St., West Bend, Wis.

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A convenient, permanent ladder of wide, low, safe rungs *directly* under the opening—completely safe and convenient. The hoops are adjusted from the ladder so providing long life for the silo and perfect protection for the silage.

Write for discounts for cash and early orders and big free catalog.

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Heals the Teat—Keeps It Open

These new, soft-surfaced dilators keep open and soothe the injured teat while the medicated ointment quickly heals the lesion. For positive results in treating Spider, Obstructions, Cut or Bruised Teats, Hard Milkers, keep Dr. Naylor's Dilators on hand. Rounded end for easy insertion, absorbent texture carries healing medication into the teat canal.

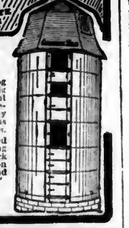


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36 Dilators, packed in jar of medicated ointment mailed postpaid for $1. If your dealer does not have our products in stock. Satisfaction guaranteed.

Dr. H. W. Naylor, Dept.10, Morris, N.Y.

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Clear First, selected Hemlock — self-draining joints—hoops can't stick —Best Silo "buy" on market. Just say "Send Full Data Silo Offer."

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Farm and Dairy

By L. W. LIGHTY



THIRTY-THREE years ago I built an implement shed 64 feet long with the entire front doors. It was not built for looks but for convenience. It was as easy to unhitch in front of the shed as in the field. Two or three minutes put the tool in the shed and it was all ready to hitch up there in the morning, so there was no excuse to ever leave the tools in the field. It has been extremely serviceable all this time, but the roof was beginning to leak, so recently we started to roof it a second time and that reminded me of its construction and use.

When built it cost me about one hundred dollars laid out in cash. The new roof now costs me about fifty dollars. In that shelter are housed implements costing as new nigh two thousand dollars. Some of them were put in when it was finished and have been used ever since and are still perfectly serviceable. Some were added later, but not an implement has deteriorated except by wear. Not a bit of weather damage.

I have seen grain binders, manure spreaders, grain drills and other costly implements completely worn out in half the time since the 64-foot shed was built and had to be replaced at ten times the cost of my implement shed, besides after a few years weathering the implements gave very poor service and costly repairs had to be made.

I am sure that shelter has paid for itself annually and more. What a terrible tax we are paying for the privilege of exposing our tools to all sorts of weather. And worst of all, who are we going to curse for this tax burden?

When to Start the Calves

Of course they must be started when they come, but the knowing dairyman so arranges that a number come in the autumn. They will be seven to nine months old when the pasture comes. They go on good pasture in fine and thrifty order and are pushed on with a grain ration in addition to the pasture so they will be in condition to be bred when twelve to eighteen months old and will come into profit when a little under or over two years of age.

This is very excellent practice as I have found it for many years and as many successful dairymen will testify. Starting them in the spring we have the fly pest and heat to contend with and the extremely busy season when it seems almost impossible to give the attention needed.

By the way, it is a little tough on us old codgers when we see the kids beat us all hollow growing calves, but it might be wise for us to sneak around and see how they do it.

No Opportunity

How frequently the complaint, the moan comes to me by letter and personally: "I had no chance, or there is no opportunity." But always those folks want to begin at the wrong end of the line. There is great need and endless opportunity and always was for those who have proved themselves. On his way to the throne Joseph of old tarried in the pit and dungeon nigh two years. By the way, it you have found a better short story in last year's literature than that of Joseph and his brethren tell me where to find it. But read the old one first.

Thrift and uprightness always carries the day in real life. Michael Faraday, the son of a blacksmith, was apprenticed to a book-binder at the age of 13 and while others found no opportunity he used every spare moment to learn the contents of the books he was sewing and covering. Thus he made the opportunity and it is not an exaggeration to say that Faraday's experiments in electricity, though conducted nearly a century ago, pointed the way for most of the electric wonders we enjoy. You will do exceedingly well to study the opportunity that Lincoln had or that Benjamin Franklin had not many years ago and not far away. Did opportunity knock at their doors?

Just about the time our readers were told of the consolidation of the farm papers the world was told of another consolidation in which three midwest country boys of not many years ago were the chief actors. One started as a small town bank clerk, one as a small town druggist and one as a wagon maker. The story of the consolidation informed us that the Reynolds brothers and Stevens organized the second largest bank in the United States with resources $150,000,000 and deposits over $900,000,000.

Not every one can reach the top rung of the ladder, but the fact is there is no end of opportunity for the young fellow with industry, thrift and good behavior.

The Timothy Plant

The timothy plant is deserving of much praise than is usually accorded it. Many writers speak as though they had a special spite at this plant. Once in a while a farmer is induced to drop it and then when the clover fails he has nothing, and soon learns that timothy is 100 per cent better than nothing for hay or a sod. Timothy seed is not expensive and it grows and yields on almost any soil. It is a plant that very rarely winter-kills and is very excellent for pasture.

Of course too much cannot be said in favor of clover, but the virtues of timothy should be conceded. The seed is easily produced in abundance and it is easily cleaned, so it need not carry any weed seeds if a little effort is made to get the impurities out. The wise person sows timothy in his mixture for meadow or pasture. If we use clover and alsike clover the timothy acts as a splendid filler, puts plants in all the available spaces, and when we cut the grass for hay while the clover is in prime condition the timothy is a mass of leaves and adds bulk and good value to the hay.

If there is sufficient moisture the aftermath makes excellent hay or pasture as may be desirable. If the meadow is to be mowed the second season almost invariably the timothy is the main crop and if there is no timothy we are liable to have a good crop of weeds. The best farmers through the grain-growing section sow the timothy seed in the fall with the grain and the clovers in the spring and while a few sow all the grass seeds in August on a prepared seed bed the extra work and the vicissitudes of the weather have discouraged many and they have gone back to the old plan, which is practical and nearly always successful.

Another consideration in growing timothy is its action on the soil. It has a very fine root system which acts largely in a different stratum of soil from the clovers and the physical action of the roots is different. With the comparatively large amount of organic matter it gives to the soil by the heavy sod it helps to form it enables us to build up the soil, because the organic matter of the sods we turn is the key that unlocks the door leading from unproductive soil to a productive one.

To Kill the Cattle Grub

DUSTING of pulverized tobacco containing 4 to 8 per cent nicotine on the backs of animals infested with the cattle grub every fifteen days during the winter months is the method by which farmers and stockmen may practically rid themselves of the pest within one year, is the assertion of E. W. Laake, chief of the United States Bureau of Entomology division office at Dallas, Tex.

In three years of study of the life history and habits of the pest, Bureau men have found the tobacco 97 per cent effective and the most practical product for general use.

It is from November to February or March, depending on the section of the country, that the grub is lodged on the back of the animal between the hips and shoulders, causing a lump or boil. Sometimes there are several hundred on one animal, all of which are damaging meat, hide and reducing milk production.

"Our experiments have shown positively that the grub can be exterminated," Mr Laake declared. "No longer must we consider the pest a necessary evil.

"Communities must organize and carry on a concerted drive, for the fly, the adult form of the grub, will go to the next farm or ranch and deposit its eggs on the cattle.

"Free use of the tobacco is essential. The ordinary powder containing 1½ per cent nicotine is not strong enough. The 4 to 8 per cent product, which will be available within the year, sifts into the hair and into holes in the animal's back and kills the worm."

Extracting the worm from the hump with a small pair of tweezers might be the method employed by the owner of the small herd, Mr. Laake explained, but he pointed out that there is great danger that every worm will not be found. In addition, it is hard and tedious work.

Derris powder, made from the plant by that name, is even more powerful than the tobacco, but the product is prohibitive in price because the plant is native to India and has not been brought to this country in quantity lots.

Two liquids, benzol and carbon-bi-trachloride, which must be injected into the hump, are also highly effective but they must be used by the trained man only.

The grub, or ox-warble or cattle-wolf, as it is sometimes called, is a national nuisance and causes damage to hides, fresh meat, milk and butter production, estimated at from $50,000,000 to $100,000,000 annually.

The American Meat Packers' Association has been active in trying to rid the country of the pest. In response to their appeal, Congress has appropriated $40,000 for control and $25,000 for research work by the Entomology Bureau. This fund has been available since July 1, and the Bureau is taking definite steps toward the establishment of control regions and the launching of a general educational campaign.

"By constant vigil, the grub can be entirely destroyed in a given herd in one year," Mr. Laake said. "Under however, the grub will still be taking its toll in dollars." Melissa Castle.



Data From Bedford County C. T. A.

RAY SELLERS
Tester

THE Bedford County Cow-Testing Association finished its fourth year December 1st, 1928, with 23 whole herds and four part-year members. There were 420 cows in the Association during all or part of the year.

The registered Jersey herd belonging to Allen R. Eshelman again leads the Association in production of butterfat with 432.2 pounds in 7,546 pounds of milk. The registered Jersey herd belonging to E. S. Ferry is second in production of butterfat with 428.9 pounds in 7,646 pounds milk. There are twenty herds with a production of 300 pounds butterfat.

The grade Jersey cow Susan, seven years old, belonging to George Morrison, leads the Association in production of butterfat for individual cows with a production of 708.7 pounds in 15,715 pounds milk. The registered Jersey cow No. 743383, five years old, owned by E. S. Ferry's herd, is second in production of butterfat of the individual cows with 634.1 pounds fat in 10,869 pounds milk.

The results for the Association for the four years are as follows:

Year	Ave. No. Cows	Lbs. Milk	Lbs. Fat
1925	301.94	5670	272.2
1926	283.26	6404	308.3
1927	270.89	6904	314.2
1928	308.57	7127	351.08

The result from the whole-year members is as follows:

Total average No cows in the Ass'n 302.57
Average per cow—

Pounds of milk	7,268
Pounds of butterfat	351.08
Percentage of butterfat	4.8
Value of product	$288.34
Cost of roughage inc. pasture.	33.85
Cost of grain	61.38
Total cost of feed	95.24
Value of product above feed cost.	193.10
Returns for $1 expended for feed.	3.03
Feed cost per 100 lbs. milk.	1.31
Feed cost per 100 lbs. butterfat.	.27

Twenty-one herds with an average of five or more cows exceeded an average production of 300 pounds of butterfat. A complete list of these herds follows:

Owner's Name and Address	Ave. No. Cows	Breed	Pounds Milk	Pounds Fat
Allen R. Eshelman, Everett	14.25	R.J.	7546	432.2
E. S. Ferry, New Enterprise	9.50	R.J.	7646	428.9
Harvey Koontz, Bedford, R. 4	14.58	R.J.&G.J.	7438	416.9
Roy Greenawalt, Hopewell	7.42	R.&G.J.&H.	7325	410.5
Hugo Morgart, Rainsburg	27.42	R.&G.J.	7060	410.2
Harry Clark, Breezewood	10.00	R.&G.J.	6914	401.1
Kinsley Woy, Everett	8.17	R.&G.G.;G.H.	7749	397.5
Ira E. Morris, Everett, R. 3	6.67	R.&G.J.	6955	384.0
Samuel Replogle, Loysburg	12.17	G.H.&G.J.	8506	383.3
Fred W. Coxe, Everett	18.05	R.J.	7499	382.6
Samuel L. Cessna, Bedford, R. 4	13.67	R.&G.H.	9859	378.1
Clyde L. Baughman, Everett	4.08	R.J.	6179	372.0
Ira R. Koontz, Lutzville	15.42	R.&G.J.	6482	365.9
Grover Ritchey, Everett	5.75	R.&G.J.	6660	350.1
Francis Koontz, Lutzville	10.33	R.&G.H.;G.J.	7098	348.8
Ira Garland, Buffalo Mills	14.17	R.&G.H.	8981	346.7
Fred H. Diehl, Bedford	20.92	R.&G.J.	7104	343.4
W. Blair, Hyndman	10.42	R.&G.H.;G.J.	8508	317.5
U. Troutman, Bedford	8.00	R.&G.J.	6153	314.5
B. Hull, New Enterprise	12.08	G.H.&G.J.	7751	305.4
Francis Baker, Everett	18.17	G.J.;G.H.	5944	304.6

Grover Ritchey completed one year's work in eleven months.
Tester in charge, Ray Sellers; L. R. Mollenaur, county agent; figures compiled by O. Sidelmann.

Dairy Topics

By A. G. HUMPHREYS

DO not remember a year when farmers started out with prospects as bright as the present one. We always have to make exceptions for the individual case when we make such broad statements, but taking the business world as a whole and the dairy industry the same way we see no reason for complaint. Milk prices are near the highest they have been since the war. That means the dairyman has more dollars to spend now, and since that is the case we hear less about what he should spend them for and how they compare with other dollars. Such is always the case. Prosperous people have a "hunch" on what they want and buy they want it. People who do not have ready money are prone to give more attention to comparisons. Any time we take it dairying is a great game; one in which the operator has a good chance to win if he will give it time and attention.

Winter

At the risk of being called any one of several things we are going to say that we like winter. That is not saying that we do not like summer or that it is not better than winter, but it is taking the wrong side of a question for the sake of argument. We have a little game we play sometimes when the mercury is reaching for what seems to be absolute zero. It consists of seeing who will be at the milk stand first, I or the hauler. So far I have lost only one game this winter. That was on New Year's morning. We met that morning, so I suppose the rating should stand about fifty-fifty.

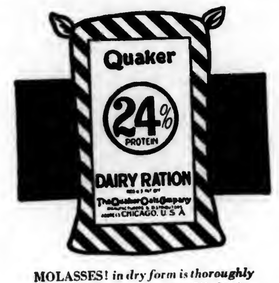
There are other compensating things that make winter enjoyable. Climbing up into the silo on frosty ladder rungs and seeing whether it is nicer to be a squirrel or a cat. Then when one starts down again to wonder how it feels to pile up in a knot in a bunch of frozen silage. Sometimes when we wheel the milk out to the private station on icy roads we have to employ all our wits to keep the wheelbarrow in the direction we want it to go. You know you can train up a child in the way it should go and in old age it will not depart from that way, but the same thing does not apply to a wheelbarrow.

There have been times, we must confess, when our feet seemed to desire to take the place usually occupied by our head.

We often hear old folks talk about the joys of a sleigh ride with the best girl, but we know nothing about it. There are two reasons. We did not possess any sleigh at that time of our life, and as a result of that oversight we had no best girl either. But in spite of a lot we have missed in life we still like winter. We make the mental provision, however, that we have the right to change our mind immediately and without notice.

BUY QUAKER FEEDS IN STRIPED SACKS

Are Your Milk Checks Big Enough?



MOLASSES! *in dry form is thoroughly mixed into Quaker (24%) Dairy Ration. Cows relish this good feed*

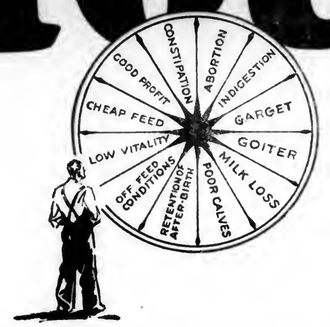
ARE you getting a proper return for your investment, and your labor, in your milk herd? If your feeding methods aren't quite right you will note a shrinkage in your receipts about this time of year. We can't guarantee to make you rich, but—Quaker (24%) Dairy Ration is a most important factor in the business of many successful dairymen. It is a big help to maximum production. It combines perfectly with your own roughages. Essential minerals in digestible form, and fresh pure ingredients make Quaker (24%) Dairy Ration a winner. See your Quaker Dealer and keep your milk checks up.

An ideal carbohydrate feed—Quaker Sugared Schumacher. Combines perfectly with any Quaker high protein concentrate (24%, 20% or 16%). A choice feed for young or dry stock; an entire grain ration for horses and a splendid fattening ration for steers, lambs, and swine. At all Quaker Dealers.

Made by THE QUAKER OATS COMPANY, Chicago, U. S. A.

BUY QUAKER FEEDS IN STRIPED SACKS

the odds are against YOU



WHAT will it profit you to save a little money on the price of dairy feed if your cows go off condition or develop one of the many ills that result directly and indirectly from the use of low quality ingredients or improper combinations in cheap feeds?

Larro costs more than inferior feeds, but you can't escape paying its price and more, no matter what you feed. What you seem to save thru buying a cheap feed, you will lose over and over again when sickness and herd troubles shrink your milk production and sap the vitality of your cows.

When you feed Larro, you know that it is made of ingredients selected for quality; you know that it does not change; you can depend on it to keep your cows healthy and produce a bigger profit over your feed cost—no matter what your roughage is.

Don't gamble with the health of your cows—the odds are against you—feed Larro and keep your cows fit to do their best job of producing milk.

THE LARROWE MILLING CO.
DETROIT - MICHIGAN



Pennsylvania Honor Roll

A PARTIAL list of Honor Roll members in Pennsylvania cow-testing associations was published recently. Following are more of the men in this state who have earned the distinction of owning a dairy herd which averaged 300 lbs. or more of butterfat per cow in a year:

Mercer County, No. 4

R. H. Brenner, 359.4; H. Fice Curtis, 357.5; S. S. Artman, 357.4; Roy White, 338.5; Fred Diefenderfer, 337.4; Jesse E. Smith, 326.8; A. E. Brown & Son, 312.2; George W. Scott, 304.8; Glen O. Melvin, 304.

Grove City (Mercer County)

Ralph Gillgrist, 442.5; S. H. Pickford, 415.1; R. E. Critchlow, 414.3; J. D. Baker, 406; Lee R. Critchlow, 395.4; P. E. McEwen, 389; Hugh Fergus, 361.6; A. M. King, 359.4; Lucia Paxton, 353.3; L. G. Pearson, 352.9; E. A. McDowell, 351.5; G. D. Barnes, 348.7; D. G. Grace, 346.3; J. L. Black, 342.2; Pew Estate, M. H. McCoy, 322.3; O. C. Welton & G. W. Boundy, 311.6; C. M. Worley, 307.6; A. D. Philson, 302.7; C. E. Reed, 302.4; G. B. McDougall, 300.

Mifflin County

Sam M. Yoder, 420.7; J. B. Byler, 419.7; R. H. King, 401.6; B. R. Byler, 377; C. K. Peachey, 342.9; Jacob Yoder, 332.7; John O. Way, 321.4; R. F. Brown, 320; Henry Erb, 316.3; J. C. Fleming, 306.1; S. C. Mitchell, 304.6; Rudy J. Yoder, 300.3.

Montgomery County

Wm. H. Landis, 419.6; Levi Schultz, 356.2; Crompton Farm, 349.4; Ursinus College, 335.1; Owen S. Gerhard, 334.6; W. C. F. Randolph, 333.3; H. D. Michael & Son, 320.2; C. W. Haywood, 317.8; Graue Dispatch Farm, 323.7; O. M. Woodward & Son, 309.8; L. K. Rothenberger, 309.5; Willow Creek Farm, 307.7; J. L. Wood & Sons, 305.4; Warren G. Schultz, 303.8; Charles E. Longacre, 302.2; Mrs. Howard Bieber, 300.1.

Perry County

H. K. Kratt, 384.1; H. K. Stephens, 376.3; E. D. Deckard, 352.4; Mrs. Lottie Bernheisel, 334.9; Tressler's Orphans' Home, 331.4; Orville Rumbaugh, 315.7; H. L. Ulsh, 308; N. B. Cabel, 306.6.

Potter County

H. H. Cooper, 437.6; Lawrence E. Buck, 411.7; C. M. Barker & Son, 408.9; Curtis Buck, 368.8; Fred Bishop, 359.1; Cleon Buck, 353.1; Erway Bros., 325.4; J. L. Grom, 316.1; Harry Lent, 303.8; N. J. Leete & Son, 300.9; W. B. Bennitt, 300.9; L. G. Stevens, 300; Pride Bros., 312.4.

Schuylkill County

Christ Wagner & Son, 407.1; Lewis E. Herring, 372.8; Earl Paxson, 352.8; Hoy J. Canker, 350; Auburn Shale Brick Co., 346.9; C. W. Grube, 340.1; William F. Gombert, 339.2; Paul H. Lengel, 336.3; Roy Hunter, 333.7; A. J. Fidler, 333.5; T. W. Lengel, 329.1; Guy S. Reed, 306; Robert C. Ludwig, 315.1; Schuylkill Co. Almshouse, 310.5.

Brothers Valley (Somerset County)

W. D. Glessner, 380; J. S. Glessner, 375.8; J. G. Snder, 369; G. S. Reiman, 367.2; F. H. Meyers, 344.5; E. M. Knepper, 335.4; Ed. L. Hay, 315; S. D. Glessner, 305.1; R. W. Glessner, 304.9; J. Jacob Glessner, 303.3; J. H. Countryman, 302.4.

Sullivan County

J. W. Adams, 436.6; Harrington & Co., 412.6; Thomas Doyle, 393.2; Ralph Rohe, 392.3; Frank V. Rohe, 391.2; A. F. Culbran, 334; G. A. Martin, 330.4; Latzelman Bros., 324.9; Wm. E. Tilbach, 324.2; Reid F. Wilcox, 328.4; J. L. Hibbard, 323.3; Taylor McCarty, 323; William Dibble, 313.4; Oscar Warburton, 313.4; Frank J. Murphy, 310.6.

Western Sullivan (Sulivan County)

Arley Day, 407.4; Leon Day, 407.1; Curtis Bammunk, 392.5; Howard Platts, 353.7; J. L. Fawcett, 350.5; Fred Shaffer, 343.7; Harry A. Hess, 324.3; F. P. Regar, 306.3.

Western Susquehanna No. 1

W. H. Bush, 365.4; E. E. Williams, 306.2; H. D. & T. A. Brown, 303.5; E. L. Carter, 301; Claude L. Carter, 301.8.

Gelatt-South Gibson. (Susquehanna Co.)

L. J. Thomas, 368; Curtis Allen, 357; Curtis Allen, 357.4; I. B. Gelatt, 357.6; Robert Brandt, 324.6; Mrs. Alice Stearns, 324.7; Wesley Bush, 322.2; to P. Wilson & Son, 320.3; L. F. Brown, 301.

Jackson (Tioga County)

Don Ely, 426.5; W. W. Brown, 369.2; Percy Ely, 365.8; L. A. Stone, 365.5; Victor Hurd, 365.3; Fred Bower, 361.2; R. Tillinghast, 355.9; J. A. Seeley, L. L. Daggett, 350.1; Ford Cady, Fred F. Tillinghast, 343.9; Noel 343.6; O. W. Wheeler, 327; E. B. 318.7; John P. Casper, 309.7; A. G. 308.7; Charles Antes, 308.4.

Cowanesque Valley (Tioga Co

D. R. Butler, 390.4; H. W. Seeley, Harrison Grist, 369.7; Giles Thomas, W. C. Boyce, 365.1.

Wellsboro (Tioga County)

Roy S. Bowen, 490.9; R. W. 421.3; E. C. Howell, 407.8; Fred 386.9; Gale Gerow, 376.2; Harry Wi 372.3; T. J. Erway, 365.1; Claude ter, 357.5; Leon Torpy, 350.1; R. sing, 348.1; O. W. Butler, 343.1; Nook, 333.6; James Warren, 326.8; Lawton, 316.3; Homer Webster, 32

Buffalo Valley (Union County)

A. C. Slifer, 459; A. D. Beaver, J. E. Boyer, 454; H. K. Benner, Fred D. Dock, 418.2; H. A. Walter, C. E. Erdley, 389.3; W. J. Erdley, W. S. Erdley, 387.8; J. L. Reitz, S. Wehr, 369; P. C. Moser, 368.1; Musser, 360; P. W. Young, 356.9; Roush, 346; J. S. Zeigler, 343.1; Moll, 331; J. S. Hackenberg, 322.2; Brouse, 321.1; Geo. B. Frederick, J. M. Erdley, 314.5; R. B. Eberhart, Clark S. Miller, 307.7.

Venango County

River Ridge Farm, 458.6; Polk School, 418.1; R. C. McMurray, 355 Beckman, 323.3; Rynd Farm, 302.4

Warren County

Warren State Hospital, 495.5; Lynnish, 398.4; B. E. Firth, 375.9; M. D. Hitchcock, 348.9; A. F. Dyke, Homer Lindell, 344.3; E. D. W 324.7; S. C. Hitchcock, 323.6; Paul L 317.7; Rouse Hospital, 310.3; Andrew Lawson, 310.3; F. C. Wilcox, 306.2; drew Johnson, 304.3; H. A. Ludwick,

Washington County

P. F. Morris, 386.4; H. M. Phillips J. C. Ray, 361.8; A. L. McCracken 340.2; Jas. M. Marquis, 344.2; Linn, 326.4; McClelland Bros., 321.2; & Liggett, 321; Oscar Devere, 306.9; C. Pease & Sons, 300.2.

Wayne County

G. W. Hauenstein, 417.3; H. A. son, 417.3; Clarence Monse, 414.1; Snedeker, 411.8; R. G. Erk, 398.2; Rosener, 373.6; W. F. Hauenstein, Homestead Farm, 363; George Erk, C. T. Box, 360.5; Friend Rosener, J. Russel Spencer, 342.7; R. A. Tr 339.7; G. Smith & Sons, 334; E. H. yard, 316.2; B. F. Kennedy, 314.5; Rude, 300.

Westmoreland No. 1 (Westmoreland

John S. Wohlwend, 410; E. G. 377.5; J. M. & C. A. Lemon, 376; Silvis & Sons, 367.8; John Moffat, R. A. Eisaman, 350.4; Westmoreland ty Home, 334.7; St. Vincent's Ab 324.9; F. H. Kintigh, 323.9; H. S. & Son, 317.9; Michael Rathgeb, Carl S. Wertz, 315.5; Paul A. Hugus

Southern York (York County)

J. S. Murphy, 369.6; J. R. 360.4; H. Lyle Hess, 359.5; Webb 345.2; R. E. Neely, 344.3; W. S. 341.5; C. J. Taylor, 314; Dale D. 303; Geo. W. Wambaugh, 302.2.

Northern York (York County)

Wm. R. Brown, 415.4; J. A. 381.3; H. T. Kaltreider, 339.4; Krall, 343.2; C. J. King, 341.2; Little, 339.7; C. Allen May, 32 E. Max, 317.1; C. H. Gross, 304.

THE Salem Cumberland-Gloucester Friesian Association, which the most active and the strongest New Jersey, has elected the follow heers for the coming year: Presid W. Ridgway, Salem; vice-presiden Frank Newkirk, Bridgeton; secreta treasurer, Carl Coleman, Elmer.

At the recent annual meeting the ciation planned to continue its hon the herd by offering local premiums ing the Association paid prem at the State Fair and in previous ars. Each person on the Garden State Breeder

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PF 2-29

To Control Abortion

THE U. S. Livestock Sanitary Association at its annual meeting in its report on abortion made the following recommendations to the individual cattle breeder:

1. Raising of his own cattle just as far as possible, and the ultimate goal of establishing and maintaining a herd free from Bang abortion disease.

2. That he test his herd so as to learn its true status and thus be enabled to know which animals are dangerous to their associates, and to weed them out if they are limited in number.

3. A policy of severe culling in reacting units so that only valuable animals are retained.

4. Keeping reactors and non-reactors entirely apart.

5. A general plan of herd management which involves the raising of heifers apart from mature animals.

6. The use of maternity stalls, if possible, for all cows at calving time and provision for relatively small units which are now habitually recruited from outside sources.

7. That additions to any clean herd or unit should consist of non-reacting individuals that come from clean herds, and that the transfer shall be made just as far as possible while the females are not pregnant.

8. The employment of a thoroughly qualified veterinarian whose services are necessary in laying out a specific plan of handling suited to the individual herd; drawing blood samples for the serological tests; the interpretation of the reaction; the handling of individual cows which fail to breed; making pregnancy examinations, and other services of like nature.

Feed for Heifers

I have three nine-month-old heifers which I would like to get the most growth onto. For roughage I have timothy and mixed hay. What grain mixture would you advise? I buy through a mill, so most feeds are available. Would you advise a mixed hay? What grain mixture would you advise, a lime-mixture adding cod-liver oil and probably calcium, or would you feed a commercial dairy ration?

Joseph J. Perry.

I WOULD feed these heifers plenty of clover hay or alfalfa hay if I could get it rather than timothy and mixed hay. Clover and alfalfa will put a lot more growth on them than will timothy and mixed hay. If you do not have leguminous roughage you will, of course, have to feed such roughage as you have.

I think a good grain mixture for heifers can be made up of the following: 200 lbs. of corn meal, 200 lbs. of ground oats, 200 lbs. of wheat bran and 100 lbs. of linseed-oil meal. I would also let these heifers have from five to fifteen pounds of corn silage daily.

The amount of grain to feed should be about one pound for the first hundred-pound weight of the heifer and half a pound for each additional hundred weight per day. A safe plan in feeding minerals is to mix four parts of steamed bone meal with one part of salt and allow the animals to have free access to it. A. A. Borland.



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This herd of T. C. Kryder made a high average in their cow testing association—12,128 lbs. of Milk and 413 lbs. of Butter Fat.

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This is one of Mr. Kryder's two cows which produced over 15,000 lbs. of Milk on Amco Dairy Rations.

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Produce Market Review

THE potato market in Philadelphia this past week has demonstrated the fact that buyers will pay a premium for fancy well-graded potatoes even when large supplies of fair stock are available at low prices. Pennsylvania potatoes of fair quality have sold at $1.25@1.50 per 120-pound sack, but well-graded stock of good quality has brought $1.50@1.60. One receiver of Pennsylvania potatoes told me that he had sold two large truck loads of very well graded stock at $1.40 per 100-pound sack, which is just about 15c above the general market.

Prices held steady in most of the other Eastern markets but the demand continued slow. Pennsylvania round whites were quoted at $2@2.10 per 150-pound sack in Pittsburgh, at $1.90@2 in Baltimore and at $2.25 in Washington, D. C. Maine shipping points showed a weaker tendency toward the close of the week with Green Mountains bringing $1.25@1.30 per 150-pound sack f. o. b.

Potato growers in New Jersey and Eastern Shore districts will have a real problem on their hands this year, according to the Annual Outlook Report just issued by the Department of Agriculture. On January 1 merchantable stocks of potatoes in the hands of growers and local dealers were close to the record January holdings of six years ago, being estimated at 131,600,000 bushels, compared with about 100,000,000 bushels last year. To permit early potatoes to sell to advantage in competition with these storage potatoes, production must be reduced sufficiently to keep early potatoes in a luxury class. This was accomplished in the springs of 1923 and 1925, but in each case a radical reduction in acreage was necessary. This year, growers in these early states apparently intend to decrease their acreage about 25 per cent. Such a reduction would relieve the situation somewhat, but would still leave prospects somewhat less favorable than usual.

Apples

The apple market in Philadelphia was generally dull with limited demand and trading. Prices held firm on fancy fruit but poorer stock moved slowly. Truck receipts of nearby Romes, Stayman and Delicious brought $1@1.75 per bushel and there were some lots of extra fancy Delicious that sold as high as $2. Cold weather hampered trading in both Philadelphia and New York. Receipts in New York showed a wide range in quality and prices were irregular. Delicious brought $1@2.25 per bushel, Rome $1@2 and Jonathan $1@1.75.

The British apple market showed an upward trend during the latter part of January. Barreled supplies in general were light but the Virginia Stayman and Yorks showed a large amount of scald. Apples shipped in shredded oil paper, however, showed practically no scald.

A recent survey of apple production shows that there has been a decided shift in plantings in response to consumer's demand. The large numbers of young trees of some of the popular varieties such as the Delicious, McIntosh, Jonathan, Stayman, Winesap and Yellow Transparent foreshadow increasing production of the varieties for several years. Production of these six varieties constituted 43 per cent of the market supplies in the 1926 season.

For the remainder of the 1928 crop season the outlook is for continued strong competition in the domestic markets. The 1928 commercial crop was 20 per cent greater than that of 1927 and 9 per cent above the average of the previous five seasons. The export outlook for the spring months of 1929 in European markets is favorable. Exports for this season through November totalled about 9,000,000 bushels and were 64 per cent larger than for the same period last year.

Sweet potatoes were dull in most markets during the week although prices showed but little change. The best New Jersey yellow varieties brought $1.40@2 in Philadelphia, $1.50@2.50 in New York, $2 in Boston and $2@2.25 in Pittsburgh. New Jersey Big Stem Jerseys were quoted at $2.75@3 in Chicago.

Butter and Eggs

The egg market in Philadelphia was firm at the close of the week with rather light receipts from the West and Central West on account of stormy weather in those sections. Receipts of nearby eggs were somewhat heavier and nearby whites sold mostly at 42@45c; dozen while mixed colors brought 40@41c. It is believed that the recent cold weather has helped consumption and the quality of the nearby eggs is running good but they have been very irregular as to size. Receipts from the South are expected to increase sharply near the end of this month which is likely to cause prices to fall.

The market on nearby eggs was irregular in New York and there is a tendency toward lower prices. White eggs ranged from 38 to 45c per dozen, browns from 39@46c and mixed colors from 36@44c. Both brown and white eggs dropped about one to two cents during the week.

Receipts of live poultry were generally moderate in New York. Prices were about steady with last week. Leghorn and colored fowl brought 28@30c per pound. Leghorn broilers 34@36c and pullets 36@38c. Receipts of dressed poultry from nearby sections were light while receipts from the West were moderate. Fowl brought 26@35c and roasters 30@43c.

W. R. W.

Philadelphia, Pa., Feb. 1, 1929.

Miscellaneous Produce

Philadelphia

Eggs.—Extra firsts, 43c; firsts, 40c; seconds, 35@37c; storage, 30@31c; selected and candled fresh eggs, 49@51c; select in cartons, 51@53c.

Butter.—Creamery, tubs, 92 score, 50½c; 88@89 score, 46@47c.

Poultry.—Fowls, 31@32c; Leghorns, 28@30c; springers, 36@35c; broilers, 36@38c; old roosters, 22@24c; ducks, 22@33c; turkeys, 28c@33c; rabbits, pr., 18@20c; guineas, per pair, 80c@1.75.

Strawberries.—Fla., auction sales, 32-qt. crate, 32@34c per qt.; pony refrigerator express, best, 36@38c.

Apples.—U. S. No. 1, per bbl., Virginia Black Twigs, $3.75@4; Stayman, $4.50@5; Penn'a per bu., Stayman, $2; Yorks, $1.40@1.50; nearby ¾ bskts., Delicious, $1@1.25; Romes and Stayman, 75@90c; Yorks, 65@85c.

Cranberries.—Per ¼ bbl., N. J., $2@4.

Celery.—California crates, large tough, 80@$1; nearby bunches, wired, 15@20c.

Potatoes.—Pa. round whites, per 120 lbs., $1.40@1.55; N. J. ⅝ bskt., redskins, 40@50c.

Sweet potatoes.—Md. and Del. bu. hamper, No. 1 yellows, $1.50@1.75; N. J. ⅝ bskts., $1@1.15.

Broccoli. Texas, per bu., $1.25@1.50.

Beets. Crates, bunched, $2@2.75; nearby ⅝ bskts., 50c@$1.

Brussels sprouts.—Calif., drums, 80@8.

Collards.—Va., Norfolk section, bbl., hold over stock, $1.25.

Carrots.—Nearby ⅝ bskts., $1@1.35.

Cabbage. Fla., ½ bbl., hampers, $1.25@1.50; Texas, 100-lb. crates, $2.75.

Kale. Va., bbls., $1.50@1.75.

Lettuce. Calif., iceberg, crates, 4 to 5 doz., 80c@3.75; Fla. ½ bbl. hampers, Big Boston, $1@1.40; Romaine, 90c@$1.

Onions. Ind. 100-lb. sacks, U. S. No. 1, yellow, 85c@5.50; Ohio, 100-lb. sacks, 85; New York, $3.25@3.75.

Mushrooms. Nearby, 3-lb. bskt., 50c@$1.15.

Parsnips.—Nearby, ⅝ bskt., $1@1.25.

Rutabagas.—Penn'a, ⅝ bskts., 60c@90c.

Turnips.—Nearby, ⅝ bskts., purple tops, 30@50c.

Peppers. Fla. crates, $2.50@3.50.

York

Butter and eggs. Creamery butter, 55@58c; country, 45@50c; separator, 55@60c. Eggs, per doz., 38@45c.

Poultry. Hens, 22@30c.

Vegetables. Potatoes, 75@90c per bu.; cabbage, 50@2c per hd.; lettuce, 10@25c hd.; spinach, 15@20c ¼ pk.; cucumbers, 6@10c each; turnips, 15c ¾ pk.; onions, 20c ¼ pk.; celery, 5@20c stalk.

New York

Butter. Creamery, higher than extras.

Eggs. White eggs, current receipts average 50@51c; extras, 50c; seconds, 40@47c. Brown extras, 45c; extra firsts, 42@44c; firsts, 41c; mediums, 42@43c.

Poultry. Live, by express, fowls, 31c; chickens, 26@28c; broilers, 35@40c; ducks, 17@30c; geese, 27@28c.

Apples.—Eastern and Southern, bu. bskts., Romes, $1@2; Wealthy, $1@1.75; Delicious, $1@2.25; McIntosh, $1.50@3.50; barreled stock, No. Spy, $3@7.50; York Imperial, $2.75@5.25; mixed varieties, $2.75@5.50.

Potatoes.—L. I., 150-lb. sack, $1.6@2.75; Maine, $2@2.25.

Sweet potatoes. Jersey, best bskt., $1.50@2.75.

Baltimore

Butter. Creamery, fancy, 49½@50c; rolls and dairy prints, 25@28c; packing stock, 25@26c; butterfat lb., 47½@48c.

Eggs.—Md.-Pa. nearby firsts (loss off), 39@40c; western firsts, 39@40c; southern 38½c.

Live poultry. Hens, old, 4½ lbs. and over, 28@29c; small to medium, 24@26c; Leghorns, 26@27c; young chickens, 32@34c; broilers, small, 37@38c; Guineas young, 1½ lbs. or over, each, 75@80c; roosters, 17@18c; ducks, 25@30c; pigeons, pair, 50@55c; squabs, 30@50c; turkeys, 35@40c.

Apples.—Fancy pack, bu., $1@2; per bbl., $3@6.

Potatoes.—Per 150-lb. sack, $1.75@2.25.

Sweet potatoes.—No. 1, hamper, $1@1.75; Yams, per bbl., $2@3.50.

Lancaster

Butter. Country butter, 54@60c; creamery, 52@60c.

Poultry.—Chickens, dressed, $1.25@2.50 each; springers, 75c@$1.25 each; ducks, $1.50@2.75 each; squabs, 25@50c each.

Eggs. Fresh eggs, 42@45c.

Vegetables. Beets, 10@15c per bunch; egg plants, 20@30 each; string beans, 40@45c per ¾ pk.; beans, lima, 40@45c per pt. box; cabbage 10@20c per head; carrots, 8@15 per bunch; cauliflower, 20@40c per head; celery, 10@25c per bunch; cucumbers, 10@15c each; spinach, 15c per ¾ pk.; peppers, 5@8c each; endive, 5@10c per head; lettuce 10@20c per head; mushrooms, 25@30c per pt. box; onions, 20@25c per ¾ pk.; green onions, 10c per bunch.

Potatoes. Per bu., 65@75c.

Sweet potatoes. 20@25c per ¾ pk.

Pittsburgh

Butter.—Creamery prints, 92 score, 57@57½c; tubs, 56@56½c.

Eggs. Fresh, select white, 43@45c; brown, 40@43c; current receipts, 35@38c.

Poultry.—Heavy hens, 30@31c; Leghorns, 26@28c; springers, 30@32c; roosters, 18@20c; ducks, 26@30c; geese, 22@25c; pigeons, 40@50c per pair.

Potatoes. Per 150-lb. sack, Mich. Rurals, $1.90@2; Maine Green Mts., $2.25@2.50; N. Y. & Pa. Whites, $2@2.10.

Apples.—Baldwin & King, $1.75@1.85; Rome Beauties, $1.90@2; Hubbardstons, $1.50@1.60.

Cabbage. N. Y. & Pa. Danish seed, $3.50@4.

Celery. Fancy, 4-stalk crate, $2.75@3.

Lettuce.—Ohio Iceberg, 16-lb. basket, 75@80c.

Mushrooms.—Pa., 5-lb. basket, 90c@$1.15.

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Glimpses of the Farm Markets

THE end of the January farm market was stronger than the beginning, although some lines closed a little below the highest of the month, says the U. S. Department of Agriculture Market News Service on February 1. Most grains held their advance, but corn sagged back a few cents. The livestock market acted well, with new high levels top hogs ... Weather conditions affecting ... brought quick short price upturns ... ter and eggs. Cabbage, onions ... toes lost a little from recent ... Temporary conditions limiting ... ing carlot supply were the exc... price changes toward the first of ... but grain markets followed ... news to some extent.

Vegetables. Potatoes market ... slight decline, following the ... gains, but still ranged 5 to 10 ... the early January price level. ... jobbing sales as far south as Atl... ern Round Whites and Green ... were bringing $1.05@1.90 per ... in terminal markets. Chicago ... of northern Round White varieties ... 90c@$1.15.

The cabbage market did not ... much activity late in January, ... the earlier part of the month ... slanted downward, losing $2 to ... Bulk Danish-type cabbage was ... $38@42 to western New York ... sacked stock $41@42 per ton. ... shipping point price in southern ... consin declined $3, reaching $3 ... bushel hampers of new cabbage ... ida jobbed at $1.25@2. Revised ... indicate cabbage production next ... third greater than last season in ... shipping section, mainly Florida ...

An increase of 10 per cent in ... strawberry acreage for the early ... with Louisiana having 24,000 acres, ... per cent more than in 1928. The ... states shipping during the past ... berry season probably will show a ... cent reduction from last year's ... no change is indicated for the ... ping states.

Most of the onion movement in ... uary was from points in Indiana ... gan and Ohio. The country price ... yellow stock held fairly well at ... New York shipping points at ... per 100-pound sack, and Michi... ducing sections quoted a few sales ... ly above $5.

Dairy.—Wholesale butter dealers ... the gradual improvement in the ... seem inclined to hold all grades ... and there was a reported tendency ... January to accumulate stocks in ... pation of higher prices. Even here ... are reported closely cleaned up on ... lots and in a relatively firmer ... than the top grades. All the market ... the exception of Chicago show ... arrivals. Effect of recent western ... in cheese prices has been felt in ... markets, and New York state ... clined in sympathy late in January.

Eggs.—Receipts of fresh eggs ... rather liberal and prices declined ... in New York near the first of ... At this time of year it is usually a ... question of time before egg prices ... sharply.

Poultry.—The market on poultry ... been steady to firm under relatively ... receipts and fair demand. Fewer ... have advanced. Roasting chickens ... age are also in good demand, but ... light and unsatisfactory fresh supply.

Grain.—The grain market continued ... in late January. Wintry weather ... sufficient snow cover strengthened ... mestic market, but the general situation ... still dominated by the unusually ... supplies, which are the largest of ... war period. Corn sagged back to ... January level. Other feed grains ... held most of the late January advance.

Feeds. Wheat feeds advanced ... January, but demand was not urgent ... a weaker undertone appeared to be ... veloping. Linseed meal was firm in ... ern markets, but weak at eastern ... Cottonseed meal averaged slightly ... The hominy feed market was firm ... sympathy with higher corn prices ... markets were somewhat irregular ... eastern timothy markets easier.

Livestock. Uneven distribution ... plies attributed in large measure, ... to changes in weather conditions, ... an irregular livestock market during ... last half of January. Fat cattle in ... Chicago was on a new low basis ... season at one time.

Unusual and extremely erratic ... fluctuations featured the Chicago ... trade, with price extremes sometimes ... apart; an unusual price condition in ... uary, a month when stability usually ... acterizes the market. Top prices ... still close to $10.

Moderate receipts and improved ... demand, together with firmness in the ... trade, were price supporting factors ... fat lamb trade. Best lambs at ... reached $17.45 at the highest, but ... to month lower, yearlings sold ... to $15, but cags to $10@15 and culls ... to $12.50.

Farmer's Business Letter

has been a week of light receipts in ... the hog market, due partly, and perhaps ... the mtin, to bad weather and impassable ... roads. West from Chicago generally ... here has been a great amount of snow, ... much sub-zero weather since the first ... the year.

hicago hog receipts this week, in the ... ighborhood of 200,000 head, were small... since the week ending December 1, ... ich included the Thanksgiving holiday. ... pping orders ran very large, about ... 00 hogs being sent to eastern points ... order, the largest week's shipments ... e January 31, 1925. The hog market ... average price, at $9.50, showed a gain ... a dime, and compared with $8.25 for ... same week last year.

hicago receipts were not alone in showing ... decline, since eleven markets had ... 336,000 hogs this week, against 717,000 ... week, and 869,000 for the same week ... year.

Quality of hogs is not as good as it has ... on, due to high corn prices, presumably. ... Receipts of hogs at eleven points for the ... ster season to date show a larger total ... han last year at this time. The gain was ... November and December, January ... owing a loss of about 500,000 head from ... t year's January total of a little over ... 000,000. The figures indicate less pork ... prospect, the government report on hog ... opulation as of January 1 pointing the ... me way. According to this report there ... re 54,956,000 hogs on farms the first of ... year, approximately the same number ... two years ago, and 5,464,000 less than ... January 1 last year. Two years ago, ... the number of hogs was almost ex... by the same as this year, the farm value ... hogs was placed at $17.25 a head, against ... 9.60 this year. Thus in two years the ... industry shows a shrinkage in value ... over $200,000,000, at a time of generally ... creasing prosperity. There is no apparent explanation for this.

Beef Supply Reduced

At the close of this week steers were ... to 81 below Monday's prices. Butcher ... ock was also some lower. Average price ... steers, near $12, is lowest since September, 1927. Top of the steer market this ... ek was $13.50, for cattle weighing 1,513 ... s, while yearlings also sold up to $15.50, ... same as last week.

Receipts of cattle were moderate this ... ek, at 48,000, but smaller than the same ... ek last year and two years ago. Seven ... kets had 151,000 cattle this week, com... ring with 172,000 the same week last ... ar, and 169,000 two years ago.

It is evident that the market is not ... y hungry for beef, a condition that is ... t to be expected to continue indefinitely. ... ring December 66,879 beef cattle were ... ughtered in this country under federal ... spection. This compares with 760,145 dur... g December, 1927. Receipts figures indi... te that the January report will show ... out the same reduction, compared with ... uary last year. This shows the actual ... duction in the amount of beef offered ... consumers. Fifty million pounds of ... f a month is a big item. It this decrease ... eps up it indicates a good outlet for all ... f beef likely to be offered.

Tariff Protection for Beef

The need for a higher tariff on beef is ... dicated by a summary of imports of ... ttle and beef as prepared by the Depart... ent of Agriculture. Imports of cattle and ... ves during the eleven months ending ... th November last year totaled 492,657, ... mpared with 383,670 during the same ... riod last year. Practically all of these ... me from Canada and Mexico.

Imports of beef and veal during the ... me period, it is pointed out further, ... mounted to 56,755,000 pounds, compared ... th 31,908,000 pounds in 1927. In previous ... ars, practically all of New Zealand's sur... us beef went to Great Britain, but in ... 28 prices in the United States were sufficiently favorable to attract 30,167,000 ... unds of beef and veal from that distant ... untry during the first eleven months of ... e year. And note further, that although imports of beef and veal from Australia are still confined to canned products, due to the embargo, there is on its ... rect competition from Argentine beef because low prices of this beef in Great ... itain exclude the Canadian supplies from ... at market and practically force it on the ... nerican market. That also explains in ... rt why the New Zealand beef finds its ... y here.

An increase in the tariff on beef from ... ree to eight cents a pound is being asked. ... What may be expected later on in the ... ason by way of fat cattle receipts is ... flected in the outgoing shipments of ... ockers and feeders from the principal ... arket centers to the Corn Belt feeding ... states. From November to date shipments show a decrease of about 130,000 from the same period of a year ago. Coming at this season of the year this shortage can be expected to develop a corresponding decrease in fat cattle receipts during the late spring and summer months. Rising corn values, an unsatisfactory fat cattle market and other factors are responsible for the indicated lag in replacements.

Strong Lamb Market

Lamb prices are still very high, and so far have not resulted in excessive runs. Receipts here this week were 73,000, against 75,000 last week and 63,000 a year ago. Shipping demand is good. The market was a little lower this week, but top lambs brought $17.65, against $17.85 last week. Average price of lambs was figured at $16.55 this week against $16.60 last week, $11.30 last year and $12.80 two years ago.

Quite a good many Colorado lambs are coming, about 18,000 this week. Shortage of hay and good prices are sending some lambs in from Colorado, but so far without effect on the market. There is reported a good deal of contracting lambs in Wyoming for delivery next fall, indicating confidence on the part of buyers. The lambs, of course are not yet born. Prices generally are in the neighborhood of $11.50, with some up to $12. Some lambs have been contracted in Utah at $10 to $10.75.

The sheep industry is evidently undergoing expansion. According to a government report there were 47,171,000 sheep on farms on January 1 this year, compared with 44,554,000 in 1928 and 41,881,000 in 1927. The question is raised whether or not the sheep business is on the verge of being overdone, but that is a question raised many times during the past few years.

Watson.

February 2, 1929.

Livestock Markets

PITTSBURGH

Cattle

MONDAY'S supply was around 55 carloads. After the bad break at Chicago last week buyers bid lower and sellers resisted, making a very slow market. Sales were at a decline of 25@50c from last week's prices, the light steers showing least change and the better and heavier kinds the most. One carload of good 1,300-pound Angus steers brought $12.75 and several carloads of good weighty steers could have been had at the same figure, but plain heavy steers would not command $12. Good fat handy weight steers went at $12@12.25, with fair fleshy kind around $11.50, some plain ones $11 or less. Good light steers were not numerous, a few selling at $12@12.25. Useful light steers, with flesh enough for most killers, could be had at $11.25@11.50, and fair light killers at $10.50@10.75. Some cattle suitable for feeders could have been bought at this range. Common light stuff sold on down according to condition. Heifers held up better than steers, an occasional choice animal going above $11 but not many that high. Fat cows were about steady, good market cows $8@9.25 and a few of extra quality up to $10. Bulls were about steady, too. Ordinary bologna brought $8@9.50, good butcher bulls $10@10.25, and a few choice butcher bulls $10.75@11.

Choice grain-fed steers, 1,200 lbs. or over	$12 65@13 00
Good to choice	12 25@12 65
Fair to good, do.	11 75@12 25
Plain heavy steers	10 00@11 75
Choice handyweight steers	12 25@12 50
Good butcher steers, 1,000 to 1,150 lbs.	11 75@12 00
Fair to good, do.	11 25@11 75
Ordinary to fair, do.	10 50@11 25
Common, do.	10 00@10 50
Good light butcher steers	11 50@11 75
Fair to good light steers	10 75@11 50
Common to medium, do.	9 75@10 75
Interior light steers	9 00@ 9 50
Feeders	Nominal
Stockers	Nominal
Choice heavy bulls	10 00@10 50
Choice handy butcher bulls	10 25@10 50
Good handy bulls	9 75@10 25
Fair to good bulls	9 25@ 9 75
Common to fair bulls	8 50@ 9 25
Inferior bulls	8 00@ 8 50
Choice fat heifers	10 50@11 00
Good to choice heifers	10 00@10 50
Fair to good heifers	9 50@10 00
Common to fair heifers	8 50@ 9 50
Thin light heifers	7 00@ 8 00
Choice fat cows	9 50@10 00
Good to choice fat cows	8 75@ 9 50
Fair to good cows	8 00@8 75
Common to fair cows	6 00@ 7 50
Canners and cutters	5 00@ 6 00
Fresh cows, calf at side	50 00@150 00

Hogs

Monday's supply was about 40 double-deck carloads. Trade was active, with good handy-weights largely at $10.70, in about last week's closing basis. Heavy hogs sold at a rather wide range of prices, some extreme weights as low as $10.25 and those not much in excess of 250 lbs. at $10.60@10.70. Light Yorkers sold at a wide range too. Hogs of 140 lbs. or over, well finished, went in with handy weights while the lanky kind and the lighter ones brought around $9.50. Pigs were quite dull and weak, $8@8.25 taking the kind here. The market for pigs is very erratic. Quite a few southern pigs are drifting in. Sows were good demand at $8.75 for standard quality.

Heavy wts., 250 lbs. or over	$10 25@10 70
Heavy taixed	10 60@10 70
Medium wts., 180-200 lbs.	10 60@10 70
Heavy Yorkers, 165-180 lbs.	10 60@10 70
Light Yorkers, 125-150 lbs.	9 50@10 00
Pigs, 100-110 lbs.	8 00@ 8 25
Roughs	8 50@ 8 75
Stags	6 00@ 7 50

Sheep and Lambs

Monday's supply was about 10 carloads, over 75 per cent of them lambs. Best sheep brought $11 per cwt., one carload going at that figure with 3,000 lbs. out at $7.50. There is not much demand for sheep on the present price basis and most of them lack finish. Lambs were firm, with the demand for good ones unsatisfied. Several orders for good handy weights at $17.25 had to go unfilled. Real culls sold at $11@12.50, with medium class all the way from $14@16 according to condition. Some lambs which were in fair flesh but not fat brought $15.50@16, the owners preferring to cash them rather than buy corn. Overweight lambs are causing no trouble at present, in fact buyers are ready to take something a bit weighty in order to get lambs that are fat enough.

Good to best wethers	$10 50@11 00
Fair to good wethers	9 50@10 50
Good mixed	10 00@10 50
Fair to good, do.	8 50@10 00
Common to fair	6 00@ 8 00
Inferior sheep	4 00@ 6 00
Good to best spring lambs	17 00@17 25
Medium lambs	14 50@16 00
Culls and throwouts	11 00@13 00

Calves

Monday's supply was about 350 head. Good veal calves were lower at $18.50, others little changed. Medium class brought $14@15 and common $10@12.

CHICAGO

Cattle

Chicago, Feb. 4.—Today's receipts amounted to 18,000 head. Market steady to 25c lower.

Common to fair yearlings	$9 25@10 50
Fair to good yearlings	10 50@11 50
Good to choice yearlings	11 50@13 25
Choice to prime yearlings	13 25@14 85
Common to fair steers	9 25@11 00
Fair to good corn-feds	11 00@12 00
Good to choice corn-feds	12 00@13 25
Choice to prime corn-feds	13 25@15 00
Common to good cows	7 00@ 8 65
Good to prime cows	8 65@10 50
Heifers, common to good	7 75@ 9 75
Heifers, good to prime	9 75@12 50
Canners and cutters	5 50@ 7 00
Inferior light bulls	7 75@ 8 75
Bologna bulls	8 75@ 9 85
Fair to choice butcher bulls	9 25@10 75
Stockers, common to fair	8 25@ 8 75
Stockers, fair to good	8 75@ 9 50
Stockers, good to choice	9 50@10 50
Fancy yearling stockers	10 50@11 00
Stockers and feeder heifers, common to choice	7 25@ 8 50
Stocker and feeder cows	6 75@ 7 50
Feeders, common to fair	8 50@ 9 25
Feeders, fair to good	9 25@10 00
Feeders, good to choice	10 00@10 50
Fancy selected feeders	10 50@11 25
Milkers and springers	90 00@125 00
Common to best vealers	13 50@17 00

Hogs

Fifty-five thousand hogs were offered. Market 10@15c higher.

Heavy butchers, 270 lbs. up	89 60@ 9 85
Mediums, 225 to 265 lbs.	9 75@10 10
Lights, 190 to 225 lbs.	9 80@10 10
Selected, 160 to 190 lbs.	9 95@10 15
Mixed packing, 270 to 350 lbs.	9 00@ 9 35
Heavy packing, 350 to 500 lbs.	8 75@ 9 15
Roughs, 300 to 500 lbs.	8 50@ 8 70
Stags, subject 70 lbs. dockage	7 75@ 8 75
Pigs, best grades	8 35@ 9 15

Sheep

With 17,000 sheep and lambs on sale the market was steady to 25c lower.

Wethers, all ages	80 50@12 75
Yearlings	12 25@15 25
Western ewes	6 00@10 00
Native ewes	6 00@ 9 75
Fed western lambs	15 25@17 50
Native lambs	12 00@17 25
Feeding and shearing lambs	14 00@16 25

Stock Movement

	Cattle	Hogs	Sheep
Receipts for week	46,318	196,976	70,776
For previous week	42,792	240,227	75,013
Same week last year	50,396	204,853	63,675
Shipments for week	13,481	86,739	22,263
For previous week	12,234	78,130	25,903
Same week last year	15,444	82,698	19,571

BOSTON WOOL MARKET

Boston, Feb. 1.—A moderate volume of business was transacted in the wool market. The lower prices and the weaker tendency at the close of the London sales during the past week was reflected by a more cautious attitude on the part of buyers of domestic fine wools and a somewhat smaller volume of business than had been anticipated, says the U. S. Department of Agriculture.

The trend in fleece wools has been irregular. Ohio 64s and finer delaine wool sold at a fraction of a cent off from the Pennsylvania price of 49c, in the grease, while the 48s, 50s Ohio strictly combing wool quotations were slightly firmer. Michigan choice 48c, 50s sold at 50c, in the grease. There was some demand for clothing 56s at 51@52c, in the grease. French combing 64s and finer is quoted generally at 40@41c, in the grease, while most bids are ½c lower.

A fair demand was received for the western-grown wools of mostly 64s and finer qualities. Territory and Oregon original bag wools brought $1.05@1.07, scoured basis, for lots consisting of bulk French combing staple with an edge of strictly combing in some of the lots. Mills generally were not willing to pay any more for the original lots with the longer staple than for those of French combing.

Domestic Wool Quotations

Grease Basis Ohio and Similar

64s, 70s, 80s, (fine) strictly combing 45c@46c
64s, 70s, 80s, (fine) French combing 40@41c
64s, 70s, 80s, (fine) clothing 38c@39c
58, 60s (¼-blood) strictly combing 52
58s, 60s, (¼-blood) French combing 45c
58s, 60s, (¼-blood) clothing 43@44c
56s, (¾-blood) strictly combing 56c
56s, (¾-blood) clothing 51@52c
48s, 50s, (¼-blood) strictly combing 55c
48s, 50s, (¼-blood) clothing 45@47
46s, (low ¾-blood) strictly combing 48@49c
36s, 40s, 44s (common and braid) 43@45c

CASH GRAIN

Chicago, Feb. 4.—The following cash prices ruled here today: No. 2 hard wheat, $1.27@1.27½; No. 3 yellow corn, 93¾@96c; No. 3 mixed corn, 94¼@94¾c; No. 2 white oats, 53¼@53½c.

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SWINE

CHESTER WHITES.—Pedigreed big type Chain, blood, all ages, 15 sows farrowed 151 pigs; priced low, must please. C. E. Cassel, Hershey, Pa.

Chester White Pigs, 6 weeks old, $4.00, 8 weeks old, $5.00. C. LEWIS TAYLOR, Wyalusing, Pa.

CHESTER WHITES since 1887. Choice bred gilts. Large fall pigs, either sex. Immune. J. C. & C. H. Brautigam, R. 5, Sidney, Ohio

Hampshires September pigs and Guernsey half calves. See them or write. ORTON HOUGH & SON, Smithton, Pa.

Hampshire Hogs Bred gilts, service boars, pigs. J. J. RAILING, R 2, Shippensburg, Pa.

REGISTERED HAMPSHIRE SWINE. Write your wants. Service boars. Woodside Stock & Pity. Farm, Summit Pt., W.Va.

Registered Berkshire Pigs, from prolific strains. Member Penna. ten-litter club. Now is time to prepare for higher prices. Norman C. Mauk & Son, Brookdale Farm, Lancaster Co., Pa.

For Sale Two fine junior yearling Berkshire gilts, bred to farrow April 1st. W. F. RISHEL, Centre Hall, Pa.

Reg. Big Type Spotted Poland-Chinas. Fall pigs, at three months old. Priced right. Shipped on approval. Wm. R. Jackson, Darlington, Pa.

REGISTERED
SPOTTED POLAND CHINA BOARS
Aged ten months. Big bone type. Registered Scotch Collie trained farm dogs, females. Bird drivers. JOHN LEWIS, R. 3, Culpeper, Va.

Spotted Poland Chinas Write your wants to A. M. KENNEL, Honey Brook, Pa.

Reg. Big Type Poland sow "Liberator's Supreme" No. 386402, bred to reg. boar. Will have 9th litter March 3. Walter Kugler, Fairfield, Pa.

BIG TYPE POLAND-CHINA fall boars and gilts. Healthy, big easy feeders. Price right. O. C. POWELL, Ada, Ohio

DUROCS Big Type Reg. Durocs. Priced right. Shipped on approval. Visit us or write your wants. O.C.Saufley, Hummelstown, Pa.

HORSES

BELGIAN DRAFT HORSES are unexcelled for beauty of color, shape and ruggedness. Right now is the time for some one in your community to purchase a pure-bred registered Belgian Stallion. He will bring profits to the owner and improve the grade of horses. The Belgian grade is in demand. A ready sale at good prices can be had for these grade colts. For information as to where to purchase a pure-bred registered Belgian Stallion nearest you, or perhaps you need a team of mares, or a mare, and for any other information about the Belgian horse, write the American Association of Importers and Breeders of Belgian Draft Horses, Wabash, Ind.

Registered Belgians Stallions and mares. Write or call. W. L. PORTER, Jamestown, Pa.

PURE-BRED BELGIANS Stock and mares for sale. Jersey Meadows Farms, Jamestown, Pa.

Registered Percherons Send for new price list. WILLIAM A. REID, Oxford, Pa.

REGISTERED PERCHERON STALLIONS and mares, Jehovah and Hesitation blood. B. C. DOTTERER, Mill Hall, Pa.

SHEEP

REGISTERED SHROPSHIRE EWES bred to our imported Buttar Rams. HYLMEDE FARM, Beaver, Pa.

FIVE YOUNG PURE-BRED RAMBOUILLET ewes, bred, $120. White Rock cockerels, from heavy laying flock, $5.00. H. C. Beardsley, Montour Falls, N. Y.

KEEPING UP

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PUBLIC AUCTION

75 HEAD BIG TYPE PURE-BRED BERKSHIRES

Saturday, Feb. 16, 1929 1:30 p.m.

25 bred sows and gilts for spring farrow
12 good sow pigs; 5 boar pigs
4 herd boars, balance feeders

My foundation animals were selected from two of the greatest Berkshire breeding establishments in the country. This offerings consists of popular bloodlines with plenty of size, correct type, exceptional quality. Anyone desiring good Berkshires should take advantage of this opportunity.

ROBT. W. KLICK, Palmyra, Pa.

DAIRY CATTLE

Holstein Bulls for sale, from an accredited herd, from calves to service-able age, from K. P. O. P. 52, the 1,100-lb. butter and 4% bull. Also females. Crystal Spring Stock Farm, Littlestown, Pa.

THREE REGISTERED JERSEY BULLS, from six to ten months old. T. S. Accredited herd. Write us. J. M. Main & Sons, Shippensburg, Pa.

REG. JERSEY BULLS ready for service. Also younger bulls. Accredited herd. C. F. & M. W. BIGHAM, Gettysburg, Pa.

TWO EXCELLENT REGISTERED JERSEY heifer calves, three months. Accredited herd. W. F. McSPARRAN, Furniss, Pa.

FOR GUERNSEY DAIRY HEIFERS. Tuberculin tested. Shipped C. O. D. Write, L. Terwilliger, Wauwatosa, Wis.

Registered Guernsey BULLS 4 to 11 months old. C. A. WRIGHT & SON, Canton, Pa.

POULTRY

Exhibition Barred Rocks, Male and female. ART MASON, Ashland, Ohio

BUFF ROCKS Exclusively. Cockerels, hens and pullets. Large bone, golden plumage. Reasonable. W. L. Gladish, R. 6, Petersburg, Ind.

AYLESBURY and ROUEN DUCKS. Embden Geese. Horse hoots, bred from prize winners. SHALLENBERGER FARMS, Amanda, Ohio

Reid's Turkey Farm for 15 years. 700 Bronze Birds. FREEHOLD, N. J., Star Route.

TURKEYS, DUCKS, GEESE. Leading breeds. Buy your breeders now at special fall prices. Catalog. Highland Farm, Rt. F, Selbersville, Del.

Special Fall Prices on high-class breeding Turkeys, Geese, Ducks and Guineas, write your wants and for mating list. Pioneer Stock Farm, Telford, Pa.

MAMMOTH PEKIN DUCKS For Sale
N. V. HOSACK, Jackson Center, Pa.

CATTLE

—BROCKETT FARMS SHORTHORNS—
Dark Red, calved May, 1928. Sire, Ravendale Gloraford: dam, Averne 2d. The best of breeding and low set and thick. You will like this bull. Priced right. Also several other promising bull calves of near breeding age.
BROCKETT FARMS, Atwater, Ohio

HEREFORDS and SHORTHORNS FOR SALE. 87 cows with calves, 146 yearling steers, 320 heifers, 51 Bulls. Two carloads coming 2 years, 126 weaned calves. Females all T. B. tested. V. W. CHANNELL, Doulds, Iowa

Registered Milking Shorthorn Cow and calf. Priced right. H. D. RAY, Parkwood, Pa.

FAIRVIEW HEREFORDS. Bulls, Heifers, Cows. Federal Accredited herd right and priced to sell. GEO. O. COCHRAN, Dawson, Pa.

D. S. POLLED HEREFORDS. A fine selection. Cows, heifers, bulls. Come or write CHAS. D. GILL, Millersport, Ohio

BUCK & DOE RUN VALLEY FARMS
Hereford Cattle. Poland-China Hogs. Hampshire Sheep. Draft Horses. THE SAINT AMOUR COMPANY. Martonville, Penna.

Angus Cattle at reasonable prices. Write BAYARD BROS., Waynesburg, Pa.



A FARMER who kept his breeding ewes yarded last winter told a writer that a veterinarian had to be called five times during the lambing period for about fifty ewes all told. The farmer seen in the picture above has hay on the January snow will be poor "picking" for a veterinarian in the spring when the ewes drop their lambs. By such methods the animals remain in suitable muscular vigor and the vital internal organs get a healthful promoting shakeup every day. H. D.

Feed for Pregnant and Nursing Ewes

By D. S. BELL

MAXIMUM returns from the ewe flock in the way of lambs born and raised depend largely on the ration which the ewes receive during the latter stages of pregnancy and during the nursing period before pasture is available. Lambs will picture the ration which the ewes receive. The weak "pee-wee" lambs that do not thrive are usually the result of feeding the ewes a ration that is deficient in some essential nutrient. A high percentage of strong, robust, up-and-doing lambs can be insured by feeding the ewes the right amount of a properly balanced ration.

Unfortunately, the phrase "balanced ration supplied in sufficient amount" bewilders some. It sounds technical. It has a scientific twang. The very mention of it seems to imply a lot of figuring which the farmer, with all his work, has not time to do. While a balanced ration is defined as "the feed or combination of feeds furnishing the several nutrients—crude protein, carbohydrates and fat—in such proportion and amount as will properly and without excess of any nutrient nourish a given animal for 24 hours" its practical application rests with knowing the needs of the sheep, the merits and shortcomings of the various farm-grown feeds, and the feeds that can be purchased to best fortify the home ration.

The Muscle Builders

Of the three primary nutrients mentioned—protein, carbohydrates and fat—protein is most likely the one that will be found wanting in a ration arranged solely from farm-grown feeds. Since proteins are the muscle builders in the body they are of utmost importance in the ration of the pregnant and nursing ewe. The ewe will not thrive and the lamb will be a disappointment if the ration is deficient in protein. But since the protein-rich feeds are usually high in price it is economy to feed only such amounts as are actually needed by the sheep.

Of the roughages that are high in protein content the legumes—alfalfa, clover, soy beans, etc.—are of the first order. Indeed, this class is about the only class of roughages that can be mentioned that are rich enough in protein to make up any appreciable deficiency that exists in other roughages such as timothy hay, corn stover or corn silage. While these latter mentioned roughages are not sheep feeds of the first rank yet they can be fed to advantage in a ration the "backbone" of which is legume hay. The inclusion of corn silage, corn stover or even timothy hay will usually effect a saving in the cost of the ration without lowering its efficiency. Where roughages are dry a safe rule is to feed one pound of legume hay for each pound of corn stover or timothy hay eaten, whereas if silage is fed one pound of legume hay will balance two and one-half pounds of succulent feed.

Fortification Needed

There are occasions on many farms where timothy hay or corn stover are the only dry roughage available. Under such conditions the ration should be fortified by purchasing a protein concentrate like linseed oil meal or wheat bran. The inclusion of a fifth pound of oil meal daily will cause the flock to show an increased return more than sufficient for the oil meal unless the ration was unusually high. Quite often in such cases, a fourth to a third pound of wheat bran will form a suitable and yet cheaper fortification for carbonaceous roughages. Substitutions should not often be made because, if the alfalfa or clover hay is a failure, soy beans may be sown in time to make a crop of hay. These have shown soy-bean hay to be not altogether equal alfalfa or clover for sheep feeding.

The problem of a balanced ration so far as the roughage is concerned therefore is simply a matter of securing legume hay for the ewes in liberal amounts or, if legume hay is not available, and timothy hay, corn stover or corn silage must be used as roughage, a protein-rich concentrate like linseed-oil meal or wheat bran must be and should be purchased to balance the ration.

Grain Pays Dividends

The feeding of some grain to ewes, both before and after lambing will pay big dividends. An experimental flock of ewes to which no grain had been fed during the year raised 26.5 pounds of lamb per ewe at weaning time, while another flock which was fed grain raised 42.2 pounds of lamb per ewe up to weaning time, the additional cost of feed per ewe for the year due to the better feeding flock was only $1.90. The difference in lamb weights at 12 cents per pound was more than pay for this item.

There is truth in the statement that the time to start feeding a lamb crop is before it is born. This does not mean that the ewe should be brought to heavy lambing time in high condition but rather by heavy grain feeding during pregnancy. Indeed, a too-stimulating system of feeding the ewes before lambing lays the foundation for a serious ailment that the little lambs' digestive system cannot dispose of readily. The so-called lamb "colic" or lamb "cholera," and its almost 100 per cent death rate among the afflicted, seems to be definitely and directly associated with too rich and too much milk during the period immediately after lambing. For best results the ewes should be brought to lambing time in a thrifty and vigorous condition and carrying just enough reserve flesh to insure sufficient strength at the moment of yeaning. This is the secret of success in shepherding pregnant ewes.

Amount to Feed

There is no rule regarding the amount of grain to feed pregnant ewes, the following of which will insure success. As "the eye of the master fattens his cattle" so the eye of the shepherd guards his flock. Usually, ewes that come into winter quarters in good condition and are then fed a ration which contains a good allowance of legume hay will need little if any grain until four to six weeks before lambing. At this time grain feeding should be begun. For the average ewe weighing up to 130 pounds one-half pound of grain daily should be sufficient. If this amount of grain doesn't do the trick of "rigging" the ewe for lambing the flock, should be gone over carefully to see that parasites, either internal or external, or some other ailment is not causing a heavy drain on their systems. If something is revealed by this inspection the present is none too soon a time to correct it.

While the ewe is in confinement careful feeding is paramount. Plenty of water from which the chill has been removed, a good allowance of legume hay and a small handful of grain should satisfy her requirements. By all means do not increase her grain allowance just at this moment; udder trouble or worse may result.

After the ewe and her lamb have been released from the lambing pen it is folly to increase her grain allowance too quickly. Unless she is absolutely without milk—in which case extra grain may stimulate the flow—the ewe should be gradually raised on her grain allowance from one-half pound daily up to one or one and one-quarter pounds daily and this change in the feeding level should cover a period of at least 10 days and perhaps better two to three weeks. The higher grain allowance should be maintained until the ewe and lambs go to pasture, whereupon, if the grass is not too "washy", the grain can be omitted.

Kinds of Grain

Up to this point we have been concerned with how much grain to feed. What about the kinds of grain? Every shepherd is familiar with the merit of oats. This grain is unsurpassed as a farm-raised concentrate for either breeding ewes or growing lambs and yearlings. Its merit is due largely to the fact that it is practically balanced in its nutritive make-up. Corn alone is not so good as oats for breeding and growing sheep and lambs because corn is deficient in protein. This deficiency is rendered more acute from the fact that over half of the protein it does contain is made up of the single protein Zein and Zein lacks almost entirely one constituent necessary for growth.

It does not follow from the above that corn—the king of cereal grains—should not be used. If corn is used fortify it by the use of one pound of linseed-oil meal for each six pounds of corn. If oil meal is prohibitively high in price wheat bran at the rate of one pound for each three pounds of corn will make a capable substitute for the oil meal. If both corn and oats are available, and this is the case on many farms, a grain mixture of three parts corn, three parts oats and one part oil meal will leave little to be desired.

It goes without saying that all sheep should have salt at all times during the year. It is especially necessary for the pregnant and nursing ewe.

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The Ancients Talked Weather—

(Continued from page 29)

rain-making was studied assiduously by kings and would-be kings. And when in time royalty graciously renounced the high privilege it was still practiced more or less by the common folk as well as by the professional magicians. The methods employed belonged, as a rule, to what we now call sympathetic magic—that is something is done which so resembles the thing desired that by some mysterious law the latter follows. Thus in Queensland, Australia, the men jumped into the pools and pretended to be ducks and frogs. In Northern Australia the magician squirted water from his mouth.

Well rain has come eventually as it always does. Could its coming be hastened not by throwing the minister's wife into the reservior but by scientific means? The experts say it could be but the cost would be rather high. One scheme proposed might provide one-half inch of rain over one square mile through the use of 6,400 tons of coal. And there would be other incidental expenses. If such a method were employed, at what price wheat would have to sell for his father to become a millionaire can be worked out by any bright farmer's lad.

No. Nature may be tardy but at any rate she is relatively economical. While after all in view of the different kinds of weather that are called for by the different farmers as well as by the patrons of the ball parks and the summer tourists, perhaps it is just as well that we still have to leave the management in her hands.

How Animals and Plants Spend the Winter

(Continued from page 9.)

the ground by the wrinkling and shortening of the roots, so that there is actually a little hollow at the surface where the crown of the plant has been pulled down. This hollow is a good lodging place for old leaves and snow, which serve as a protecting blanket during the winter.

Perhaps the most unique method of assuring the life of the plant through the winter is found in the formation of seeds which is common to nearly all kinds of plants. In this method the parent plant forms a tiny plant and stores it away in the seed with a supply of food all of which is protected by a hard outer covering.

Seeds are indeed unique in the entire plant kingdom. They are planned to withstand the rigors of winter, and other adverse conditions. The weather may be hot or cold, dry or wet and still the tiny plant on the inside of the well-formed seed is not injured. In the first place the seed contains very little water, which is a protection against freezing. On the other hand, the hard outer covering of most seeds, for some time at least, is practically water proof, so that the seed cannot absorb too much water.

This water-proof character of the seed may be due to a bony or corky outer layer, a waxy ar resinous covering or perhaps to an oily deposit. These corky or waxy coverings or oily deposits must undergo a chemical change before the seed can absorb enough water to cause it to germinate. This chemical change is so slow that before it is finished the cold winter weather has passed.

In some instances the freezing weather helps to make the change in this outer covering of the seed. You all know how hard and bony the outer covering of the walnut or hickory nut is, and how tough the outer shell of the chestnut becomes. The alternate freezing and thawing during the winter along with the chemical changes going on in the hard, tough coverings, prepare these seeds for germination the next spring. Then and not until then will the young plant make its appearance, which is at a time when there is no danger of injury from freezing.

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Walker in England

(Continued from page 38)

which indicates the market is in a fairly healthy state. But the wool story belongs elsewhere.

Wanted an Old English Christmas

We were aware that December 25th was coming on apace and wanted to spend it in a typical English manner. Who has not heard of the "Yule log, the roast goose and the good cheer of Merrie England"? And here we were in a receptive mood for our share of it. I even had visions of some bluff old English squire—all English squires are bluff and old—inviting me to his delightful rural estate (or that's what the novels call them), and perchance we would have a hunt and chase a wassail to his lair or shoot a mead or two. I think these are the more common Christmas game animals. As the date approached we abandoned hope in that direction, so began to look around where we could at least hear the Carols of "God Save You Merrie Gentlemen" and absorb the spirit of the season second hand.

A gentleman suggested York to us, "A very picturesque old spot, eh. You'll like York." Later we told another we were thinking of York for Christmas. "Fine! Quaint old town. Singing and all that sort of thing. You can't beat York." Still another said, "Jolly spot what! Finest choir in England. Old cathedral and ruins. You'll enjoy York."

On to York

So you can imagine our hopes on York. True the wife refused to enthuse much. When I told her if an Englishman didn't know where to spend Christmas better than we did he had better leave the country, she replied, "That's what they are doing. Look at the papers full of advertisements of places in France and Switzerland and the lists of extra trains carrying the people there and to the seashore resorts. Our Christmas will be quiet enough if that's what you want all right."

"But the carols," I ventured. "I always have wanted some one to carol to me outside of my own immediate family. And besides where can we go? London is filled up with all the country folks coming in and all the seaside places are full of London folks going out, so what's to be done?"

"We will go to York," she agreed, so that's how we happened to spend our Christmas in England's oldest town.

York is not only an old town but it has many points of interest as well. Here are the remains of a Roman abbey, an old castle built originally by the Normans to repel attacks from the Danes, a cathedral occupying the same ground for 1,300 years and the present structure from the 12th century, containing some of the finest glass windows of any of the European cathedrals. In addition there is a wall about three miles in length almost encircling the town and in a fine state of preservation. At one time it afforded great protection to the town and a walk along its top gives one a good view of the city. It was the medium we used to get acquainted with the folks, as we could look into the second and third story windows from its top. We used this way, as it was the only one afforded us, a deader town I never saw. There wasn't enough people to get acquainted with at the hotel and the few who were there seemed engaged in drinking the favorite Yorkshire toast:

"Heres tae masel, (myself)
An' tae ma wife's husband an'
No fergettin' ma son's fether."

Quiet at Least

We went to hear the service at York Minster and found the organist excellent, the choir fair and the building very cold. The nearest we heard to a "God bless you, Gentlemen" was a "Gorblimme oi'm dry," and the roast goose was a minus quantity. Instead of the

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Galloway Coats and Robes for Sale at Wholesale Prices. All work guaranteed. Reference: Citizen's State Bank, Milford, Ind.

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OATS

SENSATION—One of the most producing oats in cultivation. 75 bu. and upward per acre are frequent, with large, white, meaty grains weighing 44-46 lbs. per measured bu. of the highest quality. We are making an exceptionally low price in quantities. You should by all means try these oats. Also Early Champ and White Cap Seed Corn, Bearded and Smooth Barley, Soy Beans and Sweet Clover. Write us for samples and prices.
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Made from Hides Supplied by You
No better protection from cold winter blizzards. Long years of wear—fully guaranteed. Ship us your cattle and horse hides and other raw furs; we will convert them into furs, for coats and robes at considerably less than the usual prices. We also make and have in stock a full line of ladies' fine fur coats. Buy from us and save money. Catalogs and other prices gladly sent on request.
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12 WEAR-RESISTING IMPROVEMENTS
Dealers everywhere.
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Here is a guaranteed pure iron roof that resists rust. Our catalog explains why it is lightning proof and fire-proof.
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Most economical you can buy and easily put on. Write today for free catalog
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I will condition a Horse or a Cow in twelve days
Put flesh on its bones, Give it life and vigor. Can add 50 to cent to looks and value. Satisfaction guaranteed or no pay. Send postal for free offer.
P. O. FAUST, BRYN MAWR, PA.

AGENTS

THIS WILL PAY A MAN WELL.—Farmer preferred to sell Wynkx (formerly "Wormix"), my concentrated medicated salt and smoke-black guarantee. Fifteen pounds sells for $3.50; added to 85 pounds of salt it makes a better conditioner than can be bought ready-mixed. Makes feeders half the cost of fatter. Thousands of livestock owners testify Wynkx is best remedy they ever fed. Many say that since feeding it they haven't lost a sheep or hog although before they lost many. I offer you an agency with liberal profits and will advertise Wynkx for you direct to livestock owners in your territory. Write for particulars; begin immediately. Increase your income. Address Sidney Fell, Proprietor, Iva-San Laboratory, 4612 St. Clair Ave., Dept. 35, Cleveland, Ohio.

AGENTS.—Make $25.00-$100.00 weekly, selling Comet sprayers and Ashwashers to farmers and autoists. All brass, throws continuous stream. Established 25 years. Particulars free. Ruster Co., Box C15, Johnstown, Ohio.

POLMET POLISHING CLOTH cleans all metals like magic. Gets enthusiastic attention. Sells fast at 25c. Sample free. F. C. Gale & Co., 80 Ellsbore St., Boston, Mass.

SELL STORES, OFFICES, GARAGES our flashy blue floor brushes. All sizes, kinds. Big sales easy. Big profits. The Brush Works, 842 4th St., Fairfield, Iowa.

SALESMEN

EXPERIENCED FARM MAN wanted to sell Essex All Metal Corn Cribs in home territory. We furnish list of prospects. Here is an opportunity to make good money right now! Write today. F. O. Schoedinger, 326-338 Mt. Vernon Ave., Dept. 12, Columbus, Ohio.

EVERY HOME A PROSPECT.—Make big money. Empire crew, Take orders trees, shrubbery. Work entire year. All or part time. Complete cooperation. Land-cape service. Commission paid weekly. We deliver, collect. Apply Willens Sons' Nurseries, Desk F, Rochester, N. Y.

SALESMAN.—Agent, experienced water pump man wanted to represent Philadelphia Distributor exclusively. Must have car and about $100.00 for demonstrating equipment. Line leads furnished immediately. Apply Fred W. Secker, Boerne Bldg., Philadelphia, Pa.

NEW HOUSEHOLD DEVICE. Washes, dries windows, sweeps floors, cleans walls, scrubs, mops. Cheaper than broome. Over half profit. Harper, 174 Third Street, Fairfield, Iowa.

WANTED, Salesmen with cars to sell milking machines. Straight commission with $50.00 a week drawing account. Write fully. Address Box 761, Pennsylvania Farmer, Pittsburgh, Pa.

WANTED. Farmer or farmer's son or man to travel in country. Steady work. Good profits. McConnon & Company, Dept. FA2702, Winona, Minn.

THE ADVERTISEMENTS in Pennsylvania Farmer contain information that is valuable and important. Read them and when answering them mention Pennsylvania Farmer. It will help us and help you.

Farm Conditions

Franklin Co., Southern Pa.

Jan. 30: Ice and snow covered the ground and hung on the trees like crystals the latter part of last week. Wheat had been making a fair showing before the snow. The County Commissioners have reduced our county tax one mill this year. Butchering nearly completed and beeves are being killed, selling at 9c to 20c dressed. Public farm sales will commence soon. Eggs 38c, corn $1.50 bbl., wheat $1.20 bu., butter 45c, lard 13c, potatoes 50c, chickens 25@27c, oats 45c. John B. Shank.

Preston Co., Eastern W. Va.

Jan. 23: A very mild winter. Not much snow, but lots of rainfall and after each rain colder for a day or two. Wheat about as usual. Cattle wintering fair. Farmers ordering their grass seed. Flu plentiful but mild. Some of the farmers planning to attend Farmers' Week at Morgantown. Chickens laying fair with eggs 35c.
Wm. C. Wolfe.

Washington Co., Western Md.

Jan. 27: Weather cold, snow January 22, sleet and rain January 25. Trees and fields look beautiful. Much sickness. Butter 60c, eggs 40c, wheat $1.34. Hogs beginning to come up in price. Butchering mostly done. Cattle wintering well, plenty of all kinds of feed. Farm organizations busy. Most roads in good shape.
E. J. P.

Mifflin Co., Central Pa.

Jan. 28: An open winter up to January 25th, when snow and sleet fell, a much needed protection for wheat. Temperature about normal. Livestock of all kinds doing well. Veterinarians are making a retest of cattle in eight townships. It is expected that Mifflin county will have less than one-half of one per cent reactors after this test is completed.

Many of our people attended the State Farm Products Show at Harrisburg last week. Some prizes were awarded to some local farmers. The Belleville Vocational High School home economics demonstration team took second honors in the home economics demonstration contest.

Agricultural committee meetings being held with usual attendance and interest. The usual number of public sales will be held during March. Prices received for farm produce low in comparison to prevailing prices of feed.
L. K. Yoder.

Braxton Co., Central W. Va.

Jan. 29: Snowing today. Have had very little snow. Have had unusually fine weather, mercury has registered below zero only once.

The flu epidemic has somewhat subsided. Many deaths especially among the older folks.

Many farmers shipping cream. Wheat looking well for the ground to be bare so much. Corn $1.25, potatoes 81, chickens 20c, eggs 38c.
Reader.

Carroll Co., Northern Maryland

Jan. 28: Winter has arrived at last. On Jan. 17th we had a sleet storm, followed by a rise in temperature with damp, foggy weather. Roads have been good, but the thaw made dirt roads bad for traveling. The temperature dropped suddenly. The first real snowstorm of the season occurred January 23rd when two or three inches of snow fell in a short while.

Growing wheat and barley looking good. The main farm work at present is getting out the year's supply of wood and on favorable days hauling manure. Time will soon be here for making hot-beds, so attractive seed catalogues are making their appearance. Hay and fodder plentiful for feeding. Stock is looking good. Some of the farmers are butchering beeves. A neighbor has a fair sized bunch of lambs.

Chicken thieves on the rampage, stealing some farmers' whole flocks. A forestry meeting at Westminster is scheduled for early part of February. Several fair sized plantings of white pine have been made so far. Flu had been prevalent over the county but is on the wane. Corn $4.50 per bbl., wheat $1.25 per bu., eggs 34c.
Harry I. Rinehart.

Veterinary

By Dr. J. F. SHIGLEY

Cow Not Right

I have a cow that is troubled with lameness. She will be lame in one foot a while and then it will change to another—seems to travel from one joint to another. The blood vessels on the lame legs are swollen up about half way to her hock behind or her knee in front. Cow is in very good condition, produces well, is due to freshen in about four months. E. T.

It may be helpful to get some additional mineral in the ration. By all means I would use a good legume hay like clover or alfalfa or roughage and would further more strengthen the mineral content of the ration by adding three pounds steamed bone meal to each 100 pounds of the mixed feed used.

Also as an additional provision, give for a five-day period a tablespoonful once daily of saltpeter. Give this on the grain feed. Also a good dose tone and one-half pounds) of Epsom salts every week or two days will be in order.

Dog Has Sore Nose

I have a Collie dog that has a sore on top of his nose. It is rough and scaly part of the time, raw in some places. Also is raw sore on inside of nose round the rim.
C. T.

The application of a mixture of two parts sulphur to one part of vaseline frequently clears up these cases.

Thrush

I have a young mare that has a canker in one of her hind feet. What do you advise for canker?
J. J. R.

The foot should be thoroughly cleaned and as much of the parts of the frog removed as will permit of free drainage. One may then apply tar and oakum, holding this in place with a piece of metal clout or by bandage.

Many cases require the services of a veterinarian, as the treatment may require certain changes to meet the condition of the case. Clean, dry quarters must be provided or treatment will have little effect.

Sow Not Doing Well

I have a sow that has been lame for several weeks, first in one leg and then the other. She is expected to farrow in March. Eats well, looks fairly well. Her feed is corn, white middlings or ground wheat, milk, potato and apple peelings. Fed quite a few apples in the fall.
J. K. A.

Try adding some fish meal or tankage to the ration and allow the sow to have alfalfa hay, alfalfa meal or clover hay. Add one teaspoonful of cod-liver oil to the daily ration. Keep quarters dry and clean.

AT a recent meeting of the New Jersey Business Men's Conference on Agriculture in Trenton, the Governor was urged to authorize an immediate survey of township roads, to the end that a start could be made on the improvement of a secondary road system in New Jersey.

BABY CHICKS

...that rare quality, is bred into our ... chix, carrying blood of Tancred's best ... Chick produced on our own farm. ... Leghorn Pen, 1928 Penna. State Standard ... Show, State College. No pullets used ... breeders trapnested. Males pedi... All breeders Paden's White Leghorns. Illustrated booklet. Paden's White Leghorn Farm, Dept. B, Millersetown, Pa.

PROFITS from quality chicks. We cull ... chicks rigidly, set only large eggs. Use large, ... sales from pedigreed flocks of from 150 ... records which assures you the utmost ... quality and liveability. White, Buff, ... Rocks and R. I. Reds. $13. Leghorns, ... Assorted, $11 per 100. 5% discount ... orders received three weeks in advance. Circular. Fairview Heights Hatchery, Blanchester, ...

TESTED BLOOD TESTED ROCKS, REDS, ... Bred for color, egg production, and ... four years for Bacillary White ... tested by the Virginia State Department of ... All Chicks shipped under State ... Catalog and price list free. Order early. ... supply your wants. Harrisonburg ... Inc., Box 222, Harrisonburg, Va.

DAIRY CHICKS—Strong and Sturdy. Rocks, ... Leghorns, Wyandottes. Healthy and of ... quality. Carefully selected, rigidly ... and culled for color and high egg ... Assembly prices. 100% ... chicks guaranteed. Write for catalog and ... discount. Mt. Airy Poultry Farm, ... Mt. Airy, Md. Phone 57.

LEGHORN EGGS AND CHICKS.—Big ... if ordered now for spring shipment. ... Pullets at 300 egg contests. Shipped ... Winners at 20 egg contests. Shipped ... Catalog, special prices bulletin free. These ... chicks insure success. Get free Catalog, prices, ... before buying. ... Wiltwicker Leghorn Farms, ... R. Beer Washington, Ohio.

QUALITY CHICKS.—WHITE LEGHORNS, 10c, ... Barred Rocks, Reds. White Wyandottes, Black ... Minorcas, 12c. Buff Rocks, Hamburgs, 14c. Heavy ... mixed, 11c. Light mixed, 9c. 5% discount on ... March orders received before February 15. Plum ... Creek Poultry Farm, Sunbury, Pa.

CHICKS.—Pure Barred English White Leghorns. ... We Import Large Trapnested Birds. 11c and up. ... Big, husky chicks hatched from our Egg-Bred ... Chicks insure success. Get free Catalog, prices, ... before buying. ... Wiltwicker Leghorn Farms, ... R. Beer Washington, Ohio.

EXTRA QUALITY.—4 breeds: Leghorns, Reds, ... Barks, Wyandottes. Our 100-acre Breeding Farm, ... system of management, equipment and experience assure you a more profitable chick. All ... breeds State tested. Hall Brothers, Box 61, ... Fallsgrove, Conn.

EBENSHADE'S HIGH-CLASS BRONZE TURKEYS. Big profit payers. Free instructions with ... orders quarts success. Toms, hens, $12 $15 $20-$25. Satisfaction or money back. Big catalog 10c. ... See them, Ebenshade Turkey Farm, Box F, ... Berks, Penna.

CHICKS.—Single Comb White Leghorns, $12.00, ... 100. Rocks and Reds, $14.00, 100. White ... Rocks, $14.00, 100. Mixed, $10.00, 100. All good ... chicks of free-range pullet stock. I pay the ... postage. 100% live delivery. Special price on ... larger orders. Circular free. Jacob Neimond, ... Box 6, McAlisterville, Pa.

BLOOD TESTED S. C. W. LEGHORNS, Hollywood strain. Chicks, $15.00 per hundred. White ... Wyandottes, $15.00. Barred Rocks, $14.00. Also ... Pekin ducklings and turkeys for sale. Glen-Dale ... Poultry Farm, Dillsburg, Pa.

CHICKS C. O. D.—100 Rocks or Reds, $14.00; ... Leghorns, $12.00; heavy mixed, $11.00; light, ... $9.00. Delivery guaranteed. Feeding system, ... raising 95% to maturity free. C. M. Lauver, ... Box 65, McAlisterville, Pa.

SUNNYFIELD EXTRA LARGE Single Comb ... Black Minorcas, exclusively. Chicks, Eggs, Stock. ... Extraordinary layers. Lay exceptionally large ... white eggs, two matings, low prices. Catalogue. ... Sunnyfield Minorca Farms, Grampian, Pa.

REGAL DORCAS WHITE WYANDOTTES. Eggs, ... Chicks, Stock. 238-Egg Record Ledger, North ... American contest, Winter layers. Excellent type. ... Five matings. Low prices. Catalogue. Keiser's ... White Acres, Grampian, Pa.

AMERICAN MOTTLED ANCONAS.—Record Layers. Lay large white eggs. Extra large type. ... Exceptional markings. Fine matings. Low prices. ... Catalogue. American Ancona Farms, Grampian, ...

BABY CHICKS from heavy laying strains of ... Rocks and Reds, $14.00; White and Brown Leghorns, $12.00; mixed, $10.00 prepaid. Member ... I. B. C. A. Sunnyside Hatchery, Liverpool, Pa.

SINGLE COMB REDS. Barred Rocks, Eggs, ... Chicks, Extraordinary matings. Fine type. Free ... healthy birds. Exceptionally heavy layers. ... for winter production. Catalogue. Low prices. ... Grampian Hills Poultry Farms, Grampian, Pa.

GIANT LIGHT BRAHMAS.—Chicks, Eggs. Extraordinary large breeders. Fine color. Record ... layers. Standard bred. Low price. Catalogue. ... Giant Brahma Farms, Grampian, Pa.

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BABY CHICKS.—Leading strains of Barred ... Rocks and Reds. Kulp's famous Brown and ... White Leghorns. Catalog free. W. W. Kulp, ... R&A, Pottstown, Pa.

BABY CHICKS and EGGS.—Superior Ringlet ... Barred Rocks, Rose Comb Reds, Tancred and ... English White Leghorns. Catalogue. Wyndham's ... Ideal Poultry Yards, Tiffin, Ohio

KEISER'S SINGLE COMB BROWN LEGHORNS ... and Golden Buff Orpingtons. Excellent matings— ... Catalogue. F. Keiser, Grampian, Pa.

FERRIS STRAIN WHITE LEGHORN CHICKS. ... $12.00 per 100; $57.50, 500; $110.00 per 1,000. ... Juniata Poultry Farm, Richfield, Pa.

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WRITE FOR SPECIAL OFFER.—White Leghorn chicks and coal-burning brooder stove. ... Gearhart Farms, Box 87, Gordon, Pa.

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LEGHORNS, ANCONAS, 10c. Rocks, Heavies, ... 12c. Continental Hatchery, York, Pa.

HAY AND GRAIN WANTED

WANTED.—Hay, Straw, Grain, Potatoes, Apples, Cabbage, etc. Carloads. Pay highest market prices. The Hamilton Co., New Castle, Pa.

RAW FURS

WANTED.—Raw Furs, Ginseng, Minks, Muskrats, Raccoons. Especially broad stripe Skunk. $1.40. Sterns Fur Co., New Brunswick, New Jersey.

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SOME OF AMERICA'S BEST MAMMOTH Bronze Turkeys. Original Gold Coin strain. Excellent yearlings and young stock bred from prize-winners. Mrs. S. Gwen Reville, Ohio.

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TURKEYS.—All breeds. Strictly pure-bred. Pairs and trios, not akin. Reasonable prices. Eastern Ohio Poultry Farm, Bealleville, Ohio.

WHITE HOLLAND TURKEYS.—Strong, vigorous stock. Prices right. Mrs. Homer Price, Newark, Ohio.

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DEAN'S FAMOUS "VIKING" non-sitting S. C. Reds, Fine cockerels and pullets, hatching eggs from championship matings, $3 per 15; $5.00 per 30; $12.50 per 100. Special matings, $2 per 15, $3 per 30, $9.00 per 100 prepaid. D. H. Dean, R. 7, Medina, Ohio.

ALBEE'S PERFECT PEKIN DUCKLINGS $33, Eggs $14.-100. "World's Best." Service, Satisfaction. "Duck News" Free. Roy E. Pardee, Ash St., Islip, L. I., New York.

SPECIAL SALE on Barred Plymouth Rock Hatching eggs. Were $12.50 per 100, During February $8.00 postpaid. Circular. H. L. Evans, Spencer, Ind.

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ALL ABOUT BEES.—Managing, swarming, feeding, wintering and many more subjects are discussed in Gleanings in Bee Culture. Read the beginners' lessons. Each issue 64 pages, monthly; two years for $1.00. Helped thousands of bee-keepers make money. The A. I. Root Company, Box 7, Medina, Ohio.

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LEARN AUCTIONEERING AT HOME. Every student success-ful. School, Box 707, Davenport, Iowa.

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ALFALFA.—First and second cuttings, and mixed hay. Deal direct with a farmer and save money. Write for prices. The Cross Farm, R. D., Fayetteville, N. Y.

HAY.—All kinds, alfalfa, clover, timothy and mixed. Delivered prices. Harry D. Gates Company, Jackson, Michigan.

ALFALFA HAY.—Car lots for sale. Chas. B. Wing, Box 22, Mechanicsburg, Ohio.

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AVIATION.—Salary while learning, $18 to $35 per week, while under instruction in our factory, and at our airport. Call or write for information without obligation. Weeks Aircraft Corporation, Department L, Pinkinton Building, Milwaukee, Wisconsin.

SEEDS AND NURSERIES

CERTIFIED SEED POTATOES.—Early and late varieties. Northern Grown, State Inspected, properly warehoused and graded, uniformly desirable. See your dealer or write for free booklet and delivered prices, straight or mixed carloads. Albert Miller & Co., 308 West Washington St., Chicago, Ill.

TIFTON'S RELIABLE PLANTS. — Frostproof Cabbage, Bermuda Onion Plants, Wakefields, Dutch, Flathead, Copenhagen, Golden Acre. Postpaid. 500, $1.50; 1,000, $2.50. Express paid, 500, $1.25; 1,000, $2.15; 5,000, $9.40. Early Tomato, Pepper, Cauliflower, 200 Plant later, write. Tifton Plant Co., Tifton, Ga.

PEACH AND APPLE TREES $5.00; $7.50 per 100 and up. Complete assortment fruits, berries, ornamental trees, vines, shrubs, evergreens. Catalog in colors free. Tennessee Nursery Company, Box 125, Cleveland, Tenn.

HIGH GRADE SEED POTATOES.—Russets, Green Mountain, Gold Coin, Irish Cobbler, Banner, Walter Raleighs and Carman No. 3. Prices right. Catalog free. The Keystone Potato Farms, Richfield, Pa.

CLOVER SEED.—Medium Red, Northern grown. Alsike, Mammoth Red, Sweet Clover, White Blossom. Write for special prices. Holmes Seed Co., 222 Cleveland Ave., Canton, Ohio.

HARDY ALFALFA SEED, 93% pure, $10.00 bushel; sweet clover, 95% pure, $4.50. Return seed if not satisfied. Geo. Bowman, Concordia, Kansas.

DAHLIAS.—25, $2.00; 75, $5.00, not labeled. 50, $2.50; 60, $5.00, labeled. Perennial Phlox, mixed; Mammoth Scarlet Cannas, 15, $1.00; 50, $2.00. Mrs. Howard Holsinger, Benton, Md.

FROSTPROOF CABBAGE and Bermuda Onion Plants. Strictly first class in every way. Well rooted. $1.00 per thousand f.o.b., here. Mention variety wanted. Guarantee Plant Co., Ty Ty, Ga.

RUSSET SEED POTATOES, grown on my farm, $1.60 per bushel; one bushel $15.00. Send order now. Will ship when you want them. Edwin Souder, Sellersville, Pa.

CHOICE DAHLIAS.—Circular describing varieties free. Pease's Floral Gardens, Bowmansdale, Pa.

APPLE TREES, 25c; PEACH, 15c. Weigelias and Deutzias, 15c. Spirea Vanhouttei, 10c; 12, $1.00. Catalog free. Malta Nursery, Malta, Ohio.

PEACH TREES, 4c each in hundred lots. Apple, cherry, pear, plum. Reasonable. "State inspected." Catalog free. Leo H. Graves, Farina, Illinois.

FREE SAMPLES Ohio certified Clerage Seed Corn. High yielding strain. Write, Dunlap & Son, Williamsport, Ohio.

WANT—MISCELLANEOUS

OLD MONEY WANTED.—Will pay $100.00 for 1804 Dime, S. Mint. $50.00 for 1013 Liberty Head Nickel (not Buffalo). Big premiums paid for all rare coins. Send 4c for Large Coin Folder. May mean much profit to you. Numismatic Co., Dept. 726, Ft. Worth, Tex.

WE PAY UP TO $10 pound for medicinal roots, Dandelion, etc. Information and price list 10c. Luft Herb Co., Hermansville, Mich.

WANTED.—Old books, letters, stamps, etc. Box 252, Bridgewater, Pa.

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PEAFOWL, Pheasants, Bantams, Pigeons, Birds, Rabbits. Free Circular. John Hass, Bettendorf, Iowa.

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ST. BERNARD PUPS.—From pedigreed stock. Two female pups, 12 weeks old, orange and white, $35.00 each. Returnable if not pleased. Home Stock Farm, Sellersville, Pa.

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NATURAL LEAF TOBACCO.—Best grade, guaranteed. Chewing, 5 pounds, $1.60; 12, $2.60. Smoking, 10, $1.60; pipe free. Cigars, 50, $1.50. Pay when received. Valley Farms, Murray, Kentucky.

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PENNSYLVANIA FARMER

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PENNSYLVANIA STOCKMAN *and* FARMER

February 16, 1929

N. J. AGRICULTURAL EXP'T STATION
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Farm Facts and Fancies

By ALVA AGEE

WE WANT to know what lies ahead. So far back as history goes we find that human beings have had that desire. We can do a stunt of crystal gazing or listen to the most profound philosophers and economists, and the purpose continues always the same—and not infrequently the results. It is not idle curiosity so much as a desire to shape our affairs so that we may profit from knowing. I have picked a few economists who appear to me to be more shrewd than others and watch their changing views, but the best of them differ widely.

It is the same about students of human beings, the progress we are making, and whether that progress is forward or on the back track. Among forecasters there is infinite variety from which we may choose. Some are right, in the main, and some are wrong—that is necessarily so—and every man must use his own judgement in picking those he would trust most when trying to do his own thinking.

Factors Influencing Price

The U. S. Department of Agriculture's publication, "Crops and Markets," interests me. I rather liked the Department's venture into the field of somewhat definite forecasts of prices, but our editor said it was unwise, and I reckon it was. When the December issue came I turned to the discussion on "The price situation," and naturally wanted to know what would be said about the potato crop.



The statement was made that "certain facts are now apparent." The three facts, briefly stated, were (a) the present supply will continue to be the dominant factor in the price of old potatoes during the first half of 1929, (b) the early potato area may reduce acreage and thus strengthen the markets for old potatoes, and (c) the price of old potatoes next spring will affect the price of new potatoes from the South.

Now all that seemed so evident that it didn't get me far in my guessing. Some past records presented by the writer were more interesting. December prices were unduly low judging by the spring price for our biggest crop prior to 1928. One encouraging fact is that in past years very low prices have led the growers in the ten early states to cut acreage ten to fourteen per cent.

A Lower Level of Prices

There is an influence on potato prices that never can be measured, but is at work to the disadvantage of many growers. It is the high yields obtained from heavily fertilized areas. Maine contributed one-twelfth of the country's crop in 1928 and this was possible only through the most liberal feeding of the plants. Her yield per acre was 220 bushels last year, and over 230 the previous year. Virginia, New Jersey and many other eastern states get large yields per acre through lavish fertilization. It is reasonable to think that the 400-bushel potato clubs have led many a grower to double the amount of fertilizer per acre he had been using. This use of fertilizer reduces cost per bushel, and makes conditions harder for that great number of growers who follow older methods.

Rye as a Cover Crop

Mr. Zinn refers to a writer who recommends rye as a cover crop and says "Many writers have been guilty of the same thing years ago, but not many of them are doing it today." He quotes Prof. Bear who has found that the rye while retting in the ground actually reduces the store of available nitrogen. Now, let's keep that record of "guilt" straight. There was a time when clover was not growing, and we didn't know that the soil was acid. There was no general knowledge of hairy vetch. Land lacked good physical condition. Rye would grow in late fall and early spring when nothing else would grow on heavy, acid and poor land.

Year after year I helped the physical condition of land for potatoes that was given plant food in the form of fertilizers. A cover crop of rye on this land helped a seeding to grass for pasture. Certainly rye was pretty friendly to the owner of a poor soil when fertilizers were bought—and when they were not. Now it is different. We have better plants, and Mr. Zinn does right in criticising its use where vetch or lime and lime-loving legumes can be used. I think the fact remains that in its day rye did serve us well.

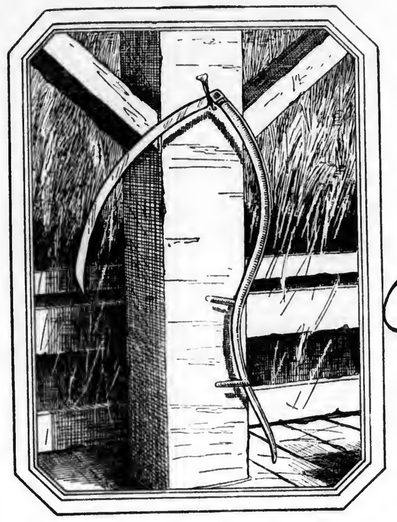
I have been studying the reports of tests of drain tile in tight clay soils, and a surprising thing is some effect upon the water level halfway between drains about seven rods apart. I should not have expected any appreciable effect, and it wasn't much. Even more surprising was the apparently half-satisfactory result when the drains were four rods apart, especially when the tile was between two and a half and three feet deep. Maybe the explanation is in the definition of "tight clay".

Considerable experience and much observation have taught me that when a clay is really tight the drains need to be not over two rods apart if one wants to cultivate reasonably soon after a rain, and sometimes less than thirty inches is a better depth than something over. Too expensive? Probably so except for wet portions of fields that one wants under a close crop rotation. Draining the wet part lets one get better returns from all the land. Where all the land is a close clay it should be in grass, if possible, the greater part of the time, and the drains need not be so close.

Employes

I remember the reference which a member of a religious denomination made to the "hireling ministry" of another denomination. Personally I believe in paying one's preacher if he needs or wants the money, but most people do not like the word "hireling." The most of us are hired, and some are fools: lawyers, doctors and other workers, but one often runs into resentment against the word "hired" as applied to men and women workers on the farm. Granting it to be unreasonable or reasonable, we find that all industries except agriculture use the term "employes" for the men working in them, and if there is a preference by workers for the term in farming it should by common consent come into general use.

If the inference I have made from some instances is all wrong, I should not have mentioned the matter; if the inference is right that any considerable number prefer the word "employe" as used in other occupations, we should let the older term drop out of use.



The scythe . . . the old oaken bucket . . . the brick oven . . . oxen . . . home mixed fertilizer . . . home grown seeds . . . all were familiar on the farms of the land. And all have gone their way. They have passed . . . not because they were not good, but because something better has been found to replace them.

The Old Order passeth.....

in scythes and in feeds

AS WITH the scythe, so it is with the mixed feed. Years ago, before the present discoveries regarding animal nutrition had been made, the farmer could approximate with a home-mixed feed the results obtainable by a commercial feed. But that was long ago.

Science and rigid economy have since entered the picture. The nutritional discoveries that have been made in the laboratory have been proven on the experimental farms. The mixing of feeds to the new, better, proven formulae is now a highly specialized business. Individual feeders could not possibly afford to enter upon the tremendous research necessary to the creation of a feed that goes after profits in a scientific manner.

Many of the ingredients essential to such a complete ration are practically unobtainable at dealers. Substitutions would have to be made that might do actual harm. Then, the home mixer can never hope to build a feed that is uniform. The different ingredients will vary in quality from time to time. This variation the manufacturer controls by careful buying and careful testing.

The manufacturer has the benefit of an immense buying power, and can command the choicest ingredients at the lowest prices. His machinery is up-to-date and efficient, carefully blending the various feeds with a minimum of labor. The home mixer has not these advantages, and must pay a good deal for labor—either his own or that of his helpers.

That is why the commercial feed yields profits far in excess of its moderate cost. The greater profits coming from maximum health, production and breeding efficiency are the supreme justification of commercial feeds based upon laboratory research and continual testing.

To be sure of profit-making feeds—look for a Park & Pollard Dealer!

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POULTRY FEEDS	DAIRY RATIONS	OTHER FEEDS
Lay or Bust Dry Mash	Overall 24%	P & P Stock Feed
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ATWATER KENT RADIO



IT'S ALL TRUE

—when you have the right radio

RADIO *does* bring the city "up close." It *does* mean more to farm families than to anyone else.

BUT *you've got to have a good radio.* Radio that reaches out. Radio that sounds natural. Radio that's always ready when you are. The best evidence that Atwater Kent Radio is good radio—that it really does the job as everybody wants it done—is the fact that it is and has been for a long time the best seller in *both* the city and the country. After listening, after comparing prices, most people want it—because they find it's the kind they want.

From a lamp-socket or from batteries

Some homes have electricity, some haven't. Either way, you get fine Atwater Kent performance and proved dependability. If you do not happen to have power from a central station, you can enjoy the broadcasting with the improved, powerful 1929 Atwater Kent battery set. It, too, is perfected.

The main thing is: *Don't wait.* The air is full of wonderful programs—today—tonight—and they're meant for *you.* Get what's coming to you—as more than 2,000,000 other families do—with an Atwater Kent.



Model 56. The new all-in-one set that fits so beautifully anywhere. FULL-VISION Dial. For 110-120 volt, 50-60 cycle alternating current. Requires 6 A.C. tubes and 1 rectifying tube. Without tubes, $97.



Model 40 (Electric), $77. For 110-120 volt, 50-60 cycle alternating current. Requires 6 A. C. tubes and 1 rectifying tube, $77 (without tubes).



Battery Sets, $49–$68. Solid mahogany cabinets. Panels satin-finished in gold. FULL-VISION Dial. Model 48, $49; Model 49, extra-powerful, $68. Prices do not include tubes or batteries.

Prices slightly higher west of the Rockies

On the air—every Sunday night—Atwater Kent Radio Hour—listen in!

ATWATER KENT MANUFACTURING CO., *A. Atwater Kent, President,* 4769 Wissahickon Ave., Philadelphia, Pa.



JUDGING from the letters received relative to comments made here two weeks ago on the deterioration in the social life of many rural communities there are others who have been thinking along the same lines. One of the letters, written by a reader in an adjoining state, is as follows:

"Your article in Pennsylvania Farmer on the changing conditions in rural communities was interesting to me. The case you cite fits the situation here, except that we have no foreigners; but the standard of farmers is lower than it was some years ago.

"Fifty years ago most of the farms were farmed by their owners. They were kept in nice condition, front yards with flowers, fence rows kept clean, and buildings in good condition. The people went to church and supported them. They took an interest in the welfare of the community and in the schools. Now, eighty per cent of the farms are farmed by tenants who have no interest in the place except to get all they can out of it while they are there. Front yards and flower gardens are gone, fence rows are grown up and buildings are decaying. Some years ago the farm adjoining mine, a farm containing about 300 acres produced annually around 2,500 bushels of wheat, 3,000 bushels of corn and a great deal of hay. Last year, 600 bushels of wheat and about 400 bushels of corn was all that was produced and that would be the average for several years. A bootlegger is on it now. With one exception none of the seven farms in my locality is paying expenses now. C. J. S."

* * *

The only reason I have for dwelling on this subject is to excite helpful discussion in the communities where conditions are slipping. Every community should have a good live Grange or farmers' club where matters vital to the social welfare may be intelligently discussed, and helpful action taken. It does no good to wail over conditions if nothing is done about it. People must meet together if a good community spirit is to be developed. Business meetings alone are not enough, neither can the work be delegated to a paid agent.

* * *

Of course, a satisfactory farm income is a prime requisite to making farming attractive, but the troubles just now are not all financial. For the last fifteen or twenty years new factors in American life and thought have changed greatly the social and economic standards. Many farm people have assumed that the highest ideals of life cannot be attained on the farm. It is up to the leaders of thought and business to correct this false conception.

* * *

In answer to the accumulated inquiries concerning the varieties of vegetables we have found best at Neshaminy Gardens I append the following list:

Asparagus.—Martha Washington.
Beans.—Early Red Valentine, Full Measure, Maule's Prolific, Sure Crop.
Cantaloupes.—Emerald Gem, Bender's Surprise, Milwaukee Market, Osage.
Beets.—Early Egyptian, Crosby.
Cabbage.—Jersey Wakefield, Golden Acre, Ballhead.
Peas.—Little Marvel, Laxtonian, Hundredfold. (These are all dwarf varieties.)
Spinach.—Bloomsdale, New Zealand.
Sweet Corn.—The Vanguard, Early Evergreen, Golden Bantam.
Tomatoes.—Penn State Earliana, Bonny Best, Marglobe.
Water melons.—Hungarian Honey, Hulburt.

Of the varieties of berries we have grown we find these do well for us: Strawberries.—Premier, Big Joe. Raspberries, red.—Cuthbert. Blackberries.—Eldorado.

* * *

The above list is not presented as being the result of a wide and careful test of all varieties, but we came to adopt them because they were found to do well on our soil and in our climate. Some others were dropped because they were not as good, and some good ones were finally omitted to reduce the number of varieties to the lowest limit and still have a succession. We are still on the hunt for a small, yellow sweet corn having the quality of Golden Bantam but having better and more vigorous growing powers. There are two or three varieties advertised as having these characteristics which we shall try out.

* * *

I have just finished reading the life of Helen Keller, entitled "The Story of My Life," written by herself. The older generation was regaled frequently by newspaper accounts of the marvelous achievements of this remarkable girl, but new sensations have crowded the last few years so fast that many of the young people of today have not had the inspiring example of her triumphs set before them. To be afflicted with total blindness and deafness when but a few months of age would seem to most of us an insurmountable handicap. Only one avenue to her mind and soul was left to her,—the sense of touch. Most of us have learned what we know, at least ninety-nine per cent of it, through the senses of sight and hearing. But here was a girl who achieved distinction as a scholar and thinker, yet has lived her life in complete darkness and eternal silence. What greater wonder has the present century produced than this girl and her miracle-working teacher?

* * *

Most of us are rather easily knocked out when Life takes a poke at us. We begin pitying ourselves, and feel that since Fate is against us there is no use in making any strenuous effort. We do this to excuse ourselves until we finally allay any ambition to improve conditions. Losses, failure, poverty, temptations, all are handicaps, but to the really strong character they are often spurs to success.

Rabbit Paint for Trees

DURING the winter months fruit trees are often damaged by rabbits gnawing on the bark of the tree trunks. Young trees with tender smooth bark are of course more susceptible to damage than older trees with rougher bark. There are many ways in use to prevent damage from rabbits but I was especially interested in a special rabbit paint, of which I heard recently.

The formula for this paint is simple. To one pound of rosin, which has been melted to a liquid state, add one pint of denatured alcohol. The rosin should not be heated too much and the alcohol should be heated up to about the temperature of the liquid rosin by placing it in a pan of hot water. The heated alcohol is then added to the rosin and stirred to an even consistency. If the rosin is too hot the alcohol will bubble and escape. Do not try to heat the alcohol over an open flame, as it is too combustible and less risk is entailed when it is heated in a vessel of hot water.

When using the paint brush it on evenly over the trunk and lower branches next to the trunk as necessary. It is best to carry the paint in a covered can, for if snow or rain water get in the texture of the paint will be spoiled. The paint covers easily and is quite economical. F. H. Beach.

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Mushrooms Raised by the Millions

By N. S. GRUBBS

THE large majority of the cultivated mushrooms in the United States are produced in one county in Pennsylvania known as Chester county. It is a specialized branch of agriculture not generally thought of as belonging to the farming industry. However, those engaged in the business practice the most skilled and scientific principles to offer the consumer solid, disease-free and uniform specimens.

In Chester county, Pennsylvania, alone the growers produce over ten million pounds with a value of more than $4,000,000. Every year is a record year in the sales of mushrooms since the number of consumers eating them is on the increase.

Of the two usual problems of production and distribution the former so far is the one with which the producer is most concerned. His crop, usually on the market from October 1st to the middle of May, is shipped or trucked to the large eastern markets and sold in wholesale quantities at good prices. The growers have a long distance to go before the saturation point of consumption is reached. The market outlook for enlarging the demand for this delicacy is unlimited.

The food value of mushrooms lies not so much in their energy value as in the variety, their peculiar and distinctive flavor lends to the menu.

Where They Grow

Commercial mushrooms are produced in specially constructed houses, 28 to 30 feet wide and usually 100 feet long. The houses are equipped with shallow beds arranged in tiers of five or six beds high. The soil, previously composed with manure, is six inches deep and during the growing period must be kept at a temperature of from 60 to 65 degrees F. The temperature of the house is controlled to a great extent by regulating the ventilators located at the peak of the building. The moisture content of the composite is an important regulator of the size, color and rate of growth of mushrooms.



Concrete Block Mushroom House under Construction. Note the Long Pile of Compost Manure Ready to Place in the Houses when Completed

In the past wood construction with insulated walls and ceiling has prevailed, but with the demand for fireproof and permanent houses concrete products are fast finding favor in the eyes of the producer.

The seed used to propagate the mushrooms is known as spawn. The spawn consists of a mass of suitable medium through which the thread of the mycelium or vegetable part of the mushrooms are thickly branched. Spawn may be secured in either bottle or brick form. The bottle form is the more popular type with commercial growers since it yields a quicker crop of mushrooms over a shorter period of time. In spawning a bed with bottle spawn the bottles are broken and the contents separated in forty to forty-five pieces the size of a walnut. These pieces are inserted into the soil about one inch deep and from ten to twelve inches apart.

A period of two weeks to a month will elapse before the spawn has run well through the manure. The latter stages of this process, or when the mycelium has run three or four inches from the original places, the entire bed is then ready for a "casing" or a covering of one-half to one inch of loam. The casing seems to serve several purposes; it makes a firm material to support the growing mushrooms, helps to retain the moisture of the soil and seems to induce the mycelium to produce its fruiting bodies, the mushrooms.

Usually a period of from six to eight weeks elapses before a crop has reached its picking stage. Picking continues at intervals during the customary mushroom season with an average of seven to ten pickings from October 1st to the middle of May. Profitable yields for one crop run from one to two pounds per square foot.

For the most part the mushrooms are delivered to the market in three-pound baskets lined with white paper. Particular growers grade consistently, make prompt deliveries and attach their names to each package.

Certified Seed Potatoes Not a Farce

LAST year a potato grower bought certified seed potatoes; potatoes carrying the official tag—that were showing 50 to 80 per cent disease. Another lot of eight cars the buyer was compelled to regrade and in the process of reconditioning he lost 20 per cent. There was this past season a demonstration in the South where state certification developed 80 per cent disease against another certification's 10 per cent. Some will say that certification is a farce. It is not when all of the inspections are made by plant pathologists with many years experience in potato work.

State Inspection

If the integrity of the seed-producing states is to be maintained it will be necessary for these seed states to clean house. The unfavorable showing made by some of them may be the result of the bin inspections being made by local people who are not pathologists. Also a failure to make an inspection when the seed goes to market.

A few seedsmen are correcting the present evils by employing a force of plant pathologists. It is their responsibility to inspect every car as it rolls. The result of their work is reflected in the growing fields. They also make all of the field and bin inspections. The states should follow their example and have experienced potato specialists make an inspection when the seed is sold. The Pennsylvania grower should insist on this inspection in no uncertain terms. An organized demand will get results.

The inspector should be a fearless fellow who is not afraid of offending some grower by rejecting a lot. The pressure is great in some commercial districts and to relieve this some seedsmen are shifting their specialists from one state to another. This is thought an advantage as it broadens the inspector and there is not the chance of passing lots that are just on the border line, as has occurred in some instances.

Under present conditions the only safe plan for the grower to follow is to carefully inspect the seed before he pays for it. This does not mean to be considerate of the bag. He will know the contents of the entire bag. He will not be satisfied with an examination of a few bags, but he will go down to the bottom of the car. Some will be taken from each bag into a warm room and examined for frost. If the load has been chilled it will be refused. Do not remove any bags from the car until the stock is proved satisfactory. If the grower does not know potato type and disease it will pay to engage some one to make the inspection who does know clean seed.

All purchases will be continued to concerns that have an old established record of fidelity, and who specialize in growing and shipping seed potatoes. Under no condition will seed be bought because there is a tag on the bags—state or private. After all the purchase depends on the integrity of the organization with which you deal.

George E. Walker.

Improve Herds

SEVENTY-NINE cow testing associations are engaged in improving Pennsylvania dairy herds, C. R. Gearhart, State College supervisor of the associations, reports.

Bradford county has six of these organizations, the largest number in any county, and also has the oldest group, Canton, which was organized in 1913.

During the past few weeks new associations have been formed in Snyder, Lackawanna and Tioga counties. Several other groups are in the making. According to Mr. Gearhart, the organizations will be manned by graduates of the short course at State College. Twenty-four of the young men enrolled in the course have indicated a desire to engage in cow-testing work.

Last year Keystone cow-testing associations increased the value of the product per cow $6.93 over the preceding year. This amounted to $195,301.26 for all cows tested. Tests located 2,497 unprofitable cows in the herds of members, who promptly sent the "boarders" to the butcher.

The Same Old Problem

I SAID, to find a logical objection to a farm tax levied on the income from the soil—except that crop failure means no tax. Crop failure of course means no tax money also, but that's the farmer's lookout, not the tax collector's.

A neighbor said not long ago that he thought the taxpayer should be given the option of paying his taxes in twelve installments. This would be a real help to some folks, and the treasurer's office could easily adopt this plan.

A farmer should not be taxed for improving his land, but he should be taxed on what that land produces. Suppose a man buys a farm with good improvements and poor soil. Such farms are not uncommon. I know of a dozen where land companies put up fine buildings in order to boost the selling price of the farm. Along comes the appraiser, takes a look at Smith's buildings, and puts him down for twice the acre valuation of Jones down the road with his tumble-down buildings. Every man in the neighborhood knows that any forty on the Jones farm is worth the Smith eighty. Smith's a good debater it he gets the proper valuation on the tax books.

S. H. Green.

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NATURALLY

AFTER thinking real hard the Federal Board of Vocational Education concludes that more students of full agricultural courses will remain in agricultural work than students of other courses or students who take only a little agriculture in high school. A farmer who has read and studied the Board's deductions comes along with the parallel conclusion that those who buy large hats are usually the possessors of large heads.

COST TOO MUCH

LAST year practically all cattle feeders made money. This year it is different. The trouble is not so much with the current market for fat cattle as with the past market for thin cattle. The fat cattle market is not bad when we consider the prices of the chief competing meats. Actual prices of fat cattle are not low in comparison with other prices, but they are low in comparison with the cost of thin cattle. There is no way to make money in feeding if we pay too much for material—and that goes both for the animals and what they consume.

YOUNG AND GENTLE

A FEW days ago C. S. Snapp, Stephens City, Va., was passing through his barnyard when his yearling bull ran up behind him and knocked him down, then proceeded to roll him around on the ground. Fortunately the bull had been dehorned and could not gore its victim. After the bull had been chased away Mr. Snapp was carried to the house, where he will remain for a few weeks under the care of his physician. Apparently he was not seriously injured, but doubtless he has learned something about trusting even a young gentle bull.

THOSE WASTE PRODUCTS

LET US not expect too much, or expect it too soon, in the way of converting so-called agricultural wastes into valuable articles of commerce. We remember when about every waste product of the farm was going to be converted into industrial alcohol, but that dream has not yet come true. Cornstalks, rice straw, cottonseed hulls, sugar cane bagasse and other things may be useful for paper, for building materials or even for finer things, but we are still a long distance from general application of such processes. This year 20,000 acres of cornstalks will be used for paper pulp if present expectations are fulfilled. That is progress, but it is only a step forward on a very long trail. These and other developments will come when somebody can make money out of them and only then. Capital is interested in all such developments and will care for them without the need of public appropriations.

THE USES OF NECESSITY

SIXTY years ago a wealthy relative of an eighteen-year-old student in Columbia University willed him $2,500 a year as long as he remained in college. That boy never left college until he died last week. He continued an undergraduate all his life, studying for one degree after another and doing nothing with any of his education. But before passing judgment on his course let us older people review our own lives and see how much we would have done in this world if we had not been compelled to work at something. Probably most of humanity needs and will continue to need the application of the serrated edge of the spur of necessity.

INVESTED IN BLOOD

IN 1928 New Jersey dairymen bought 11,903 cattle in Wisconsin and Pennsylvania dairymen bought 5,156. We don't know what these cattle cost, but probably more than $2,500,000. Last year Wisconsin sold $2,000 dairy cattle to other states and countries and got for them nobody knows how many million dollars. Two questions naturally arise here: How did Wisconsin do it? Why can't such dairy states as Pennsylvania and New Jersey breed their own cattle? The answer to the first question is easy enough. Wisconsin invested in dairy blood many years ago under the leadership of such missionaries as the late Governor Hoard, then invested in cow-testing associations, in eradication of disease and in advertising. New Jersey and Pennsylvania are now making similar investments but instead of a surplus still have a deficiency in high-class dairy cattle. Blood has proved an enormous asset to Wisconsin. It will be to Pennsylvania or to any other state or region that has enough vision to establish on that foundation a great animal industry. No matter whether it is dairy cattle or something else, there is no other solid foundation than blood.

DIFFERENCES

A READER suggests that we name the agricultural products on which higher tariffs are proposed and about which tariffs there is a difference of opinion among farmers. If we attempted to do that we would have to list the whole schedule, for there is some difference of opinion among farmers about practically every item of it. But we may name a few products as examples, without trying to discuss a bill not yet framed.

Many feeders are not in favor of a higher duty on stocker and feeder cattle. They want to buy Canadian cattle and finish them, and they believe that the present tariff is high enough or too high.

Many farmers are opposed to a duty on hides. They are users of the products of hides in shoes, harness, belting and other articles but are not raisers of cattle, and they consider a tariff on hides disadvantageous to them.

Many farmers are opposed to a higher tariff on sugar. They declare that all farmers use sugar while comparatively few produce it; and some suggest that a bounty on sugar is more economical than a tax on it. There is likewise some objection to a higher duty on molasses, largely by those who want to feed it.

Probably more tobacco growers favor a lower duty on wrapper tobacco than favor a higher tariff on it. Those who object to revision upward on this product are growers of filler tobacco. There are similar differences among farmers as to other proposed changes, jute for example and even potatoes. Some growers have appeared at Washington to protest against higher tariff on potatoes because they import seed from Canada.

So it goes always in tariff revision. Each interest is unselfishly willing for its own product to bear the burden of higher tariff and for the other fellow's product to be relieved of it. Tariff legislation is always interesting because it reveals so much of human nature as well as so many things of a business nature.

COUNTY WOOL UNITS

AT ITS annual meeting last week the West Virginia Sheep and Wool Growers' Association decided to discontinue the state wool pool and to adopt the county unit in handling this year's clip. This action is the more interesting because it is contrary to the policy advocated by the larger organizations and by the national organization of wool growers. These organizations protest that small units are detrimental to the cause of cooperative marketing and call for more concentration instead of so much "scatteration" in such marketing. The fact that western growers favor larger pools or unity of action by existing pools, while eastern growers prefer county or small pools, is due to difference in conditions. The western growers claim that the small pool out there is too often a market-breaker, wielding an influence out of all proportion to the size of its business. In the East this is not the case; and the small pool has conspicuous advantages in the education of growers by demonstrations in grading and handling wool. Pennsylvania has more small pools than any other state, probably half as many as all other states, and they have proved very helpful to growers in both educational and commercial ways. West Virginia's experience will be viewed with much interest.

THE REGULATOR

FOR years we have heard, in discussions of the agricultural situation, the assertion that other industries can regulate production and so prevent such depressions as afflict agriculture, wherein regulation of production is in the very nature of things impossible. No doubt production in industry can be more promptly shifted than in agriculture, yet there is much evidence that regulation is difficult if not practically impossible. The textile industry of this country affords an example of failure to regulate production after some years of effort to do it. In both cotton and woolen branches of that industry there has been and is now much talk about this regulation but very little of achievement. The oil industry affords another example. Last year an attempt was made to regulate production in this rather compact industry, but now that effort is recognized as a failure. The attempted restriction of production, which did result in a temporary price improvement, has had the effect of stimulating new prospecting and the industry faces a greater surplus than it did a year ago. In this case the attempt to restrict production has had the opposite effect. And so in other cases which might be cited.

When we come down to realities, when we consider actual results over a period of time sufficient to allow correct conclusions, we are likely to find that there is only one real regulator of production—the profit and loss account. That is about the only influence which has a constant and vital effect.

Eastern Farm Comments

By MILES HORST

FROM all indications between 500 and 600 Pennsylvania farmers are doing some constructive cutting in their woodlots this winter. They are covering from one to ten acres and taking out all crooked, defective, scrubby and worthless trees. The sale of the wood taken out pays well for the work done at a time when work on the average farm is slack, and the woodlot is all the better after the thinning is done.

* * *

THE acreage sown to barley in Pennsylvania has been increasing each year since the war. Particularly is this true in those sections where corn does not mature in an average season. Barley on fairly good farms yields at the rate of 30 to 40 bushels of grain to the acre and in feeding value is equivalent to about 90 per cent of that of corn. It merits the attention of more farmers who now are carrying heavy expenses for grain purchases for their dairies and for hogs.

* * *

WITH no thought of discouraging boys and girls from taking active part in baby beef calf club work in 1929, we feel it timely to throw out a warning that calves bought for this purpose should be bought at reasonable prices. Boys and girls taking part in this venture during the past three years have made money doing so. But they have had a rising cattle market in their favor. Just how long this will continue we don't know. But it can't continue for too long a period. The hard-headed business sense of the skilled feeder should dominate the policy in handling these clubs.

* * *

A PROMINENT fruit grower in Pennsylvania writes: "This past year I paid more than $100 tax on gasoline which I used in my tractors and spray rigs. It is unfair that I should pay this tax for road building purposes when the gasoline is used solely for orchard purposes."

This man expresses the feeling of thousands of farmers and orchardists in this state. A tax on gasoline used for agricultural purposes is a tax against production. It is therefore penalizing Pennsylvania farmers in a national program of production, for a recent survey shows that farmers in thirty-four other states are exempt from a tax on gasoline used for agricultural purposes and two more have no gas tax at all.

* * *

POTATO growers will feel a strong temptation to use inferior stock as seed potatoes this spring due to the fact that they have cheap potatoes in their cellars and little or no cash left from the sale of last year's crop. Let us remember that the kind of stuff we plant will determine the kind of stuff we shall harvest.

We have evidence aplenty that, except in a few counties of this state, it does not pay to plant potatoes grown on our farms for more than two years regardless of price. Those men who feel that the price of certified or approved seed is too high can find potatoes in their neighborhoods grown from such seed last year, which can be bought at table stock prices. Good seed potatoes, however, are so low in price that growers should think twice before passing them by.

* * *

A GROUP of farmers in an eastern county have asked state authorities to establish a rigid patrol in their community in an effort to end bootlegging and outlawry in the neighborhood. They declare that some fire insurance companies have refused to assume risks on property there, that farm values are depreciating because of the reputation the community is getting and that children in the community are subjected to dangerous and immoral practices. We have letters from farmers in other communities to this same effect.

Such situations are unpleasant. The most effective force to rid such communities of these illegal practices is an aroused public sentiment. Without this the law is almost helpless except for temporary raids. But the two working together can effect a change for the better.

* * *

BEING open myself to that criticism so frequently aimed at farmers for not keeping detailed financial accounts of their farm practices, I can at least sympathize with that 95 per cent of our farmers who neglect this "most important part of farming". Certain business men and even some farm advisors like to poke fun at us for not being able to produce an account book at the end of the year. Such books when kept are very valuable and farmers do well to use them. But we wonder at times whether these critics do not forget that some of us use our heads rather than white paper for this purpose.

* * *

A BILL, H. B. No. 91, has been introduced into the Pennsylvania legislature providing for a reinstatement of the tax on horses, and cattle more than four years of age. It will be remembered that this tax was removed by the 1927 legislature on the ground that the original purpose for which the tax was levied in 1844, namely to build canals, was no longer in vogue and that the tax itself was unjust, because it was levied on movable property in the agricultural industry, where such property in the industries was untaxed. The arguments were sound and considered so by that legislature. The tax is just as unsound today and the bill should receive no consideration by the present session.

* * *

ANOTHER bill, designated as H. B. No. 353, would amend the stallion law of this state by reducing the annual licensing fee from $10 to $1. In view of the fact that these fees are paid directly into the state treasury and thereby become a direct tax on owners of pure-bred stallions the fee should be reduced to $1, an amount ample to cover registration charges. The horse breeding industry in this state needs encouragement, and taking the tax off good horses standing for service is a step in the right direction.

* * *

THURSDAY of last week 560 men sat down to a banquet in the Yorktown Hotel at York, Pa. About half of them were farmers, the other half were business men. They met in the interests of a better York county, recognizing that farmers and town folks have a close interest in one another's affairs, and that the welfare of one group affects the welfare of the other group. They discussed roads, and tariffs. Last year on a similar occasion they discussed taxes. These occasions are driving home their mutual relationships and interests. These folks are realizing this too, for each year their interest in the event and the things for which it stands grows as is evidenced by the increasing number who attend it.

IT was my privilege on February 9 to share with the members of the Kimberton Grange of Chester county, the celebration of their 23rd anniversary. The event was outstanding in many ways. To begin with, the ladies of the Grange set up a banquet such as only country women can provide. There was an abundance, and there was variety to suit any taste. In the afternoon the party assembled in the Grange meeting room for a program of entertainment in which music featured.

Seldom have I attended any function of a subordinate Grange where there was so much good musical talent as this Grange had. The boys and girls, members of the Juvenile Grange, sponsored by this subordinate Grange, had their part too.

* * *

THE Newtown Cooperative Association, whose members are farmers living in southern Bucks county, held their annual meeting in the Makefield Community House near Newtown, Tuesday, February 5. The organization has 61 members who buy their feeds, fertilizers, seeds, twine, fruit baskets, etc., cooperatively. The association last year did a business of $83,311.58.

The amazing thing about their business is that it was done with a gross overhead of 2.36 per cent. And another amazing thing about it is that at the end of the year they had only $217 outstanding. A record of this kind is outstanding in business. The business is chiefly done through the ordering of carlots and the goods distributed from the car door. We can only conclude that the association has good management and that the members are loyal to it.

* * *

A BULLETIN recently issued by the Pennsylvania Department of Agriculture on the corn borer states: "It is quite evident that the European corn borer will be with us always and that the American farmer must learn to grow corn in spite of the borer.... The control of the corn borer is largely a matter of farm practice. Any operation which will destroy the borer in the corn fodder or stover before the time of the emergence of the moth constitutes a satisfactory control method."

The bulletin emphasizes the importance of community action in checking this pest and outlines various methods now recommended to farmers to follow on their own farms. The bulletin can be had by writing to the Department of Agriculture at Harrisburg.

* * *

A DAIRYMAN living in Potter county, Pa., gives this experience in regard to feeding raw potatoes to dairy cows. Last fall after grading his crop he found that he had 200 bushels of cull potatoes on hand. The only livestock he had was dairy cows. He started to feed potatoes to two of his cows at the rate of a peck a day. They went along nicely. So he increased the amounts. The one showed no bad effects but the other did.

He kept increasing the amount to the one cow until now she is eating 60 pounds a day with no bad effects. In fact she produced more milk during December on 60 pounds of potatoes with other concentrates than she did on pasture and is better in flesh. This man is enthusiastic about feeding low-priced potatoes to dairy cows but throws out the suggestion that we don't yet fully understand the proper feeding of them.

* * *

DR. H. B. Mitchell, director of the Lancaster City Bureau of Health, made these interesting statements before the Pennsylvania Dairymen's Association. He said that "since Lancaster adopted an ordinance requiring that all milk sold in the city be from tuberculin-tested cattle, there has been a noticeable decrease in the deaths of children under two years of age, due to tuberculosis. In 1926 6.3 per cent of the total deaths were due to tuberculosis, in 1927, 5.7 per cent, and in 1928, only 2.2 per cent. Likewise, deaths of children under two years of age which could be attributed to intestinal and dietary conditions decreased from 27 per cent in 1927 to 24 per cent in 1928."

Tri-State Meeting

The 17th annual meeting of the Tri-State Sheep and Wool Growers' Association will be held at the George Washington Hotel, Washington, Pa., March 7 and 8. The annual shearmen's banquet will be on the evening of March 7. This is the first time for this old sheep breeders' organization to meet in the Keystone State and it is expected that the attendance will equal that of the highly successful event at Cadiz a year ago, the first time the Association met in Ohio.



A Record Breaker for Size

ON January 11 James Loughner, Jeannette, Pa., butchered the largest hog ever recorded in Westmoreland county and Mr. Loughner would like to hear from any one in the state who has slaughtered a larger one.

Mr Longhner's hog weighed 1,225 pounds live weight and dressed 1,110 pounds or 90.6 per cent of his live weight. His heart girth was 89 inches. He was 99 inches from the end of his tail to the tip of his nose and his tail was 17 inches long. He was 45 inches high and the leg below the hock was 12 inches in circumference.

This hog would have been four years old February 15 had he lived that long. He was a pure-bred Poland-China and was recorded as Stark's Indicator, No. 162723, having been bred by C. A. Stark, Vandergrift, Pa. He was sired by Highland of Oak View, and his dam was Lady Indicator.

Mr. Henry Lougliner, a brother of Jim, slaughtered a hog a short time previously which dressed 1,054 pounds. The Loughner brothers therefore have reason to believe that they hold the championship for big hogs and at least have more meat out of two hogs than any other two brothers in Westmoreland county, or the entire state of Pennsylvania for that matter.

In the picture are, left to right: John D. McCurdy, James Loughner, W. L. Treager, Joseph Loughner. W. L. Treager, County Agent.

The Human Side of Europe

The People Are More Interesting Than the Museums

By ELLEN S. BRINTON

Editors' Note.—Miss Brinton will be remembered as the author of some valuable material on the use of milking machines which was published in the columns of Pennsylvania Farmer a few years ago. When we learned that she was going to Europe last summer we asked her to write of her experiences and observations. The accompanying article is the first of a short series she has prepared in response to that request. Miss Brinton holds a responsible position with one of the large milk distributing companies in Philadelphia.

IF YOU are like the average American you also have been dreaming of a trip to Europe. Perhaps you are feeling that it is a difficult undertaking to go alone and too expensive to join an escorted tour. Well, I tried it this past summer and my conclusion is that any one who can plan and finance a trip of several weeks in the United States can also manage to go to Europe and back.

I wanted to see if possible the life of the people in various countries rather than the usual program of art galleries, museums and cathedrals. Here the tour agencies were of no assistance so I read, asked questions, scouted around for information, made a general outline of what I wanted to do and bought a round-trip ticket for the ocean voyage. So many Americans—especially teachers are going abroad during the summer months (over 500,000 estimated for last year) that it is necessary to reserve passage months ahead—January or November if possible. Fifty dollars is paid down and a month before sailing the balance is due or money refunded if plans must be changed.

A passport is necessary and very simple, if identification and nationality can be proved. I took mother with me to the Passport Division in the Federal Building in Philadelphia—together with a photograph that must be of conventional size—and in a few days received from Washington a small red booklet. This passport is of absolute necessity in foreign travelling—it must be shown on demand by custom and police officers. I carried money in the form of American Express checks and bank officials asked for my passport every time before cashing a check. Hotels and pensions (boarding houses) must report to the police all strangers stopping for more than 24 hours—and again the passport is needed to fill out the important-looking document. This sounded fearfully military to me at first, but after twice seeking police information to locate some of my own friends I begin to think it is a useful institution that might well be copied in America.

My biggest problem was selecting suitable clothes and minimum quantity. Friends told of the chilling cold on shipboard and in Europe—newspapers reported terrific heat. What I found was several days of real American summer weather at sea, and until we crossed the gulf stream the ship was unbearably hot inside. Summer clothes of thinnest variety only were endurable. After that on shipboard, in England and on the continent the average condition was warm midday sun with such cool breezes indoors and in the shade that a flannel or dark silk dress with light-weight coat were necessary. Vienna was warm and a thin dress comfortable. I finally squeezed into two small suitcases, but found later that many American girls were going for six to seven weeks with only one.

Such fun on board—provided one is not seasick. I was not, but whether it was my good fortune or the very simple precautionary tablets the doctor suggested using I do not know. Anyhow the chief thing to remember is to eat plentifully and never let the stomach get idle and into mischief.

With the Elite Tourist Class

I was on the "Leviathan"—formerly the German ship "Vaterland" now operated by the U. S. government—and in the tourist cabin. This is a kind of glorified steerage that has developed since the immigration laws are so restricted and European travel so popular with people of limited means. According to a popular tale the millionaire and social climber goes first class, the newly rich second class and teachers, students, clergymen and professional people who have brains and culture go tourist. Perhaps after all it is a mere case of price. The average cost of tourist cabin for round trip is $185 to $200, depending on time of year and the ship. We had everything one could wish for except space. Covered decks for wet weather are limited in area and most of the cabins are small, some reminding me of a narrow pantry with two shelves on each side. But the food was excellent and apparently free as the air, for besides three plentiful meals a day, morning lunch and afternoon tea, there were bed-time sandwiches and fruit and crackers on request to eat any time. (Remember this was the U. S. line—experienced travellers told differently about some other lines.)



Our dining room steward was a Duke University (North Carolina) boy earning his college fees during summer vacation. He said tourist cabin had the reputation of averaging higher in total tips for the stewards than first class. Jobs like this can be secured only by high-grade boys, through the influence of steamship officials.



Sailing minature ships is a popular hobby in England. Fathers make them for their sons—costing sometimes $100 to $500, and so large that wheeled carts are needed to haul them to the park pond, and then spend hours sailing the ships themselves



Unloading an American tourist automobile at Cherbourg, France. All large ocean steamers coming into Cherbourg must unload passengers and freight into small tenders, and these unload at the wharf.

Games, dances and social activities are always featured in tourist cabin—with a director in charge and all kinds of equipment furnished free. Really a voyage of six days is too short to be satisfying.

Landing in a strange country is really a simple matter. As in America one's needs and inquiries have been very well anticipated and there is always some one to direct every strange move. While still at sea, passports are examined, landing papers prepared, money exchanged and tickets sold for the first land journey. Tourist passengers generally have so little baggage that customs examination is quite perfunctory—liquors and tobacco being the chief items of interest. The only real examination I had passing in and out of six countries was on a night train entering Germany. The most dignified "Van Dyke bearded" professor (otherwise porter) assured me that if my passport was under the pillow edge and baggage unlocked no one would disturb my slumbers. But not with a woman inspector! She is sure to make a thorough job, and she went [to] every corner with determination even under [the] bed clothes, finally departing with a friendly [smile] I have not yet learned whether she got what [she] was looking for.

Everywhere in Europe one rides [in] a train according to class and price [pre]ferred. The cars generally have a [long] aisle down one side and compartments opening off it seating six or eight persons. Checking baggage of any [kind] is done very little, the usual traveler having half a dozen bags or cases, [all] which fortunately there are ample racks overhead. I rode second-class generally except on a short local trip. The seats were upholstered and very comfortable. For 50 per cent more than fare I could have a white lace [cover] over the seat back, and the privilege of tipping the conductor to reserve the compartment for myself and friends. He would stick a label on the [out]window and lock the door and I could draw the silk curtains and be as [lone]some or as snobbish as I wished. For half the first-class fare I could use a third-class compartment and sit on a wooden bench against a straight back partition, and like the other classes have a choice of "smoking" or "no smoking" section. For still less I might, in some countries, have fourth class and have the privilege of taking on board with me all my worldly possessions, including some geese and the family pig. Europeans generally used third class and I always found a jolly, sociable, interesting crowd.

I know only the English language except a little school-book German that was utterly inadequate. Fortunately the Woman's Rest Tour Association has foreseen a need for women travelling and they furnish to members a booklet of hotels and pensions (boarding houses) all over the world where English is spoken and inexpensive rooms and meals provided. I also carried a phrase book in four languages that was supposed to almost talk itself but in actual practice I could never find what I needed to say.

Next trip I shall depend on the tiny vest pocket dictionaries with 12,000 words that can be secured all over Europe and make up my own phrases.

There are always uniformed porters available at stations to carry bags and in every case they proved kind and helpful, no matter how stupid I proved over understanding their torrent of strange words. I planned always to have some money available of the country on entering, and tried to be familiar with it, but changing money every three or four days of course I made some ridiculous blunders. One large Czeck coin given a dignified railroad official for some special kindness I found afterwards was worth just 1½ cents. He thanked me graciously but I can see now his surprise and amusement.



Wheat Wheat and Cheat Cheat

The Heavy Cost of Weeds

Their Ways and Weaknesses

By E. M. GRESS

LONG-TIME weather forecasting has never been placed on a scientific basis and has, therefore, never become very popular. Nature, however, has ways of communicating with her children—ways that are based on real, scientific principles. For instance, I well remember, as a boy, how we used to say that when the flowering dogwood was in bloom it was time to plant corn. Perhaps we may smile at this and call it superstitution, but does not the blooming time of the dogwood depend to a great extent upon the spring temperature and rainfall; and when the warm sunshine opens up the dogwood buds, so also has it warmed up the soil and made it about right for planting the corn, which is, indeed, very sensitive to temperature conditions of the soil.

Weeds are ever present enemies always scattering their seeds where they are sure to give us trouble. One needs only to glance around in the fall in order to predict, with safety, that there will be an abundance of weeds the following summer. However careful farmers and gardeners may be to destroy weeds in the late fall, many will escape their notice so that there will be sufficient seeds and roots to start a good crop the next spring.

There is an old definition that "a weed is a plant out of place." This may be true but the definition is not adequate. A weed is really a plant that has acquired some characteristics of hardiness or methods of propagation that cause it to thrive in conditions that are adverse to the cultivated crops. Therefore, a weed can endure poor or rich soil, cold or warm temperature, wet or dry weather, and besides it is propagated by some persistent root or underground bulb or by seeds produced in great abundance; often all of these methods of propagation are characteristic of weeds.

Assuming, therefore, that there will be plenty of weeds to greet every farmer and gardener this spring, and particularly those who forgot to clean them up last summer and fall, we should like to call attention to the fact that an early start on the fighting of these enemies is very essential—"A stitch in time saves nine" might, indeed, be applied to the fighting of weeds.

Market Value of Crops Decreased

There is no time in its life history when a plant is so easily killed as about the time it is coming through the ground; that is, after it has used the food stored in the seed but has not yet developed a root system to absorb raw materials from the soil. A little disturbance at this time may fatally injure the plant. Of course, the farmers cannot do much in the spring to prevent weeds from growing in their winter wheat or in the pasture and hay fields. Much can be done, however, to prevent them from making their appearance in the graden, the potatoes, the oats and the corn. Many of the weed seeds germinate very early in the spring, indeed some of them started their growth last fall. Thorough and frequent tillage of the soil before planting the potatoes or corn or before sowing the oats, will destroy many of these weeds. The preparation of a good seed bed is therefore most essential in fighting the weeds. Besides, this tillage puts the soil in good condition for the germination of the crop seeds. Sometimes the farmer and the gardener are in such haste to plant their spring crops that they neglect this preparation of the seed bed, which will not only retard the starting of the crop but will also insure a larger crop of weeds to cause extra labor and expense later. If farmers realized how costly the growth of weeds is, they would make a strenuous effort to keep them from getting a start.

It has been pretty conservatively estimated that weeds cost the farmer annually $2 per acre for each acre of tillable land. This is a pretty heavy tax to pay for the growth of weeds. A little effort in the prevention of weeds will reduce this cost very materially.

There are so many ways in which weeds cause a loss. They increase the labor in preparing the soil for planting, in cultivation and harvesting the crop, and in preparing the produce for market.

Weeds also increase the wear and tear on machinery. They are to the farm machinery almost what the mud road is to the automobile.

And above all, they decrease the yield by shading and crowding out the crop plants and by using up the moisture and food materials needed by them. The loss caused by weeds absorbing water needed by the crop plants cannot be estimated. It certainly is a very potent factor in reducing yield; for in Pennsylvania the annual rainfall is scarcely sufficient to mature a crop and is therefore a limiting factor in producing a good yield. Weeds are heavy drinkers and rob the soil of a lot of moisture, indeed they are real bootleggers when it comes to a question of "wet and dry."

Weeds decrease the yield by harboring insects and plant diseases which feed upon and destroy crop plants.

And again, weeds cause a loss by decreasing the market value of farm crops. In 1927 the loss to farmers in Pennsylvania due to the presence of garlic in wheat was conservatively estimated to be approximately one-half af a million dollars—too much tax for the growth of only one weed. Within the last few years this loss caused by garlic in wheat has been reduced from one and one-half millions to one-half a million dollars. By a little more care in the selection of garlic-free seed wheat, this one-half of a million dollars loss can be further reduced. Indeed, if every farmer who raises wheat would be careful, the loss could be entirely wiped out.

Therefore, in the spring of 1929 let us all be on the alert to carry on a campaign against the weeds which are among the greatest enemies of the farmer.

First: select good clean seed, free from weed seeds.

Second: prepare the soil well. Make a good seed bed so as to give the crop plants a chance to get a good start.

Third: begin early to kill weeds, remembering that weeds are most easily killed when in the seedling stage.

Mixed Varieties of Corn for Silage

By HUGH FERGUS

FOLLOWING my article last week on "Rotations" I am going to explain a new method of harvesting corn that we have been using the past two years, and one we like so well that we expect to continue using.

For the past five years we have been filling two 12x36 ft. silos. It is pretty hard to guess how many acres of silage corn to plant to fill these. Some years the same acreage will lack an acre or two of filling the silos. Maybe the next year will be a good corn year and we have an acre of silage corn over. Well, a couple of the "lean" years when there was not enough of the silage corn we snapped off the ears from some of the field corn, dropped them on the row, then cut the stover with the corn binder and put it in the silo.

We tried to sandwich a load of this between two loads of the silage variety, but had a little spoilage due to the dryness of the stover. So in the spring of 1927 I thought I would try putting field corn in one hopper of the planter and silage corn in the other. You know there is a stage in the ripening of field corn when the ear is ripe and the stalk still green. We started to fill the silo at this time, snapping the ears from the field corn, dropping them on the row, then cutting the stover along with the corn binder and putting both in the silo. We always load either one row of field corn stover and one of silage or two of each in order to insure their mixing in the silo.

In 1927 I planted only one variety of field corn and one of silage, but found before we were through filling (we use our own outfit and the filling season lasts about three weeks) that the field corn was getting a little too dry.

Last year we used two varieties of each, but this year I am going to use three, which I think will be the best arrangement we have tried yet. These will be first, an extra early variety of yellow field corn I got fifteen miles north of here in Mercer county. I will plant West Branch Sweepstakes silage corn with this. Second, and my main planting, will be with a high-yielding, medium early local variety of field corn with Lancaster County Sure-Crop. Lastly, a high-yielding late variety of local corn with Eureka. Last year under this system we put nineteen acres of corn in the silo. This year I am hoping to crowd twenty in and will have only four acres to cut and husk from the fodder.



The farm house kitchen of Theodore Dilts Hunterdon county, N. J., is no longer cluttered with milking utensils to be washed, nor does Mr. Dilts have to carry a tea kettle of hot water to the barn on cold wintry days as he did before he installed an electric water heater on November 8, 1928. When he starts milking he turns on the five-gallon heater, the water heats to 180 degrees and the power is automatically shut off. Mr. Dilts has a herd of 17 cows and finds the power costs of the heater between 10 and 15 cents per day. G. W. H.

Any one from a twelve-year-old boy to an old man can snap the ears off rapidly. When the fodder is all off the field we husk the ears, throw them in convenient piles, leave them to dry for three or four days, then crib them. It seems to do little damage to the corn to lie on the ground in the husk for three or four weeks, even in wet weather. If a little care is used in dropping the ears on the row, few are damaged by being run over by the binder and wagon wheels.

Under this system a lot of labor is saved in handling the field corn. The stover is cut with the binder and loaded on the wagon and run through the cutter. The old system called for cutting the corn, setting it up, tearing it down to

(Continued on page 30)



WHICH?

...*for your* POTATOES

LAST fall's big crop of potatoes brought prices down low. The growers who made a profit were those who kept their potato plants on the job by keeping them well-fed and healthy.

LEFT is a healthy potato plant with the sturdy, upright stems, and smooth, even-colored leaves obtained when a plant is fertilized with a complete fertilizer containing plenty of potash. This type of plant pays the grower a good margin of profit.

RIGHT is a potato plant grown on a soil deficient in potash although abundantly fertilized with nitrogen and phosphorus. The plant is stunted, the leaves are crinkled, and the petioles shortened. The leaves, deep green at first, later become bronze in color. The entire plant may collapse. Growers who produce plants of this type suffer big losses in poor crops.

Don't let your plants become so starved for potash as to develop hunger signs.

Field demonstration and successful farm practice show that a potato fertilizer should contain at least 100 pounds of actual potash per acre. Many growers are getting excellent results from 200 pounds of actual potash per acre. A complete fertilizer, applied at the rate of 2,000 pounds per acre, should contain 5 to 10% potash. Make sure that your potatoes get plenty of potash. Potash will help you have a good year every year.

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West Virginia Farmers' Week

OVER seven hundred Mountain State farmers and farm women journed to Morgantown to participate in the annual Farmers' Week conducted by West Virginia University, February 4-8. This number exceeded the attendance of last year by a considerable margin, but more significant than the number present was the attitude of those who came from all parts of the state to put in a week of intensive study of better farming. They were interested in production, in methods of lowering the cost of crops and livestock products, in getting the most out of their soil in order that they may make the soil serve them better.

As in all other states agriculture in West Virginia encounters many problems, taxation, marketing, etc., but unlike some other states its farmers feel that production is also a major problem and one which is more likely to yield tangible results than are those relating to price fixing and economic panaceas. This is partly due to changes in the agriculture of the state, such as the rise in importance of dairying and potato growing, and partly to the fact that more information about better farming is available than ever before.

A state of hills friendly to bluegrass cannot afford to neglect its grasslands, and the farmers at Morgantown last week showed by their attention to talks on pasture and soil improvement that they are awake to the importance of meadows and pastures in keeping livestock. These subjects were discussed in several sessions by W. D. Zinn, and he was flooded by questions from capacity audiences.

While the dairy cow is assuming greater importance as the agriculture of the state becomes more intensive, and as improved roads make available more markets for dairy products, the beef steer is still highly regarded in this state, and the talk on "Beef Cattle" by James E. Poole, market expert from Chicago, held much of interest to the crowded roomful who heard him.

Status of the Cattle Industry

"Present commercial cattle conditions are without precedent," said Mr. Poole. "Replacement is the serious problem confronting pasturemen and feeders. The cycle theory concerning production, as it has developed in the past, is worthless as a guide post, because an entirely new set of production conditions has been created. Existing conditions in the fat cattle market, for which a temporary surplus of heavy cattle is responsible, do not even suggest what is happening behind the screen or elsewhere than the central markets.

"The salient features of the industry are:

"Post-war liquidation of western breeding herds, on which pasturemen and feeders depend for periodical replenishment, has run its course, but not before reserve stocks had been reduced to the lowest ebb since the early eighties of the last century.

"In a gigantic gathering effort to maintain normal beef supply six crops of cattle have gone to the slaughter house during the past four years, meaning that aged or mature steers have all but disappeared from the reserve supply.

Short Calf Crops Expected

"Not only has the calf crop in recent years been closely garnered to satisfy feeders' needs, but continued slaughter of heifer yearlings has prevented replenishment of western breeding herds, but left the majority on an average basis. The seriousness of this so far as future replacement in the feedlot and pasture is concerned is that a large percentage of western cows must go to the butcher during the next two years, as they are no longer sure breeders. This means short calf crops during the 1930 to 1934 period even if a conservation of heifer calves is effected on a considerable scale, which is improbable, as between feeder and veal demand prices attract them to the feedlot and the slaughter house.

"Steers over one year old were closely gathered by feeders last year, insuring scarcity of aged cattle from now on, which in turn means curtailment of beef tonnage. In the Southwest pasturemen are now paying $110 to $125 for three-year-old steers to go to Kansas pastures, prices that would be impossible but for scarcity.

"Few long yearlings are available anywhere in the West. Pasturemen in this emergency are resorting to buying short-age yearlings, cows and heifers, to utilize their grass, which means deficiency in grass beef supply next fall.

"The whole western cattle breeding area faces a gigantic rehabilitation task at high investment cost, beef-bred cows having doubled in value recently.

"During the post-war period of depression, western commercial breeders have been unable to buy the good bulls needed to maintain quality of their cattle, increasing the seriousness of the replacement problem.

Eastern Production

"Significant facts are that cattle slaughter under federal inspection diminished about one million head in 1928 and three-quarters of a million head in 1927. Coincidentally the whole country was ransacked for everything wearing a hide to maintain this restricted tonnage. In all probability further supply contracting will develop in 1929 and several following years.

"Already consumers are protesting against high cost of beef which has restricted its use in the nation's diet. A menace exists in consumer demand for immediate relief possible only by modifying or abrogating the existing embargo on South American beef, the inevitable sequence of which would be another invasion by foot-and-mouth disease which is evident in Argentina although existing in benign form. British experience is that when given a foothold on virgin soil this disease becomes virile and British scientists have definitely determined that chilled meats carry the germ.

"Obviously, if the national larder is to be replenished adequately with beef some one must grow it. That mass cattle production west of the Missouri River will again attain former magnitude is improbable. This creates a condition that makes possible return to eastern pastoral areas the beef-bred cow capable of raising a good calf; the other kind cannot be grown profitably. We are about to realize the intrinsic and potential value of our eastern pastoral land, especially that lying in the great Appalachian region."

Insect Pests

In a discussion of insect pests E. C. Sherwood, extension plant pathologist, stated that the corn borer is not at present a menace to West Virginia. Its spread is expected to be down the Ohio river and it may never reach the interior of the state, but of course this is uncertain and farmers were requested to watch out for it and if they found any borers working in corn stalks to send them to the University for identification.

The Japanese beetle has not reached West Virginia, but it is creeping in that direction and may be expected some day.

The Oriental fruit moth is found over most of the state. No practical spray method of control is known. The paradichlorobenzene used to poison peach tree borers will kill some of the moths in winter quarters. Cultivation does the same. A third precaution which helps is not to leave any wormy or "mummy" peaches in the orchard over winter.

The Mexican bean beetle feels quite at home in the Mountain State where its ravages in gardens have introduced it to hundreds of farmers. Information about its control is available, but as one farmer stated: "We have both the information and the beetle." The damage done by this beast varies somewhat with the weather—worse some years than others—but it apparently is here to stay. In order to live with it clean-up methods of culture and poison sprays are recommended. Dust, flour, lime, etc., will scare the beetle away, but will not kill him or prevent his return. A spray or dust, in the proportion of one pound of calcium arsenate to 50 gallons, kept on the under surfaces of the leaves, will kill the beetles. This with plantings of a succession of crops provide a way of control.

Holstein Breeders

The W. Va. Holstein Breeders' Association held a luncheon and business session at which about thirty breeders were in attendance. P. B. Williams of Triadelphia, president of the association, acted as toastmaster.

Plans were worked out to promote interest in Holstein cattle in West Virginia and much enthusiasm was shown. O. K. Quivey, agricultural agent of the Baltimore & Ohio Railroad, spoke on the special train which will tour the country in April distributing pure-bred dairy sire. The special will be in West Virginia from April 17 to 26.

Officers of the association were reelected as follows: P. B. Williams, Triadelphia, president; S. S. Ball, Ravenswood, vice-president; J. V. Hopkins Morgantown, secretary-treasurer; A. L. Campbell, Falcott, and L. J. Posten, Morgantown, directors.

The West Virginia Wool Growers' Cooperative Association

West Virginia wool growers in their meeting during Farmers' Week reelected J. D. McReynolds, Clarksburg, president, and R. H. Buckwalter, Lewisburg, vice-president, while G. L. Hively, Walton, was elected as secretary to succeed W. P. Ireland who has served in that capacity for the past two years.

Instead of one centralized state pool as of former years, the association voted to adopt a county pool system for handling the 1929 wool crop. The county pools will be made up by the farmers themselves delivering their wool to the county storage house or at time of shipment. These pools will be supervised by a county man, usually the county service manager. He will direct the assemblage of the wool, keep records of each man's contribution, and make payment of all amounts due the producer after deducting a minimum amount for handling charges.

Bids will be received, for the wool in all the county pools, by the secretary of the State Association. All sales must be cleared through the state office, whether for one or more of the county pools, at the same time.

Colonel E. L. Shaw will represent the State Department of Agriculture and the State Extension Division as general field man in helping to work up the sentiment for pooling, and as adviser to county managers and others. His duties will extend over the period of time from April first to August first.

Jersey Breeders

The West Virginia Jersey Breeders' Association reelected its officers for another year at its luncheon meeting on Wednesday. The officers are: W. G. Riggs, Moundsville, president; D. W. Coffield, Elm Grove, vice-president; Charles Richardson, Shinnston, secretary-treasurer.

One of the Jersey luncheon speakers, Prof. H. O. Henderson of the University Dairy Department, paid tribute to Mrs. W. E. McClung, of Romeoville, as a cattle breeder. Mrs. McClung, who was later announced as one of the Master Farm Home Makers, has broken state Jersey records in four Register of Merit classes in the last year. Professor Henderson named testing and the use of better bulls as the fundamentals of herd improvement, illustrating the importance of using only proven sires. He directed attention to two bulls in the College herd, one about as good as the other in outward appearance. One has five tested daughters; they average about 25 per cent less milk and butterfat than their dams. The first 17 daughters of the other sire average over 100 pounds more butterfat per year than their dams. Professor Henderson expressed fear that West Virginia may become a dumping ground for abortion-infected or untested cattle from Pennsylvania, unless the authorities take action against the disease similar to Pennsylvania's projected program against contagious abortion.

Mr. O. K. Quivey of the Baltimore and Ohio Railroad announced the better sires train which will cover the state April 17 to 26, starting at Parkersburg. He complimented the Jersey men on the fact that enough high-quality Jersey bulls for the train could be secured in West Virginia; bulls of the other breeds must be imported. The voices of the speaker accompanying the train will be amplified through loud speakers in the various cars and outside as well.

There are 900 Jersey breeders in West Virginia, according to J. V. Hopkins of the College extension department. He recommended that the annual meeting of the Jersey Association be held during the annual three-day State Dairymen's Association meeting at Charles Town. Action was taken to hold a meeting at Charles Town as suggested without abandoning the annual session during Farmers' Week.

Robert Eno, federal of the American Jersey Cattle Club urged the Mountain State Jersey men to test, breed and weed their herds, to exhibit at the fairs, to sponsor calf clubs and to hold state consignment sales to promote the interests of the breed. A committee was appointed to make plans for a sale.

Marshall county was announced as the winner of the county club contest in which the counties competing were scored on their activities in dairy and breed development. The points considered were: Better individual and bull association sires; keeping of cow testing and Register of Merit records; boys' and girls' calf club work; exhibition of Jerseys at fairs, etc.; cooperation through Jersey organizations. Marshall county made a total score of 3,089 points against 1,972 points for the Eastern Panhandle, the only other contestant.

Baby Beef Production

Speaking of beef cattle problems Thursday morning Prof. E. A. Livesay expressed his belief that some West Virginia livestock men would find baby beef production profitable. He said the college had made a profit on baby beef in four of the last five years, all expenses being charged against the herd at regular market prices.

Professor Livesay predicted that economic conditions would bring about a very definite change in West Virginia's beef business in the not distant future. Mountain State cattlemen either will specialize in breeding work, shipping young stock to other states to be fattened, or they will improve their feeding methods, meeting the demands of the market by turning out younger, smoother and better finished steers than at present.

Feeders were reminded of their obligation to the men who, by importing the right kind of breeding stock, are making it possible for them to buy calves of the type to meet the changing requirements of the markets.

"If we stay in the beef game we must produce the kind of animals the market wants and produce them economically." Corn silage and legume hay—clover, alfalfa or soy beans—were given as the best aids to economical production. The experience of the College has proved that one acre growing corn silage is worth five growing timothy hay for wintering cattle. And it is better for the cattle and costs less to put corn in the silo than to husk it in the usual way.

The cheapest and best beef is produced from calves dropped in early spring—March 15th to May 15th. Such calves have two aids to a good start in life—a long season on pasture and an extra supply of milk due to the fact that their dams also are on pasture

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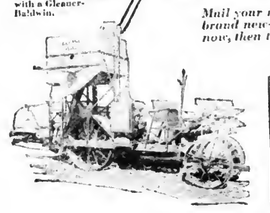
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Cream Contest

The rapid expansion of West Virginia's cream producing industry was reflected in the remarkably successful Mountain State Cream Contest which was held during Farmers' Week. This first cream contest, which is planned as an annual event, drew 124 entries of from two to five gallons each, which were graded and paid for at the market price of churning cream. Scoring was done on the basis of the following 100-point score card:

Flavor, 45 points. Flavor is judged by odor and taste according to the quality of butter it will make.

Acidity, 20 points. Acidity considered perfect when .3 per cent or less. When over .3 per cent, score as follows: .4, 19; .5, 17; .6, 15.

Richness, 15 points. To receive a perfect score cream must test 30 per cent or over. For each per cent under 30 per cent deduct one-half point.

Body, 15 points. Body should be smooth and uniform. It may be injured by being partly churned, by being frozen, by being curdy, or by containing dirt.

Can, 5 points. The can should be clean inside and outside, free from rust and dirt, and well tinned.

The cream contest winners follow, with the home county and the score of the ten leaders:

Mrs. E. A. Smith, Lewis county, 93.33; William Doak, Doddridge, 93.0; Olie Haught, Tyler, 92.58; J. E. Hamilton, Marion, 92.50; T. H. Baker, Lewis, 92.50; C. E. Richmond, Marshall, 92.50; N. T. Duncan, Lewis, 92.33; Blaine Hixenbaugh, Wetzel, 92.25; Clark Wilson, Gilmer, 92.25; B. P. Williams, Monroe, 92.25.

The home butter contest winners and their scores: Mrs. Chas Harmer, Shinnston, 93.0; Mrs. M. A. Blake, Lost Creek, 92.5; Virginia Blake, Lost Creek, 92.0; Mrs. Herber Roach, Bristol, 91.5; Mrs. Sophia Spray, Troy, 91.25. County having largest number of entries in butter contest, Harrison county. Having won this cup for the third time, this gives Harrison county permanent possession.

Winners of the Farm Women's Butter Judging Contest: 1, Mrs. E. B. Robinson, Harrison county; 2, Mrs. W. I. Lembard, Preston county; 3, Mrs. Chas. Harmer, Harrison county.

State Livestock Association

The annual business meeting of the West Virginia Livestock Association followed a luncheon on Thursday. G. H. Hively of Walton was elected president, succeeding J. C. Gibson of Kingwood. Ross H. Tuckwiler of Lewisburg, Greenbrier county, was chosen vice-president and B. F. Creech of the College Animal Husbandry Department secretary-treasurer. Winners of the three medals offered in the live-stock judging contest were announced as follows: Gold medal, Louis Wuchener, Lewis county; silver medal, Arthur Sheets, Harrison county; bronze medal, G. L. Hively, Roane county. Ribbons were awarded to Albert Showalter, Wirt county; W. C. Warner, Fayette; Carl McCoy, Wirt; W. E. McClung, Greenbrier; G. E. Borgman, Preston; Morris Bolton, Greenbrier; E. B. Romans, Greenbrier. Contending for the cup donated by the Greenbrier County Farm Bureau, Greenbrier won first place, Wirt county second, Preston county third.

The final meeting of the Farmers' Week program was the annual banquet in the ballroom of the Hotel Morgan. About 300 farmers and extension workers were present to hear Dean Fromme announce the winners of the various contests and to honor the new group of Master Farm Home Makers. The five women given the home maker award were chosen for their accomplishments in home and community in a movement similar to the Master Farmer project, sponsored by The Farmer's Wife in cooperation with the home economics extension service. The women thus honored were: Mrs. E. D. Darnall, Weston; Mrs. M. W. Fulton, Cherry Run; Mrs. L. E. McClung, Rupert; Mrs. Ray Ward, Elkins; Mrs. G. E. Watson, Little Falls. The awards were made this year, for the second time in West Virginia, by Miss Bess M. Rowe.

President John R. Turner of W... Virginia, addressed the banquet and... ence welcoming them and emphasiz... the importance of the state's agric... tural industry. In his summary of t... Farmers' Week activities Dean Fromm... stated that this year's registration h... talled nearly 750 persons, a large i... crease over previous years. Th... were 40 enrolled in the house-dress e... hibit. The seventh annual corn a... grain show had 321 entries, the pota... show 110.

The principal prize winners were a... nounced as follows:

Apple and Potato Show

Commercial growers' class. Sub Clas... one standard bushel.

Grimes: 1, T. J. Downs, Farmington, Marion county; 2, L. G. Zinn, Philippi, Barbour county. Jonathon: 1, J. E. M... Donald, Martinsburg, Berkeley coun... Rome: 1, Fenton Gall, Martinsburg, Ber... eley county. Stayman: 1, Walter W... fall, Flatwoods, Braxton county. York: ... J. E. McDonald, Martinsburg, Berke... county. Any other variety: 1, Golden D... licious, T. J. Downs, Farmington, Mari...

Sub Class B, one standard bushel box... Section 8. Any other variety.

Red Rome: T. J. Downs, Farmington, Marion county.

Sub Class C—One plate, Black Twig: 1, Fenton Gall, Martinsburg, Berkeley county. Delicious: 1, J. E. Hall, Walkersville, Lewis county; 2, W. H. McDonald, Romney, Hampshire county; 3, T. J. Downs, Farmington, Marion county. Grimes: 1, T. J. Downs, Farmington, Marion county; 2, W. H. McDonald, Romney, Hampshire county; 3, L. G. Zinn, Philippi, Barbour county. Jonathan: 1, J. E. McDonald, Martinsburg, Berkeley county; 2, W. H. McDonald, Romney, Hampshire county; 3, S. L. O'Neal, Philippi, Barbour county. Rome: 1, T. J. Downs, Farmington, Marion county; 2, J. E. McDonald, Martinsburg, Berkeley county; 3, Fenton Gall, Martinsburg, Berkeley county. Stayman: 1, Walter Westfall, Flatwoods, Braxton county; 2, Fenton Gall, Martinsburg, Berkeley county; 3, J. E. Hall, Walkersville, Barbour county. Winesap: 1, W. H. McDonald, Romney, Hampshire county. Red Rome: 1, Walter Westfall, Flatwoods, Braxton county. Other varieties: 1, Winter Banana, W. H. McDonald, Romney, Hampshire county; 2, Spitzenburg, S. L. O'Neal, Philippi, Barbour county; 3, Roxbury, L. G. Zinn, Philippi, Barbour county.

Potatoes

Sub Class A—Standard Peck (32 tubers).

Smooth Rural: 1, Virgil Poe, Montrose; 2, Raymond Squires, Weston; 3, Martin Long, Montrose. Russet Rural: 1, G. L. Borgman, Kingwood; 2, Ralph Kelly, Tunnelton; 3, Alden C. Rogers, Clarksburg. Green Mountain: 1, Clevis Marple, Weston; 2, G. E. Borgman, Kingwood; 3, W. A. Vorback, Morgantown. Irish Cobbler: 1, Bert E. Sayre, Letart; 2, George C. Lowman, Sleepy Creek; 3, E. M. Maxwell, Wheeling.

Sub Class B.—Plate (5 tubers).

Smooth Rural: 1, Slan Bolyard, Philippi; 2, Wilbert Tenney, Lorentz; 3, W. H. Gibson, Pisgah. Russet Rural: 1, G. L. Borgman, Kingwood; 2, Arthur Green, Clarksburg; 3, Jerome Boyles, Philippi. Green Mountain: 1, G. E. Borgman, Kingwood; 2, L. R. Sturm, Clarksburg; 3, Raymond Rogers, Clarksburg. Irish Cobbler: 1, Ralph Shirefey, Berkeley Springs; 2, G. A. Stickler, Sanger; 3, W. C. Warner, Fayetteville.

Winners at Seventh Annual Corn and Grain Show are given below with their home county:

Reid's Yellow Dent—low altitude: 1, J. Florin Bowers, Mineral; 2, Arthur Sheets, Harrison; 3, Joseph Simpson, Ohio; 4, Columbus Dillon, Harrison; 5, Elden Bowers, Mineral; 6, A. W. Rittenhouse, Harrison; 7, Luther Squires, Braxton; 8, Howard Jones, Harrison; 9, J. D. McReynolds, Harrison; 10, L. E. Anthony, Wetzel.

White Dent, low altitude: 1, J. D. McReynolds, Harrison; 2, John Parks, Harrison; 3, Frank Wells, Wirt; 4, Irvin Ingram, Wirt; 5, J. W. Eib, Harrison; 6, Gilmore Rine, Marshall.

Any other dent, low altitude: 1, D. S. Reed, Jr., Ohio; 2, Roy McGary, Marshall, 3, Ed. Dowler, Marshall 4, J. A. McGary, Marshall; 5, J. P. Bonar, Ohio; 6, Gilmore Rine, Marshall.

Single ear any variety, low altitude: 1, Howard Jones, Harrison; 2, W. D. Long, Harrison; 3, C. W. Somerville, Wirt; 4, Gilmore Rine, Marshall; 5, John Wilson, Harrison; 6, A. N. Lawson, Harrison.

Reid's Yellow Dent, high altitude: 1, E. C. Felton, Barbour; 2, Millard Poling, Barbour; 3, C. A. Craig, Preston; 4, R.

(Continued on page 30.)

When Doctors Disagree

I AM writing a few lines just to get them out of my system. You may publish all, part or none as you see fit.

For a good many years I have been a reader of the Stockman and Farmer (at one time my father won first prize for a corn essay. I couldn't have written the essay but I can raise the corn), and now will share the Pennsylvania Farmer with all my old friends.

Of course we like Mr. Agee for his clean-cut straight from-the-shoulder, good-sense remarks. We heard him at State College some—oh, well it really doesn't matter how many years ago. We are both boys yet.

We heard him talk on raising strawberries. We wish we remembered all he said. Just now we have a patch of strawberries. We set them out in the corn, thinned the corn out a little below for them and they did very well. The corn did well too, for most corn would do just as well or better if thinner. Then too we kept every weed out and that didn't seem to hurt the corn.

Experience with Dahlias

Then we like Mr. Lighty because he likes so many things that we like. He likes a square deal, good stock and flowers. I enjoyed reading about his dahlias.

We plant our dahlias along the back yard fence. We drive a stake at every fence post, letting it stick up some three feet, nail a strip from the stake to the fence post, lay a long sapling on top. This holds the dahlia up off a path that goes along the fence. Thus every time we go to the barn or well we pass right past the flowers.

We sometimes cut a tuber of a red dahlia and a tuber of a white dahlia, stick the two halves of the different colors together and we have variegated flowers. Sometimes the same flower will have some all white petals and some all red petals.

Then we sure like Zinn because he is a "sure enough" dirt farmer. We like him in spite of the fact that he uses a left-hand plow. With all his faults we love him still. We are always glad to read Woodbine notes. We call our farm Wimbolton and the family name of the registered Holstein cattle is Bolton.

Then Hepsy Neff—we would hate to get along without her. We wouldn't like to get along without any of the women. We can hardly get along with them. If we were in single blessedness we would be eager to make the acquaintance of Miss Neff. We think a woman of her good sense would be a handy thing about the house, a joy to any home.

The Milk Cart

In the paper last fall we read with interest Mr. Humphrey's dairy topics. We use a hand cart for carting milk to spring house, made by bending a buggy axle down so that the bottom hangs about one foot from the ground with ordinary wheels on two stout boards, six inches wide and bolted one on each side. Two handles are bolted to these. Two iron straps are hung, one at each end of this board, to allow a thin bottom to rest on these straps and the axle and two feet slanting well back toward the handles so the user can bear down on the handles and serve as a break going down hill, and thus you have a light durable push cart that can easily be made to hold six cans. It is easy of access and will not upset.

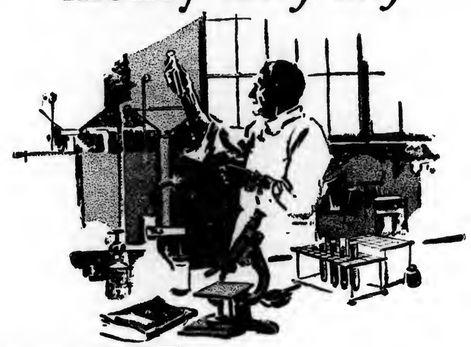
As to choked cows "we should worry," if we are lucky enough to be on the job. We take a No. 9 fence wire six or seven feet long, double it, insert the loop end down the cow's throat. It's an easy matter to give the apple a little pull. The apple is dislodged, the cow swallows it, all's over and the hand plays on.

Taking it all around I am well pleased with the consolidation of the two papers. R. M. Fulton.

Oil facts for farmers

(No. 11)

How specialization will save you money *every day*



Make this chart your guide

The winter recommendations specified on this chart should be followed from freezing (32° F.) to 0° F. Below 0° F use Gargoyle Mobiloil Arctic (except Ford Model T use "E").

If your car is not listed here, see at your dealer's, the complete Mobiloil Chart, which recommends the correct grades for all cars, trucks, tractors, etc.

NAMES OF PASSENGER CARS	1929 Engine Summer	1929 Engine Winter	1928 Engine Summer	1928 Engine Winter	1927 Engine Summer	1927 Engine Winter	1926 Engine Summer	1926 Engine Winter
Auburn, 6-66	BB	Arc.	BB	Arc.	BB	Arc.	A	A
" 8-cyl.	A	Arc.	A	Arc.	A	Arc.	A	A
" other models	BB	Arc.	BB	Arc.	BB	Arc.	A	Arc.
Buick	BB	Arc.	BB	Arc.	BB	Arc.	BB	Arc.
Cadillac			A	Arc.	A	Arc.		
Chandler Special Six			A	Arc.	A	Arc.	A	Arc.
" other models	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Chevrolet	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Chrysler, 6-cyl.			A	Arc.	A	Arc.	A	A
" Imperial	BB	Arc.	BB	Arc.	A	A	A	A
" other models	A	Arc.	A	Arc.	A	A	A	A
De Soto	A	Arc.					A	Arc.
Dodge Brothers	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Durant	A	Arc.	A	Arc.				
Erskine	A	Arc.	A	Arc.	A	Arc.		Arc.
Essex	A	Arc.	A	Arc.	A	Arc.	A	
Ford, Model A					E	E	E	E
" Model T					BB	BB	BB	BB
Franklin	BB	Arc.	BB	Arc.	BB	Arc.	A	Arc.
Gardner, 8-cyl.	BB	Arc.	BB	Arc.	BB	Arc.	A	A
" other models								
Graham-Paige	BB	Arc.	BB	Arc.	A	Arc.	A	Arc.
Hudson	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Hupmobile	BB	Arc.	BB	Arc.	BB	Arc.		
La Salle	BB	Arc.	BB	Arc.	A	Arc.		
Marmon, 8-cyl.	A		A		A	A	A	A
" other models			BB	A	A	A	A	Arc.
Moon	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Nash, Adv. & Sp. 6	BB	Arc.	BB	Arc.	BB	Arc.	A	Arc.
" other models	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Oakland	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Packard	A	Arc.	A	Arc.	A	A	A	A
Peerless, 72, 90, 91	BB	A	BB	A	BB	A	BB	A
" other models	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Plymouth	A	Arc.						
Pontiac	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Reo	A	Arc.	A	Arc.	A	A	A	A
Stearns Knight, 6-80	BB	Arc.	BB	Arc.				
" other models	BB	A	BB	A	BB	A	BB	A
Studebaker	A	Arc.	BB	Arc.	A	Arc.	A	Arc.
Velie, 8-cyl.	BB	Arc.	BB	Arc.				
" Gr'yl.	A	Arc.	A	Arc.	A	Arc.	A	Arc.

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Mobiloil
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2—is refined by specialized processes to bring out this rich lubricating value.

3—has 3 times as many steps in its manufacture as many oils offered you.

4—costs twice as much to make as many oils.

5—is accurately determined as to body and character for your own car or tractor—through the Mobiloil Chart—whose recommendations are approved by 609 makers of cars, trucks, tractors and other automotive equipment.

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Mobiloil
VACUUM OIL COMPANY

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That's *dependability!* And that's the kind of reliable, dependable service OilPulls give, no matter where you find them. In fact, any user will tell you that he can absolutely depend on his OilPull for:

1. Most work per day
2. Most labor saved
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4. Lowest upkeep costs
5. Fewest layup losses
6. 10 year life and longer

The reason is easy to find. It lies in the experience and ideals back of OilPull design and construction. Rumely has specialized for nearly 100 years in building power farming machinery *exclusively*. Rumely knows farming . . . knows tractors. Rumely builds the OilPull to *meet the farmer's need* for dependable power at lowest possible cost.

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$1095 Cash

F. O. B. Factory

Terms can be arranged if desired

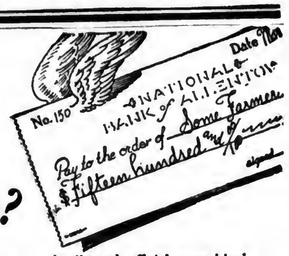
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Is the Grain Drill Accurate?

By E. A. KIRKPATRICK

I WAS calling at Brown's farm one day last winter when father and son were going over their seed requirements. They had decided not to use their own oats for sowing, for one reason or another.

"Now how much do you think we will need to buy?" the father asked.

"Well there's 60 acres to go in oats this year, and three bushels to the acre would be 180 bushels," the son replied.

"But you can't figure it that way. We set the drill at three bushels last year, and I know blamed well we sowed over 100 bushels on the lower field —28 acres you know."

Here was a chance to be of service, I thought. My friends tell me that's why I've never become wealthy—I'm always giving things away. At any rate I suggested:

"It would be a simple matter to put the drill through its paces on the barn floor before taking it to the field, and adjust the gauge to sow exactly three bushels, if that is what you want."

"And how so?" the son asked.

How to Test a Drill

That was calling my bluff, and no mistake. I began to tell about the width of the drill, the circumference of the wheel, the number of revolutions to the acre, etc. But I could see the father wasn't paying much attention, and that my suggestions were a little too general for the boy to follow. So I finally said:

"I'll work out a set of directions for calibrating the drill, and send 'em to you, or leave them the next time I'm up this way."

Which I did. Thinking some other farmer might like the information, I've offered it to the editor. If you have read this far, you will see that he has bought it, which suits me to a T. Here are the directions:

First, make sure that your drill is set to sow seed of the size you intend to sow. Soy beans, for example, feed through a large throat and oats through a small throat. A reversible lid covers the small throat when the large one is open, and vice versa.

Put the drill on a smooth surface. The barn floor, or floor of machine shed, is all right. If the work is done in barn or machine shed, a couple of ropes or block and tackle can be used to raise the drill enough so the hoes or disks can be let down as for seeding, and the wheels will clear the floor. If ropes or tackle are not available, use a prop to hold up each end of the drill. Have tongue in position it would occupy in seeding.

Trips per Acre

Measure the distance between blades of the outside disks, and add to this the distance between two adjoining disks. The total distance is the width of strip seeded in a trip across the field.

After getting the width of strip in feet you can figure out the distance the drill will have to travel to sow an acre. There are 43,560 square feet in an acre, so the problem is simply this: Divide 43,560 by the width of strip. Suppose the width of strip is 12 feet, then 12 into 43,560 goes 3,630 times. Save that number, 3,630.

Measure the distance around the wheel. If you have no tape measure that you can measure around the wheel, then do this: Measure the diameter of the wheel (outside of tire) and multiply it by 3 1-7. Suppose the circumference is 15 feet. Divide 3,630 by 15 and we have 242 that's the number of times the wheel goes around in seeding an acre. Save that number, 242.

Fill the seed box with grain and set the indicator for the amount you want to sow per acre. Be sure to use the setting for the particular kind of grain you are testing. If you've paid attention to that, then sow one-fourth of an acre. First put a canvas down under the drill to catch the grain, tie a handkerchief on a spoke near the rim of the wheel, at point directly below the hub. This so you can count the revolutions of the wheel.

Adjustments

To sow an acre you will have to turn the wheel 242 times (the number saved), and to sow one-fourth of an acre, you will have to turn one-fourth as many times—four 242 goes 60½ times. After that number of turns has been completed, gather up the grain on the canvas and weigh or measure it. If your indicator is set for three bushels to the acre, the amount seeded on to the canvas should be one-fourth of three, or three-fourths of a bushel.

What to do if the amount measured isn't exactly one-fourth of what the indicator says the drill is sowing? Make allowance for the error.

Suppose the amount seeded on to the canvas is only one half bushel, when it should be three-fourths. If that is the case, you'll have to change the indicator so it will sow 50 per cent more grain.

The error is the difference between the amount indicated and the amount actually sown; in this case, ¼ minus ½ or ⅓ of a bushel. To get the percentage of error, divide this difference (¼ bushel) by the amount actually sown (½ bushel): in this case, it will be ¼ divided by ½ equals ½ or .5, or 50 per cent. Move the indicator to sow 50 per cent more grain—that is, set it at 4½ to get it to sow three bushels per acre.

Suppose the drill when set for three bushels per acre seeds four bushels on the canvas. To get the percentage of error, substract as follows: 4 - 3 equals 1. Divide this difference of one bushel by the amount actually sown (four bushels) as follows: 1 divided by 4 equals ¼, or .25, or 25 per cent. Set the indicator to sow 25 per cent less grain; instead of setting it at 3, set it at 2.25 and it will sow about three bushels per acre.

Finally, use clean seed and clean out the throats, so that nothing will hamper the grain from passing freely through.

Pitch on Inside of Silos

G. F. writes: "Please give me any information you can as to the advisability of putting pitch and tar, such as is used by roofers, on the inside of tile, brick and cement silos. As roofers we have had several inquiries as to doing this sort of work."

IT IS very common to coat the inside surface of all types of silos with hot asphalt, such as is used in road and street work, and this is considered good practice. It not only stops air leakage which would injure the quality of the silage, but helps to protect the silo wall from the moisture and weak acid in the silage.

It is not considered so desirable to use coaltar for this purpose, but so far as I have observed this would not have serious detrimental effects, aside from making the silage somewhat less palatable. Probably some of the silage next to the wall would have to be discarded. We should be glad to have the experience of some of our readers on the use of coaltar as a silo coating.

I. W. D.

Combination Mill

ONE manufacturer of feed and roughage mills has developed a blower which can be attached to their machine converting it into a silo filler and fodder shredder.

This combination makes a cheap and satisfactory outfit. A 5 or 7½-horse power electric motor runs the outfit in good shape.

The Japanese Beetle

By FELIX ZERNIN

I AM commencing to be an old man, having passed my three score and ten mark, and sometimes find daily papers stale, flat and unprofitable. They profess to bring the latest news, but somehow it doesn't interest me much My own fault likely enough.

Still I can often get a thrill out of old stories. I came across some old cuttings that related what had happened in Havana when the U. S. army was in control after the peace with Spain. The city was said to be a pest house, no sanitation of any kind, people dying in the streets and corpses unburied everywhere. Then Colonel Leonard Wood was appointed Governor General and under him the new administration started. A vigorous campaign of cleanliness was to be tried.

It was easy to install a rigid system of quarantine to keep yellow fever and malaria confined till such diseases could be stamped out. Sanitation and drainage was harder to enforce, but Major Gorgas, the best medical officer known, began the process of cleaning up. Within six months—all honor to him and his associates—he was able to point to Havana as cleaner than any city in the United States. They even spoke of abandoning quarantine, for only here and there had a case of yellow fever appeared.

Where Expect Help?

But in the meantime new immigrants had come in faster than ever before; People who were not immune, like the native Cubans, and all at once an epidemic of the dreaded pest swept the city again—the worst in public memory, so the papers said.

If drainage, cleanliness and quarantine could not stamp out this scourge, where could you look for help? This is not the place to speak of the heroic fight that Major Gorgas and others fought amid dangers as great as any army ever faced, while instead of cheers they received nothing but ridicule. Even well-disposed men shook their heads. General Engineer Davis, he who finished the Washington Monument, told him:

"I'm your friend, Gorgas, I'm trying to set you right, but on the mosquito you are simply wild. All who agree with you are wild. Get the idea out of your head. Yellow fever as we all know is caused by filth."

A Heroic Part

Others called him "buggy." He listened and went his way. Who can name all the brave souls who offered their lives for the good of humanity, never thinking of reward or publicity in the papers? I am trying to be brief and not tire my readers, but will give you the name of one of the unknown heroes. A common soldier—no, I am wrong, he was certainly a most uncommon soldier—John R. Kissinger was the brave fellow's name—was the first one to offer himself for inoculation. He was bitten on November 20, 1899, and again on November 23 by a mosquito that had been allowed to suck the blood of a severe case of yellow fever. No ill effects followed. On December 5 he was again bitten by five infected mosquitoes. This time the inoculation "took". He was gravely ill, but recovered. Soon his health broke and he left the army. He was completely paralyzed and his wife had to be both nurse and bread winner.

Such splendid sacrifice could of course not go unrewarded. And a grateful country at last gave him on March 2, 1907, a pension, the magnificent sum of twelve (12) dollars per month!

For-Get-Me-Nots

A traveler who visited Cuba years after the plague was stamped out found an abandoned graveyard of yellow fever victims, covered—it was doubtless swampy ground—with Myosotis, forget-me-nots. I liked this story better than that of the poppies in Flanders and will conclude this history with the proud remark Major Gorgas made in 1905, when he entered the dissecting room of the government hospital in Ancon where a number of white-clad surgeons were at work on a cadaver:

"Take a good look at this man, boys. It is the last case of yellow fever you will ever see."

Again I beg your pardon, because you have now to listen to the moral that belongs to every good story. It was published on February 28, 1901, in Life: "It looks as if the medical profession would be owning us an apology presently for the trouble the world has been put to for many years past to disinfect travelers and their effects and merchandise, that have come from yellow fever ports. The new theory about yellow fever, as developed by experiments of Dr. Walter Reed of the army, is that it is carried nohow except by the agency of a certain female mosquito, who imparts it by her bite. If this theory turns out to be sound, it will be at once a triumph and a matter of mortification to the doctors, for while it will be very clever and useful to them to have made such a discovery, think what they will be owing us on account of all the sulphur burned and all the fuss and delay on yellow fever in the last century." There is gratitude!

Back to the Beetle

This has been a funny way of telling my readers something of the Japanese beetle, but if they are not too tired I hope I can lead them back to the home pasture.

The beetles certainly put the fear of God into the American public. When they did appear in swarms and cleaned up every vegetable in sight, it looked as if the plague of locusts had returned and was eating up Egypt. If it had happened a hundred years earlier, no doubt but there would have been days of fast and humiliation. But—and I can speak from personal observation, for I am living close to Cinnaminson township, N. J., where they made their first appearance—our farmers were not so very much troubled.

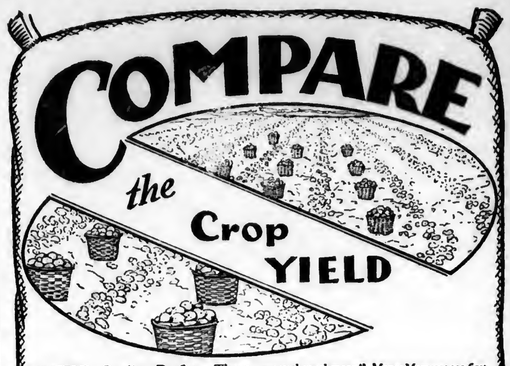
We Jersey farmers are getting hard-boiled. We have fought the 'tater bug, the cut worm, the cabbage worm, the San Jose scale and the most ferocious mosquito and were willing to say, "Bring on your Jap beetles, we'll have a try at 'em. They seem to like our smart weeds better than anything else, and of them we have enough to give every able-bodied beetle nervous dyspepsia."

In Small Towns

It was in our little towns that they were more destructive. All over Jersey you find nice little towns that are really suburban residences. Houses with fine lawns in front and with showy flowers and climbers make the state look as if it was the suburb of Paradise. And the beetles must have been of the same opinion, for at the front yards they went with a vengeance. In June when everything was blooming they started at the Hydrangeas and Cannas. Both of these bloom here in South Jersey with a perfection I have seen nowhere else. It was a shame to see streets that used to look pink, yellow and purple reduced to a uniform brown, as if a prairie fire had swept through them.

Of course the people howled, the country papers took it up—much the beetles cared. They did what George Washington had done before 'em—crossed the Delaware. Then they went to Philadelphia and took that, as the British had done after the battle on the Brandywine. Then the fat was in

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the fire! Not even Fairmount Park was safe any more.

The government must do something. The government did. Clamped down quarantine—and more quarantine. No more flowers in automobiles, no more shipments from infected districts. Did the beetles care? Sorry to say, they didn't. If they couldn't ride by auto, they took to the air. They didn't need any landing places nor space to take off from, they simply went.

Now this may seem to be quite funny, but it certainly is not meant so. I think most of us have confidence enough in the entomological researches that are carried on in Moorestown and other places to know that if scientific methods cannot find a way to stop this plague private enterprise is helpless. It is impossible for small gardeners or even farmers to buy costly spraying apparatus and store it up eleven months every year, only to be unfamiliar with its use when they need it. You might as well expect every householder to keep his own fire apparatus and scrap the fire department. Above all it is useless to keep up the quarantine when the cost of it is more than double the money spent for research work. (I had almost finished this article, when I read in the Pennsylvania Farmer of December 15 that Mr. Richie from Riverton, N. J., states that last year $700,000 have been spent for maintaining quarantine as against $125,000 for research work.) It is absurd at this time to stem the progress of the beetle by quarantine, when the same amount of money might suffice to exterminate the whole crop of insects.

For much of what I have written, in the first part, I am indebted to Mark Sullivan in "Our Times" published by Scribners Sons. This book I would like to recommend to any of your readers, who find themselves homebound, as we say in Jersey, from accident, disease or old age.

Garden and Truck Crops

By GILBERT S. WATTS

Fertilizer for Berries and Melons

TO J. M. of Schuylkill county I would suggest that you apply 150 pounds of sulphate of ammonia or 200 pounds nitrate of soda per acre on your strawberries immediately after working mulch between the rows. To avoid getting too much in one place broadcast the material with a full swing of the arm as in sowing clover seed by hand but do this at a time when the foliage is absolutely dry. If the leaves have made considerable growth before you top dress, it may be advisable to have some one follow with a broom and sweep the foliage lightly to brush off the fertilizer.

In fertilizing muskmelons, watermelons, cucumbers and squashes in hills it is good practice, in addition to putting manure in the hill, to scatter from one to three handfuls of a good potato fertilizer over a circle about three feet in diameter. Rake this in thoroughly before planting.

Celery is ordinarily planted five or six inches apart in rows 30 inches apart when blanching is to be done with boards or paper, or in rows four or five feet apart when earth is to be used for blanching. Considering the fact that you have had no experience with celery it would be a good plan to write to the Office of Information, United States Department of Agriculture, Washington, D. C., and request Farmers' Bulletin No. 1269—Celery Growing. This will be sent to you free of charge and should prove very helpful.

• • •

Fight on Cucumber Pests

IN REPLY to the inquiry of R. T. McL. of Lackawanna county Early Fortune is a popular early variety of cucumber, Long Green is an attractive mid-season variety and Stowes Pickling is good for that purpose. In tomatoes Bonny Best and Marglobe are hard to beat. Sure Crop Wax bean, Dwarf Horticultural Shell bean, Early Wonder beet, Chantenay carrot (early), Danvers carrot (late) and Model parsnips are standard. Cuthbert red raspberry and Cumberland black raspberry are popular. Early Snowball cauliflower is good.

The first step in controlling cucumber diseases is to control insects because these pests spread disease on their mouth parts. Dusting is satisfactory for this purpose. The beetles usually may be controlled by frequent applications of a mixture made of one part of calcium arsenate to 20 parts of land-plaster. This may be shaken through a burlap bag. Hydrated lime, although commonly used, is likely to stunt the plants. For plant lice apply a two per cent nicotine dust. For leaf spot and mildew 3-4-50 home-mixed Bordeaux spray applied at a high pressure is most effective.

Several Pennsylvania growers have been pleased with the results which they have secured by using plant protectors. Others are not so enthusiastic. Probably it will resolve itself into a matter of whether or not one has the time and inclination to manage the additional details of setting the protectors over the plants and watching conditions thereafter. Those who have used plant protectors successfully seem to agree that some ventilation should be provided from the beginning. This usually is done by slitting or tearing the protectors slightly at or near the top. Practically all seed and supply houses now are offering paper plant protectors. Some of these advertise in Pennsylvania Farmer.

• • •

Good Plants under Glass

"HOW do you start beet plants under glass?" asks R. H. of York county. The usual plan is to sow the seed thinly in rows four to six inches apart in a mild hot bed about six weeks before the plants can be set in the field. March first is my date. For two years, instead of sowing in drills, we have "spotted" a number of beet seeds. That is we have dibbled holes a scant half inch deep and spaced 1¼ inches apart each way in a smooth, firm seed bed. One seed (a beet "seed" is really a compound affair and may contain several seeds) was then placed in each hole. Dry sand is next sifted over the surface and scraped off with a straight edge leaving the holes level full. Water but not to excess.

This method is not as much work as it sounds and has produced more plants per sash and of better quality. Where flats (shallow plant boxes were used) the finest plants were secured. Crosby's Egyptian and Early Wonder are standard varieties for bunching.

• • •

"Damping Off"

AT THE beginning of the plant-growing season it is well to keep in mind that the best way to control "damping" off is to prevent it getting a start. Reasonably thorough waterings in the mornings at infrequent intervals and plenty of fresh air (without chilling the plants) are fundamental. When there is much cloudy weather it is often possible, particularly in manure-heated hotbeds, to grow seedlings to the transplanting stage without applying water at all after the seeds are sown.

The MARKET PLACE

By W. R. WHITACRE

MR. E. R. BIDDLE, in charge of the New York office of the U. S. Market News Service on Fruits and Vegetables, states that during 1928 New York City and vicinity consumed 700 carloads of fruits and vegetables each business day of the year.

The total receipts of fruits and vegetables including bananas entering the Port of New York by express, freight and boat amounted to 234,622 carloads and of this total 209,578 were handled and sold through the wholesale markets of the city. New York City is a large distributing center and large quantities were diverted from New York to other cities.

Carlot arrivals were reported from 43 different states and the only ones not represented were North Dakota, South Dakota and Nebraska. In addition to these there were at least 15 foreign countries. California supplied 57,947 cars or about one-third of the total supply, while Florida was next with 22,383. There were more cars of grapes received than any other commodity with a total of 23,579 cars. This does not mean that this large quantity was consumed in New York City, as only 13,578 were reported unloaded for local consumption.

More Greens Used

Potatoes ranked next to grapes in arrivals and exceeded this fruit in the number of cars unloaded on the market. Practically 22,057 cars were unloaded for local consumption, but this figure was somewhat lower than last year. A total of 89 different commodities were listed, most of which arrived in carload lots. One noticeable feature was the increase in the number of carloads of vegetable greens such as broccoli, dandelion and anise.

The Department of Agriculture, realizing that carload supplies are no longer an accurate guide as to total supplies in the larger cities, started a survey to discover how much produce was received in New York by motor truck. Beginning in the middle of July reports were secured from all important receivers in the jobbing market. Reduced to carload equivalents receipts from the middle of July to the end of December amounted to 10,285 cars. Taking the heavy receipts of asparagus, strawberries and other early commodities into consideration it appears that truck receipts would amount to about 10 per cent of the yearly supplies in the market. Receipts of strawberries were not reported, as the heavy movement was over before this work started, but a conservative estimate places them at around 800 carloads.

From Points South

The bulk of the truck receipts was from New Jersey and New York, but there were many truckloads from the Eastern Shore sections of Virginia, Maryland and Delaware as well as from North Carolina. In fact, several lots of berries were received from South Carolina.

There were about fifty commodities that arrived by motor truck in quantities sufficient to make a carload a week. The arrivals of fruits and vegetables by truck from New Jersey for the period during which records were kept nearly equaled carload arrivals from the state for the entire year. There was a total of 5,646 cars reported by the railroads compared with the equivalent of 5,245 carloads reported by truck during the last six months. Pennsylvania shipped an equivalent of 367 cars to New York by truck, most of which were mushrooms. In addition to truck shipments 1,040 cars of Pennsylvania fruits and vegetables were received by rail.

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50 plants	.50	.60	.80	.90	1.00	1.50	2.25	3.00
100	.90	1.00	1.00	1.50	1.75	2.50	4.00	5.00
250	1.60	1.90	2.35	2.75	3.00	5.50	8.00	11.50
500	2.50	3.00	3.50	4.00	5.00	7.50	12.50	20.00
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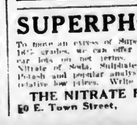


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Box 9, Geneva, Ohio

Soil Improvement

By W. D. ZINN

WE have two general divisions of plants, soil robbers and soil builders. The former are non-legumes and the latter are legumes.

To the non-legume family belong all the so-called grasses, including corn, wheat, oats and all other plants that do not draw nitrogen from the air. When we grow a ton of timothy hay we take from the soil about 25 pounds of nitrogen, but when we grow a ton of clover hay we draw from the air about 40 pounds of nitrogen and if this clover hay is fed to livestock and the manure properly saved thirty pounds of this nitrogen drawn from the air may be returned to the land.

If these figures are true is it not foolish for a farmer who can grow clover to grow timothy in its stead? But that is not the only reason why we should grow clover instead of timothy.

The Department of Agriculture at Washington, D. C., says that when timothy is worth $9 a ton to feed based on digestible nutrients clover hay is worth $14.

A cow giving heavy flow of milk requires 2 ½pounds of protein a day. She would have to eat 100 pounds of timothy per day to get this much protein, which would be impossible.

Dairymen who buy concentrates in order to procure protein for their cows when the roughage consists largely of timothy hay and silage, both very shy in protein, could substitute clover hay for the timothy and be able to cut down on the protein they buy.

The third reason why we should grow clover instead of timothy is that the former is a deep feeding plant, while the latter feeds largely on the surface. If we want to utilize the plant food for eight or ten feet down in our soils we need to grow alfalfa.

Soy Beans and Sweet Clover

Please publish through the columns of your paper information in regard to the raising of soy beans and sweet clover. Is it advisable to sow the two together? How much of each per acre, and what time in the year should they be sown? Hermann G. Williams.

SOY BEANS is a southern plant and should not be sown until the weather gets warm and the ground is warm. The first of June will be plenty early in Pennsylvania. No grass or clover seed should ever be sown with soy beans. The soys make such a dense growth that nothing will do well sown with them unless it is millet or Sudan grass. I have grown both of these with soy beans. Have tried clover several times and always failed.

The best way to sow sweet clover is to sow it with oats or barley in the early spring. It should not be cut after the 10th of September and should go into winter quarters with 12 inches of growth. If this is not done there is great danger of it heaving out. Sow 15 pounds of inoculated scarified sweet clover and from one and one-half to two bushels of soy beans per acre.

Roused His Ire

I suggest that you owe an apology to your farmer readers for the gross impertinence of the remarks with which Mr. Zinn closes his article in the issue of Jan. 19th. Disregarding the fact that the average farmer who keeps stock puts in more working hours even on Sundays and his holidays than most workers in other lines do in their normal working days, the willingness to offer such comment for publication betrays a contempt so profound that the frank scorn of the congressman, who is reported to have told a farm delegation to "go home and slop the pigs and leave government to those who know something," was flattering by comparison. Benjamin Kirson.

THE sentence to which our correspondent referred was the following: "The command to work six days is just as binding as to remember the Sabbath day to keep it holy." This remark was made because in a certain town there are a lot of chronic loafers who waste a lot of valuable time and then are complaining all the time about hard times. I leave it to our readers to decide whether the criticism made by our correspondent was justifiable.

Mixing Fertilizer

As I read on page 36 in your issue of Jan. 19 about mixing fertilizer I cannot help but feel that any one who tries to follow the recommendation is going in for a lot of grief. The questioner requests: "Be specific in your instructions." My impression from reading is that the writer probably never mixed ten tons in his life, perhaps not even one. I have mixed hundreds of tons during the past fifteen years and have found that theory needs to be modified by what is practical. A. R. Kohler.

IT WOULD not be interesting to write for a paper if every one believed all that one said and would not question any of his statements. I turned to this article on page 36 to see what kind of an inexcusable blunder I had made in telling that correspondent how we mixed fertilizer, and for the life of me I could not see wherein it was not clear. I have been having a carload of fertilizer mixed every year for several years and I have been giving the directions for the same, though not doing the manual labor with my own hands. If our critic has a better way of explaining how he mixes his fertilizer he will confer a favor on the writer, as well as on the interested readers, if he will tell how it should be done.

Sweet Clover

I read your articles regularly and get a lot of information from them. You have had a great deal of experience with sweet clover and I need some advice on it.

I sowed an 18-acre field to grain and grass in 1927. My grass was to be alfalfa, some little red clover and timothy. I got a fine "catch", felt proud of it. But when it developed I found I had white sweet clover instead of alfalfa. That is the fact.

Now my trouble begins. It grew up very nice and thick—weather conditions were against me in haymaking time. I could not make the hay until it got too big, eight to ten feet tall. I let it go. Of course it went to seed, millions and millions of seed.

I want to plow the field for potatoes and corn for 1929, but I am told that this will reseed itself and make it impossible to keep the potatoes clean because the sweet clover will come up in it.

How would you manage this field to get good results from it?

But now this is not all. Our rotation here is corn and potatoes, then oats and then wheat with grass. Now if we can keep the sweet clover down in corn and potatoes it will come in the oats in full force and take the oats. I lost a buckwheat crop in that way. The sweet clover—yellow, sown with the buckwheat—grew so big that it cleaned up the buckwheat. You know these days we can't afford to lose too many crops.

I guess sweet clover is all right, but I don't know how to handle it. I harvested 1,800 bushels of potatoes this year, but unfortunately no price. We can't do too much hand work on the corn and potatoes, too scarce and expensive.

This mass of stuff will be hard to plow under, but with the tractor plow I guess we can do it. Would it help to roll the stuff down first or would it spring back up again? The reseeding affair is my trouble now.

What kind of hay does sweet clover, yellow and white, make? How does it compare with alfalfa in feeding value? M. S. Dickey.

I THINK a farmer who can grow sweet clover as our correspondent did is to be envied rather than pitied. No matter what is done with the land the sweet clover should be rolled down flat and broken as much as possible so as to cause it to rot this winter. If when spring comes and the sweet clover isn't well rotted our correspondent would better rake it off but I am of opinion it will have so decayed that this will not be necessary.

If any other field can be found on which to grow the potatoes and corn I would certainly not plow this clover now, for it will make a very fine crop of hay this year which will be just as good as any alfalfa. The land then could be plowed and the field planted to corn and potatoes in 1930, but I would leave the part to go to corn until the spring and plow it about the first of May. The potato ground would better be plowed in the fall.

I feel sure our correspondent will have trouble with the sweet clover coming in his corn and potatoes if he plows the ground in the fall or during the winter. I would try disking the ground lightly early in the spring, then give the seed time to germinate and plow it under. He will have some trouble if he manages it in that way but not as much as he would have if he turns down the seed. Where sweet clover can be grown as our correspondent is growing it there is little trouble to make the land very productive. If he does not want to mow the sweet clover it will graze two or three times as much stock as any other land.

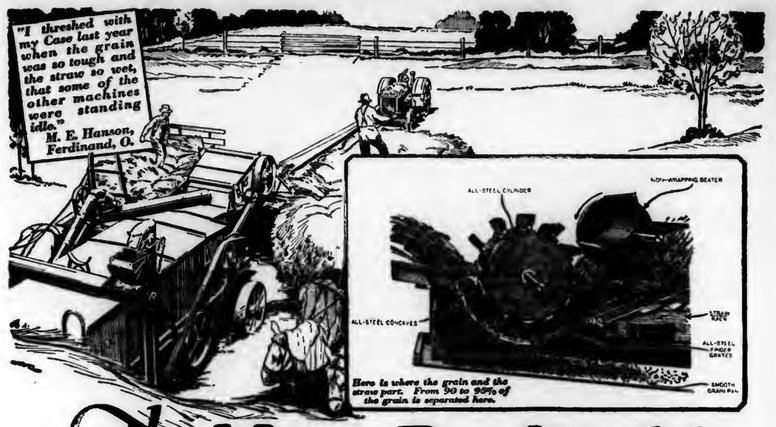
Millet

A PENNSYLVANIA reader asks for information about growing millet. It is an annual and when made into hay has about the same feeding value as timothy hay. Sow one bushel per acre. Sow any time in June but it may be sown as late as July. The Hungarian is probably as good a variety as we have.

Ewe Raises Five Lambs in a Year



This picture shows a common grade ewe and her five lambs that she raised in 1928. About the middle of March she gave birth to the three large lambs and raised them. The last week of October the two small ones were born and she is raising them. A. G. Beamer.
Westmoreland county, Pa.



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Husky Treatment Promotes Health

THIS picture may strike the reader as rather husky treatment for these November pigs out wading a January snow. Inside of their quarters was a fine dry bed of straw and a creep under the hog house stairway. The young porkers would soon be back, no worse but better for their vigorous morning foray through the soft snow. H. D.

For Farm Relief

EVERY week with interest I read your editorial page and find most prominent bulls and farm relief.

I don't keep any bulls and when I happen to be where there is one I give it wide berth, so bulls don't bother me. But farm relief does. But for the little farmer it looks hopeless.

As in sickness the doctor first locates the cause of the illness, then applies the remedy, so that is why I am writing, to express my views of the cause.

Twenty-five years ago the government's biggest fight was breaking the trusts. In other words, trying to give the little business a chance. Now all is changed. What is a half a billion merger nowadays? A common thing. What does that mean? Working on a smaller margin of profit.

Take for instance the chain stores. A thousand stores yielding only $1 per day can exist, while the one-man store at $1 per day would go bankrupt. So much for that.

I am a truck farmer on a small farm. I have grown potatoes, onions, strawberries, string beans and tomatoes, from one to three acres of each. Take potatoes. If I get 100 bushels on one acre, that's good here. So how can I compete with the 400-bushel grower in potato growing country? I can't, so I'm going to quit. Have no proper storage for onions, so will quit them, as harvest prices don't compare with winter prices.

As to beans and tomatoes, before I start I can contract them. I know what I'll get. All I worry about is yield and harvesting. Plenty of manure and very little fertilizer will grow them at small cost. Strawberries is a chance. Last year I cleared only $25 on 1½ crates for my labor. Year before last $250 on 87 crates.

So if the little farmer will consider the big farmer's production and cut out that crop he'll get some relief.

Here's another point you don't read of: That's the rented farm system. If I grow ten acres of corn to feed my stock I consume it all. My renter neighbor has to grow 20 acres to get the same as I get. That leaves the landlord's share to sell. That's where your source of the biggest part of the surplus comes in. Do away with the rented farm system and one means of surplus will go. That would be another relief.

Again, for this section anyway, the trucks have lowered local prices. For instance, our local production of late potatoes last fall was nothing. Trucks hauled in from big production areas and filled the local market. Result, low yields and low prices. I went in the hole.

Now reverse it. The trucks want so much for hauling (half or more) that which we ship out nets low prices. So the farmers who sold to the trucks that supplied our local market got the small end. So I say trucks hold down the prices.

Then comes farm machinery. How can the little farmer compete with the big farmer with a tractor going night and day? Horses can't get volume of acres over a tractor. Only relief I can see is for the little man to quit and let the big man do it all. The only relief the government can give is to get another Teddy Roosevelt to fight the trusts. Geo. W. MacLellan.

Kent county, Del.

School Legislation

I HAVE read some of Mr. Zinn's articles in regard to West Virginia schools and while I do not always agree with him I am always interested in school news and particular articles relating to our rural schools.

I just recently read an article written by A. J. Legg of Nicholas county and this article reminds me of a few matters I have often thought about but never have taken the time to express my opinion in writing.

It is what Russell Conwell would call "Slaves of Time." As applied to our present system of granting teachers certificates it means that a man or a woman, in order to secure a teacher's certificate, must spend so many weeks or months within or around one of our normal schools or colleges. Now after the required number of hours in these required institutions, regardless of how little or how much the boy or girl knows, he or she is granted a teacher's certificate. Now I think the suggestion of Mr. Legg that some kind of a test be given is all right. Teachers should most assuredly have reasonable grasp of the subject matter they are expected to teach.

Again when our school law was amended that it made it impossible for a young man or woman to get a certificate by examination, regardless of how little or how much he or she knew, a rank injustice was done against hundreds of our boys and girls who by reason of financial conditions could not leave home and pay the cost of board and room rent, traveling and other expenses. As it is now the bars are up and no matter how bright or how well prepared the boy or girl may be he or she has no opportunity to teach unless they can afford to spend the specified amount of time in certain schools.

Now I want it understood that I am not opposed to the training schools but I do believe in equal opportunity so far as possible and if a boy or girl does the required amount of studying and secures sufficient knowledge (though they may have to use the back of a wooden fire shovel) they should be permitted to enter an examination and on making reasonable percentage be granted a certificate to teach.

I understand there is important school legislation to be considered at this session of the state legislature. I hope in some manner the farmers of the state may have an opportunity to know how this proposed legislation will affect the rural communities and some means provided whereby they may express themselves in regard to it.

H. W. Johnson.

Marion county, W. Va.



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FRESH, pure oatmeal! Nothing better for little fellows' diet, as everybody knows.

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Send $1.00 per 100 with order. Pay balance when chicks arrive. Let us supply you with our big, strong Peerless Chicks from flocks that have been carefully bred and culled and contain the blood of such leading strains as Tancred, Barron, Wyckoff, Thompson, Fishel, etc. They are real money-makers.

Price—Post Paid, 100% live arrival	50	100	500	1000
WHITE, BUFF & BROWN LEGHORNS, ANCONAS	$6.50	$12.00	$57.50	$110.00
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HEAVY ASSORTED $10.00 per 100. We want you for a customer and will do our best to please you. Order from this ad or send for illustrated circular.

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Poultry House and Privet Shade Bushes

A Big Poultry Business

By R. L. SCHARRING-HAUSEN

ALL sorts of commercial poultry breeding establishments exist. Some of them are content to hatch any egg which will produce a chick, while others, through special breeding and management practices, make every effort possible to supply their customers with chicks of the highest type. I recently visited a farm of the second sort in Sussex county, Delaware, the heart of the broiler section of that state, and one of the most important poultry sections of the East.

The farm is a large hatchery and breeding proposition combined with several associated farms for the purpose of producing high-class Plymouth Rock chicks for the local broiler trade as well as for poultrymen there and elsewhere who are in the egg business.

The hatchery department is equipped with three 47,000-egg machines, and runs ten months in the year, supplying chicks from September 1 on. When I visited the plant, about that date, a hatch had just been taken off which had turned out 62 per cent. Last year the hatches averaged from 70 to 75 per cent, which returns certainly ought to satisfy anybody.

When the chicks are hatched they are placed in the shipping boxes and held for a day before being shipped out, during which period they are culled three times in order to remove all weak chicks, so that nothing but strong, livable chicks leave the farm. On September 1 orders had been placed for 40,000 chicks from New Jersey alone, and it was expected that during the season at least 100,000 would be shipped there.

Brooding Equipment

The breeding up of the foundation stock, as explained by the manager, was particularly interesting. He has been associated with several Experiment Stations in the East, and has only recently returned from developing a large poultry project in Argentina to take charge of the breeding operations and development of the Delaware plant.

The plant is specializing in Plymouth Rocks because the local trade demands this breed. In laying the foundations for the breeding work, 250 hens were selected from the general flocks for egg production and size of egg combined with size of body and standard points. These selected hens were trapnested for a year and, out of the original 250, 120 were reserved for breeding purposes.

In securing cockerels for these matings, males were purchased from a well-known Rock fancier and also from contest flocks, in order to establish standard as well as production qualities in the breed. From these matings 750 pullets were secured and put on trapnest, from which some very good egg records were obtained, and it is planned to go on with this work and secure progeny tests. It was possible to put out several hundred cockerels from these matings for use on the associated farms, with the expectation that all cockerels used will ultimately come from select matings.

In order to take care of the increasing volume of business, this plant is beginning an expansion which will in time lead to a 10,000-hen capacity. In looking over the work which had already been done toward this end, I could not help admiring the comprehensive and far-reaching plans which had been made for the layout and management of this extensive development. The location is on a level tract of well-drained light soil and the climate is mild—ideal conditions for poultry raising.

A permanent type of brooder house with two compartments is being used, heated by coal-burning brooder stoves. These houses, made with a partition in the center, can be converted into breeding pens if desired. These houses are very conveniently arranged, with an automatic water supply and a hallway at one end for the storage of feed and coal and also as storage for stoves and other brooding equipment when not in use.

Outside Sanitation

This idea struck me as admirable, knowing that on most farms no special provision is made for storing brooding equipment out of season, with the result that it is often neglected and damaged. The windows are covered with glass-cloth and the ventilating frames are covered with tobacco cloth, which is much less likely to become clogged with dust than the muslin curtains in common use.

To take care of sanitation outside a special yarding system is used. The small chicks are first confined to a limited pen covered with gravel, which is removed and replaced at intervals. As they grow larger they are turned into different yards on which a green crop is growing, and this shifting around, combined with the well-drained light soil and the use of green crops, takes care of worms and other pests and diseases which otherwise contaminate the soil and play havoc with the health of the birds. There is no question but that a permanent brooder house is more convenient than a portable one, if the question of adequate sanitation can be answered.

Any one who has much knowledge of the poultry industry realizes that it is becoming highly specialized. Some men hatch and sell baby chicks, others produce broilers and pullets, while still others are in the business of producing eggs or meat. Some of these lines can be combined, but it seems to me that advanced breeding and the production of high quality chicks are somewhat out of the province of the ordinary poultryman, and it is in this highly specialized field that such developments as this poultry farm find their place.

The photograph of one of the older buildings on this plant shows the use of privet bushes for shade. This common and hardy hedge plant, set far enough away from the building so that there is room to drive between, grows quickly and affords protection from the hot sun in summer, and also forms a warm sheltered spot in front of the house at other times without shading the building itself.



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Nest Box Notes

THE other evening, while indulging my weakness for the movies, pictures were shown of some of the winning birds at the recent Garden Show in New York. Among them was a large white gander, which flapped his wings, ruffled his feathers and lifted up his sonorous bass voice in a series of resounding honks. These antics, reproduced perfectly by the new sound pictures, greatly delighted the audience. How much more fortunate are we farmers than city people to be able to listen to such beautiful barnyard music at any time free of charge!

* * *

THE water system which I installed in my poultry buildings last fall has been giving the best of satisfaction. During the winter it has been operated by the underground shut-offs which drain the risers to the pens, and although the temperature has been down nearly to zero several times, there has been no trouble from frozen pipes.

No one who has never carried water by hand to a large flock can realize how many weary trips will the buckets each a handy system will save. Then too the hens love all the water they require to wet and direct the dry mash they are eating from dawn to dark, which isn't always the case when water is carried to them.

No matter how good our intentions may be, when the ground is a eddy or covered with snow, or when we are rushed with work, there are bound to be times when the hens are thirsty. There is no doubt that lack of water is detrimental to egg production, and I feel certain that a supply of water in each pen not only saves labor but also increases egg yield.

* * *

AS I write this everything outdoors is covered with ice, the result of a rain that froze as it fell. I notice that many poultry yard fences made of the ordinary two-inch mesh wire have been broken down, especially where the wire is somewhat old and rusty, while fences made of the woven farm fencing are bearing up under the weight of the ice. I have found that six-foot wire fencing, especially made for poultry use, is not only better than the usual two-inch mesh wire but cheaper and better looking, especially where it is put up on steel posts.

* * *

WITH the exception of corner posts, it is poor policy to set steel fence posts in concrete, as is sometimes done. In the first place this is unnecessary, and in the second place the soil in time will settle below the level of the concrete, leaving a space for the chickens to crawl under. Finally the post will probably rust off at the surface of the concrete, leaving the block several inches above the ground level in the way. Digging out such a block is a real job. Modern steel posts are made in such a way that they are self bracing, and apply strong for poultry fence construction when merely driven the proper depth into the ground.

* * *

A SHORT cabbage crop this fall reduced my supply of green feed, so I added 50 pounds of alfalfa leaf meal to 600 pounds of mash and seemed to get very good results.

* * *

GEESE usually start to lay sometime in February or early March, depending on the season and the climate. It is a good idea to supply them with laying mash and oyster-shell about this time, and to fix up some nests in a shed for them. The eggs should be watched for and gathered as soon as laid, as freezing temperatures are bad for them. A broody fowl of the heavier breeds makes the best mother.



On his 200-acre farm at Davisville, R. I., Professor Lewis winters 3,000 breeders, broods 20,000 chicks and produces and sells over 100,000 chicks and 8,000 pullets a year.

Lewis laying house equipped with CEL-O-GLASS.

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EIGHT years ago the present 200-acre Lewis Farms was an ordinary Rhode Island hill farm. Today it is one of America's most practical, profitable poultry farms.

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S. C. White Leghorns, $12.00,-100; Barred Rocks, $13.00,-100; R. C. Reds, $14.00,-100; White Rocks, $14.00,-100; Mixed, $10.00,-100. My flock is tested and culled for heavy layers. I pay the postage. 100% live delivery. Special prices on larger orders. Circular Free.
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Quality higher and prices lower. Breeders selected and leg banded by men trained by Ohio Poultry Improvement Association and authorized accredited inspectors. Leghorns 12c each. Rocks, Reds, Wyandottes 14c each. Light Brahmas 16c each. Write for catalogue and special price on 300 or more. **THE WHARTON HATCHERY CO. Box 108, Wharton, Ohio**

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Experience with Poultry

STARTING with nothing much except three piano boxes, my wife and I have been able to build up a pretty big poultry business. We sell now about 150 dozen eggs a week and from Christmas until spring about 2,500 baby chicks a week.

To get this far it has taken us about sixteen years. I do not think I would advise many people to do what we did. I gave up a fairly good job in the city and came to the country, with no capital, to raise chickens. But we so liked the life, my wife and I, that we are very happy now we did not listen to our friends and give up what they called "such a crazy idea."

Our friends were, like ourselves, immigrants, born in that part of Austria which is now Roumania. But they all seemed to like Baltimore and my wife and I did not. I went to night school and read as much as I could about farming. My friends could not see why I should want to farm when I could remain there in such a great city and go to movies and, as they said, "enjoy life."

I was sixteen years old when I came to America. I was twenty-five when my wife and I left Baltimore for the country.

A Hired Man

We went first to Sykesville. I became a hired man. My pay was $17 a month with house and wood. I had many things to learn, even how to chop wood. But I did not see any reason why I should not try first on this farm the ideas I had from my reading.

So I experimented on my boss' 15 hens. That winter we got more eggs, he told me, than any other farm around there with a flock up to 200 hens. In that part of the country the farmers left the hens to themselves and got few eggs in the winter.

I experimented also with the cows and they gave a little more than twice as much milk as before. I know this because I weighed the milk.

I had not been long with this farmer when he sold his place. I advertised for a small place that would be suitable for poultry, "Can pay $200 down." That was all I had, and I had to borrow that.

Sixty Acres

What I got was 60 acres of rough land, with ten acres clear, near Randallstown, Maryland, where my father and mother had settled. This was in 1914. Russell, our oldest boy, was born that year.

For our place we promised to pay $1,400. It was in bad shape, on a bad road and without conveniences. When you start without capital you must do the best you can with the best you can get.

We bought three piano boxes. They cost $1.50 each. We opened them up and put them together with round pieces from the woods, filling in with thin material from sash crates and other odds and ends. That was our first chicken house.

We had that first year 50 pullets. I trap-nested them and picked for foundation breeders fifteen that laid more than 160 eggs a year. By the end of the second year we had 225 hens of that breeding. It is always, I think, a temptation to increase the flock too fast, with too little choice of breeders. We did not do this. I trap-nested throughout the first three years. I would not allow myself to think only of the money we so badly needed.

The Hardest Years

Those first years—I should say the first four—were the hardest. It was just as our friends in town had said it would be, we had no money to spare for the movies! We kept one cow but we could not use much of her milk because we needed every cent. I worked out. We had a real struggle.

In the fourth year we became so badly in debt that I had to take a factory job. My wife drove me to the trolley at 5:30 every morning, and did all the farm work herself. We kept this up until most of our debts were paid.

We were six and one-half years on our first farm. At the end of that time we had a laying flock of 750 hens and had so much improved the place that we could sell it for two and one-half times the price we had paid.

This place we bought, where we are now, is on a good road and much more at the center of things. It is a tobacco and dairy farm of 125 acres, 65 acres clear. I rent most the fertile and valuable part of it for the growing of shade-grown cigar-leaf tobacco and handle my poultry on about ten acres, including some woods. This I have fenced in hen-tight, with the fields under a rotation that provides fresh range, especially alfalfa, each year.

You might laugh to see the buildings. I have turned about every building I found on the place, except the dwelling, into a place for my chickens. My broilers, when indoors, scratch in a big building that is a combination of a tobacco drying shed, a horse barn and an old tenant house hauled together and joined.

Willing to Take the Trouble

I made one hen house of a wagon shed and another, even, of an icehouse! This was the first year we were here. The one hen-house on the farm then was 60x12 feet, holding only 175 birds. Later we built a henhouse, 110x24 feet, with a grain room attached and with running water and a litter carrier.

The second year on this farm I set a 2,200-egg incubator in the old calf pen and I have since increased our incubator capacity to 10,000 eggs without using any other building. Our hatches run better than 60 per cent.

Our loss of chicks in raising, in spite of our not having fancy equipment, remains down between 10 and 15 per cent. We sell most of the males as broilers at about fourteen weeks, keeping the most promising of them for breeders. They are in brooders ten weeks, then on range in open-air houses 12x14 feet, with wire sides, 100 to 150 pullets to a house. All birds on range are hopper-fed and hand-fed and water is piped to them. The males we keep for breeding are handled the same way.

We have pretty good success with our chickens. People often ask how we do it, what is our secret. We do not think there has been any secret about it. It is just that we were willing to take the trouble.

David Kloski.

Diphtheretic Roup

I have lost several birds through sore spots in the throat. As soon as I find a bird gasping for breath I treat it, but I have found no way to save these birds. I have used medicine from three different companies. I have 1,000 birds. I had a little roup which was not serious, but this flu, or pneumonia, or bronchitis, or whatever it is, is hard to cure. G. Edward Ossman.

THE disease described is often called diphtheretic roup, and occasionally proves pretty troublesome. I have treated birds with this ailment with more or less success by removing the yellow matter around the entrance to the windpipe with a quill, and touching the spot with iodine. The trouble is that very often the birds strangle before they are discovered, and do not always respond to treatment if taken in time, as the yellowish matter forms again. It is a good idea to remove sick birds from the flock.

As a general precaution keep your houses especially clean and dry, being particularly careful about ventilation. It would be a good plan to buy a little disinfectant and use it in the drinking water according to directions. R. L. S.



Champion X—For Model T Fords—packed in the Red Box—60c. *Champions*—For all other cars, including Model A Ford, and trucks, tractors and stationary engines—75c.

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FARM owners operating cars, trucks, tractors and engine-driven farm equipment will be vitally interested in the new improved Champion Spark Plug.

So much better, so greatly improved for modern high-compression service is this new Champion that farm owners will find it a revelation in exacting the utmost in power and economy from every engine. The exclusive sillimanite insulator—as vast an improvement over all previous insulators as the original sillimanite over porcelain—is specifically designed to meet *all* conditions of the most advanced engineering.

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Advanced new, solid copper gasket-seal which retains all advantages of Champion two-piece construction with the positive assurance of remaining absolutely gas-tight against the much higher compression of today's engine.

Special analysis electrodes which have been greatly improved to resist pitting and burning, and through scientific design assure a maximum spark and a fixed spark gap under all operating conditions. These proved superiorities are so pronounced as to warrant immediate equipment with new Champions, no matter what spark plug you may be using now.

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You Get the Chicks—We the Ad-vertising, Fair?
Better get your pencil and send for this 4-color, beautifully illustrated catalog now—also advertising allowance for your free Baby Chicks. Only a limited number so you should write now—this very minute.
This catalog, the prettiest and most elaborate we have ever seen, gives you some new, valuable ideas on raising pure-bred poultry—actually shows you how to e-a-r-n-p-r-o-f-i-t-s poultry profits—complete history of 17 different breeds—famous strains—Shall we mail your copy tomorrow? ... and send your Free Chicks in a week or two?
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Your breeding flock of turkeys needs new blood
Get it from the Montcalm Game Farm
Our Mammoth Bronze toms and hens are in size, vigor, early maturity, bone, thickness of flesh and correct markings. Do not inbreed and lower the vigor of your flock. One of our high-class young toms, or a trio of carefully selected birds, will increase the livability of your poults and help get your turkeys off to the early market and high prices. We guarantee all our stock. It must give satisfaction or money refunded.
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SCHLICHTER BROODER HOUSE
Fresh Air and Sunshine all day. Double-Glass windows. Round. Sanitary.
E. F. SCHLICHTER CO., 10 S. 18th St., Phila. Pa.

10 CHICKS FREE with each 50 ordered Aug.
Write for details on free chick plan. Ohio Accredited Rock—Prize winners at many shows from National down. Developed for many years for high egg production. Free mash feed in best of health. 13 breeds. Catalog free. Low prices quality considered.
Don't Miss This Offer.
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Schweglers' THOR-O-BRED LIVE AND LAY
OUR breeders are bred for high egg production. White, Brown and Buff Leghorns, Barred and White Rocks, R. I. Reds, Anconas, Black Minorcas, Buff Orpingtons, White Wyandottes and rogs. 100% live delivery guaranteed. Write today for FREE CHICK BOOK.
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CHICKS From Choice Flocks, culled for heavy laying. Barred Rock, White Leghorns, and mixed. First hatch in Mar. 100% live delivery guaranteed, postpaid. Write for special price.
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they help you get the most out of life and save you time and trouble doing it.

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more $ *from* YOUR BABY CHICKS

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You can raise *nearly every* healthy chick to early maturity by using *Eshelman's Buttermilk Chick Starter*, because it is a scientifically balanced ration especially designed for the delicate digestive organs of the baby chick.

ESHELMAN'S BUTTERMILK CHICK STARTER
is reasonably priced* to assure you of *maximum results* at a *minimum cost.

Buy it from your ESHELMAN DEALER —he sells it fresh!



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The Farm Home

Memories of School Days

I BEGAN my meager schooling at an early age by running off to the near-by schoolhouse and listening. The absorption method, I suppose. We had only four months of school, no such thing as a manual, every father mapped out his own course of study for his children, and brawn was as necessary as brain to the teacher. We had long seats, crowded. The "big" spelling class extended across one end of the room and as far down each side as it could go for the seats.

Spelling was the main thing. If only one book was taken home it was the spelling book and the "bees" meant much burning of night oil, and neglect of other studies. Often at one of these contests every word, literally, would be spelled, capitals, phrases, names, etc., and a schoolmate who is teaching his 37th year this winter told me that in an adjoining district the "Pronouncer" finally downed the contestants by having them spell the names of the artists, given in minute letters in a corner of the illustrations.

Earnest Teachers

We used McGuffey's books for spelling and reading, Ray's Arithmetic, Harvey's Grammar, Mitchell's Geography, Cutter's Physiology, Meservey's Bookkeeping, Barnes' General History, Lewis' for state history, and a medley of U. S. History—Henry, Goodrich and Montgomery.— Macy's Civil Government and we had copies set for writing. Of course part of these branches came on later as I grew older.

I could, and did, read avidly from the time I was six years old, and am happy to say my acquaintance with C. A. Stephens—of the Youth's Companion—dates from then. When I taught school on a No. I grade, the most money I got was $29 a month. Institute attendance was compulsory and we got nothing for it. I always boarded away too. We then had a five-month term. We used slates and slate pencils and our whole school at Red Brush, all the years I went to school, never used as much tablet paper, lead pencils and fountain pens, as the present-day Red Brush, with its few small pupils, does in one term. It was a tragedy to break a slate or lose a pencil.

We had good teachers. Looking back at them now, across the vista of years, I see that they were an earnest, sincere, well-intentioned set of men. I remember only one who dealt in sarcasm and held a pupil up to ridicule, and he only certain ones, of whom I was one.

Not Much Poetry

The teachers taught us to study—study hard—learn everything by rote, fine print and all, and to know all the dates in history, learn every rule in mensuration, practically repeat the Constitution, and not to let a little thing like areas of all the states upset us.

I do not recall that I ever went to but one teacher who laid any stress on poetry. He told us to read carefully, and memorize our McGuffey poems. And what it meant to me! "Heritage" with its "What doth the poor man's son inherit" and its moral; Gray's "Elegy", Carey's "Pictures of Memory", "Minot's Ledge" and "Break, Break, Break".

I am old-fashioned enough to say I am a lover of rythm in my poetry. I want a swing and march and ripple. I want beautiful phrasing, and to feel I have read something worth while. I like Tennyson, Longfellow, Lowell, Kipling and Whitties. Yes, and Hemans, too. Sure, I enjoy Kilmer, Service, Frost, Masefield, Teasdale, St. Vincent-Milloy, and Sandberg, occasionally. And I like Eddie Guest and Walt Mason.

Geography Too

I remember when at the age of eight years I was starting in geography and, as always, books were expensive to buy, my parents decided to get me the Intermediate, in place of the Beginners. I was studying the map of the United States, and noticing North and South Carolina, wondered why it was Virginia and West Virginia. As I had the fullest confidence in my teacher—who, by the way, we all, little and big, called by name—I took my new geography and marched over to him, asking where was East Virginia. Did he think it beneath his dignity to enlighten me? Not at all. He told me clearly and plainly how West Virginia came to be a state, the early name of Augusta county and gave me a brief resume of its early days. A little thing, but Pat never was any happier than when making a lesson clear to a beginner.

We have a big problem in this part of the state. Our rural schools are so small and our boards reluctance to give each child a fair show, it is a perplexing and vicious circle. If we had good roads we could have transportation. If we had full schools each sub-district would be sufficient unto itself. For more than a decade we have loudly said, "The tide will turn, they'll be coming back to the farm." But no turning yet. For each family that does return to the country three go to the city, I verily believe. And we are not in an isolated section, either. Cars, phonographs, radios, dailies and magazines are not unknown to us. There's not a person in this neighborhood who would hesitate a minute if needed in sickness, or to do a kind deed. It's the "fewness" of us and getting fewer.

Nellie R. Nesselroade.

Waxed & Varnished Floors

TO recondition a waxed floor, it should occasionally be given a very thin coat of wax, put on with a woolen cloth, and polished, if possible, with a weighted brush. This is a good job for one of the boys in the family or neighborhood. Pushing a weighted polisher around is fairly heavy work, but it requires just the sort of muscular effort a boy likes to use. The room should be prepared for a waxing of this kind by having the furniture moved out, and the walls, woodwork and floor completely cleaned and dusted. Under moderate use a floor needs rewaxing only two or three times a year.

Waxed floors, says the United States Department of Agriculture, should be swept with a soft brush or mop entirely free from oil. Oil softens wax and should never be used on it in any way. About once a week a waxed floor should be given a more thorough cleaning with a cloth wrung out of warm soapy water, or moistened with turpentine or gasoline. Applying too much wax is a common mistake. Rub white spots with a woolen cloth or weighted brush, applying a little wax it necessary. Keep a slip-on cover on the weighted brush when it is not in use. Never allow it to come into contact with oil.

Varnished floors may be swept with a soft brush, a mop, or a broom covered with a cotton-flannel bag, and then rubbed with a cloth or mop slightly moistened with floor oil or kerosene. The oil gradually dries out of varnish after it has been applied to wood, and unless restored by an occasional rubbing with an oiled cloth the varnish becomes exceedingly hard and brittle. Use only enough oil to moisten slightly the cloth or mop.

Varnished floors retain their color and luster better if no water is used on them, but if very dirty they may be wiped with a cloth or mop wrung out of warm soapy water, wiped dry at once, and polished with an oiled cloth or mop.

Note:—Many folks not having the weighted brush, use a home-made one which the children love. Even the five and six-year-olds can "iron the floor". Slip your heaviest iron, yes your laundry iron, into a heavy woolen bag, and proceed exactly as if you had a real weighted brush.



Let the Boys Wax the Floors

"Better Floors and Their Care" is one of our free homemakers bulletins. It carefully outlines the nine steps in refinishing floors, and is invaluable in housecleaning time. Yours for the asking if you please send a stamped, self-addressed envelope with your request.

About Colds

By HEPSY NEFF

IT may still be news to some of us that colds are rare in the Far North; as rare in fact as measles and chickenpox. Read Stefansson's "Friendly Arctic" or Nansen's "Farthest North" and get the facts from their actual experience.

We all know persons who take cold very easily and others who rarely know so much as the symptoms of a cold. As usual, there is a reason. Cities with their smoke and unclean air are the worst breeders of colds because the air passages of nose and throat are constantly being irritated. Most of us carry germs of cold or disease in the mouth every day of the year. If our phagocytes, the policemen of the blood, are strong and active these enemies never get beyond the throat. (The story of the phagocytes is more wonderful than any fairy tale.) Only a chill can drive these white policemen from their post at the gateway of the throat. Our experiences prove this when we say, "I had been out until thoroughly chilled and took a severe cold."

If we are free to walk or run we do not chill and so escape. Pictures of Eskimo or any Arctic travelers show every part of the body wrapped in fur or wool with merely a breathing space for the touch of cold or wind. Stefansson tells of an explorer who had lived through temperatures of 68 below zero. It is no mystery. "We do not try to endure the cold; we protect ourselves against it," was his explanation.

But we are studying, colds, not cold, and a possible new wave of influenza is predicted. Those who have known the persistent ache of influenza will not trifle with an hour's ache or temperature. More and more, careful physicians are saying, "Go to bed at once and stay there as long as a temperature lasts." Many serious results have followed a relapse from getting up too soon. The best doctor possible and a strict following of his orders is the advice of experience.

Preventive measures are to keep warm and do not overeat. Dr. McCollum, whose experiments with rats is well known, says a cage of buttered rats alongside of rats suffering from all the conditions which a cold can bring. The butter-fed rats showed not the least sign of any infection. Some of us have tried this with convincing results. Besides, more butter is a fine remedy to take.

In Enemy Country

By JAMES WILLARD SCHULTZ

(Copyright, 1928, by James Willard Schultz)

(Concluded from last week.)

Said and signed he: "With the whites we Crows have no quarrel. Where now are camped the Spotted People, the Big Bellies and the Parted Hairs is our own country. The buffalo that they are killing are Crows' buffalo. They are together, the five tribes of them, more powerful than we are; we cannot drive them out of our country. So long as they remain in it we shall never make peace with them. My son, break that pipe bowl upon the stones of the fireplace, and burn the pipe stem. Such is our answer to those enemy tribes!"

Reluctantly, Black Elk took up the pipe, laid it back upon the ground, and said to his father: "I think you are making a great mistake in refusing it. I think that you should make peace with those tribes, and with them be ready to fight the whites. And even though we do that, even though the Blackfeet tribes and the North Big Bellies join in, I warn you that the time is coming when the whites will become so powerful that they may succeed in taking from us, north and south, east and west, all of our buffalo plains."

"We have never harmed the whites; they will not trouble us. It is well that they are fighting our enemy tribes. Do as I told you; break the pipe," Dusty Bull all but shouted.

For answer to that, Black Elk wrapped his robe about him and left the lodge, and I followed close after him. We heard the smash of the pipe upon the fireplace. Our hearts were heavy within us.

We went into my father's lodge, lay down upon my couch, and slept.

On the following day, after I had told my father and mother much about the friends I had made during my long absence, I said to him: "Was the body of that Low Horn never discovered? Are you not suspected of killing him?"

"The body never was found. You know that he was hated by his people. Not long ago, Long Bow, the Mountain Crows' head chief, said to me, 'Low Horn is away a long time; maybe he will never return.' And then he laughed and gave me a sly look. 'No, it is not likely that he will ever come back,' I answered, and also laughed. At that, he leaned over and whispered: 'He was a bad man! I am glad that you killed him.' We then talked of other things."

I wanted to examine the white cow robe, and my mother got it down and spread it out before me. The fur was beautiful; very thick, of darkish white color. I asked my father what he intended to do with it. He gave a little laugh; looked everywhere but at me; got up and started out of the lodge, saying as he went: "Your mother will tell you about that."

She laughed too; a loud and happy laugh; and when he had gone, she said: "This robe is for your grandmother, for her to give to Sun when, in the New Grass moon, we return to our people. She is to have it in payment for what he did to her."

"Did to my grandmother? Never, never would he harm her!" I cried.

"Men are only children; big of body, full of winters, but still just as mischievous and inquisitive as little children," she laughingly exclaimed. "You remember the dress your grandmother made of the cloth that we bought for her, and how your father several times inquired about it? Well, when I told him that she had finished it, embroidered it with elk teeth, he sneaked to her lodge at night, pecked in, and saw it upon her. And then he was so ashamed of himself, of having purposely looked right upon his mother-in-law, that he could not bear to remain in the same camp with her, nor even in the same country. So was it that he made us come with him into this enemy country. Then, when he brought in this white cow hide for me to tan, he confessed the wrong that he had done to my mother, asked if I did not think he could wipe it out by giving her the robe?

"And was it just for that that you brought us here at the risk of our lives?" I cried. "Why, you foolish one, you little child! You should have known that my mother is different. She would have been glad had she seen you looking at her in her beautiful dress; she will want no payment for that!"

"We can now go back; she shall, anyhow, have the robe to give to Sun. I am glad that, at last, I have told you about it" he said.

"Yes. Go without our son; through your childish foolishness, we have lost him!" I replied, and then we both cried.

"And now all is well. We are really going to return to our people. I am glad! glad!" I said.

"Yes. But your father is terribly ashamed. Say nothing about it; do not laugh at him when he comes in."

After a time my father returned; he looked not at me as he went to his sitting place, his couch. I told of more of my stay with the Spotted People. Many days passed before I talked with him about returning to our own people.

To us three it seemed that winter would never end; but at last it did, and in the Green Grass moon we parted from our good Crow friends, and after many days of travel, found our own tribe of the Blackfeet encamped on Belly River.

And how my grandmother laughed when my mother told her of the cause of my father's taking us into far-off enemy country! "Tell him, she said, "that he must himself give the sacred robe to Sun. Also tell him that I shall soon have a new dress, and I want him to come and see me in it."

(The End.)

The School Girl's Clothes

I HAVE been greatly interested in the letters in this paper regarding cold lunches for school children. I agree with Mrs. F. E. Krout if the children were more warmly dressed a cold lunch would not injure a child in ordinary health very much. A frail, delicate child is a different problem.

I never could see why boys living in the same house, going to the same school and often engaging in the same sports as their sisters should be warmly clad in heavy underwear, while the sisters are clad in the thinnest of underwear, silk stockings and low shoes, so they will look nice.

I have in mind a girl who dressed that way. Now at thirty she has trouble with her throat and her legs and arms are red spotted. Two others went to school bareheaded in cold weather and the one has catarrh badly, the other one tonsilitis and diseased tonsils. With the nice underwear to be had in this modern age surely our daughters can be nicely and warmly dressed as well as their brothers. It lowers the vitality more to be thinly clad than to eat a cold lunch of nourishing food, when two meals are eaten at home.

There were several letters printed at threshing time on meals for threshers. A letter from a lady in Lancaster on that subject interested me. The unexpected company from town; how they do enjoy the home-made bread and pies and cakes, and all the good things we have, just for the picking. If they like home-baked things so well why do they not bake? Surely they have more time and are nearer the stores to buy the yeast and flour when needed.

From a Farmer's Wife.



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The Sunny Side of the Street

By BARBARA HILL

ON every side I find people who are a continual in-spiration. May I tell you about my trip to town last week?

A neighbor invited me to go with her when she served her route.

I went over in the morning and found her busy superintending the packing of egg crates, boxes of butter- milk, printed butter and dressed chick- ens.

"We're all ready when we change our clothes," she said cheerily. It was a cold, blustery day and we were well wrapped ready to start. "Guess we won't go for a spell," said the man who was to drive, and indignantly he kicked a flat tire with his toe. I dared not look at my neighbor who had all those customers to please and the re- sponsibility of so much at home.

"Drive it in James, where you can he as comfortable as possible while you change," was all she said.

Soon she had her coat off, a dust cloth in hand and was shining things up about the house.

We made the route in good time, the clouds were breaking away and we were on our way down town when pish—the sound of oozing air came to our ears. The car shivered and came to a stop. I again groaned and the driver said something under his breath. A picked up tack was the cause of the trouble this time and a new tube would be the remedy.

"Have it on again in a jiffy," said the kindly garage man who knew my neighbor well. But Ho!—what run- neth from under the car? Just a trickle of gasoline for the gas line had sprung a leak.

It was all over with me. Had it not been for showing the white feather I should have taken the first bus home had a cup of tea and with a good story tried to wipe the memory of such a day from my calendar.

But an even voice at my elbow was saying, "It's not so far now and we can walk. Might as well get our shop- ping done first this time." That was all and with tightly compressed lips I trudged on by her side. Yes, trudged is the word, while she tripped along with quite as much enthusiasm as she had shown earlier in the day. Of course the walk would not hurt me. I would have no other demands on my strength, but what about my friend, and then the annoyance of the thing and the cargo waiting.

Our trip was through the residential section of the city and I wondered why my companion so often crossed the street. There was no reason for this that I could see and finally I said, "Why do we cross here?"

"Why don't you see," she cried, "how warmly the sun shines on the other side and who wouldn't walk in the sunshine if they could?"

I stood stock still and looked at her and answered, "Today, I didn't know the sun was shining."

How does she do it? Is this the an- swer? This continual walking on the sunny side; always avoiding the shad- ows; never admitting, scarcely recog- nizing they are there.

Such conduct takes high courage and keen determination. But evidently it is worth it. There isn't a question but she is going over the top with a smile on her face.

Sewing Prize

THE prize this week has gone to Mrs. John Shearar, Carlisle, Pa. She sent in the two following helpful ideas.

My Girls' Slips

"When making slips or petticoats for my growing girls, I do not make a seam at the shoulder. Instead I face the front and back pieces neatly, and then sew three snap fasteners about an inch apart. It is then a very simple matter to lengthen or shorten the slip length according to the dress worn.

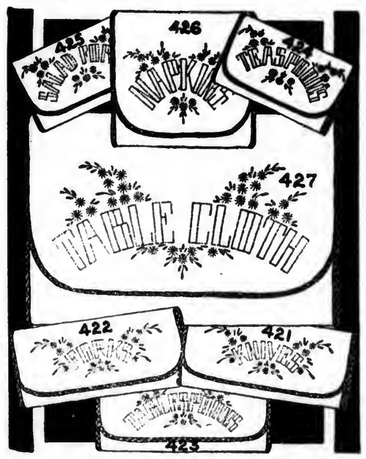
Faded Cretonne Draperies

"My cretonne draperies have just been cleaned. They were as good and strong as new, but hopelessly faded where the sun strikes them. I launder- ed them very carefully and while still warm from the iron, went over the faded designs with crayons to match. I then laid plain paper over the painted work, and pressed with a moderately warm iron. Now they look like new, and I am very proud."

Note:—Be very sure that you have wax crayons when you do this trick.

G. S. S.

Silver and Linen Holders



These holders for linen and silver are stamped and made up complete of white Lunchburg cloth with pinked edges, safety flap and are bound in blue crocked gingham. These cases make very accept- able shower presents for the pretty five bride. The price is quite reasonable. You owe it to your silver to put it carefully away in one of these holders. Designs 421 422 423 424 425 and 427 sell at 25 cents each. Design 426 is priced at 50 cents. All materials are stamped to and address. Send money to Embroidery Department, Penn- sylvania Farmer, 7301 Penn Ave., Pitts- burgh, Pa.



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Patterns 15c, two for 25c. Send order to Pattern Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

A New Game for Washington's Birthday

WHILE we always associate the Virginia Reel with the festivities that enliven the third week of Feb- ruary, yet in addition to silver buckles and hoop skirts, a new game is always enticing.

I well remember one played last year at a local party. It is a stunt that can be used equally well with a large or small number of guests. Ours happened to be a Sunday School gathering numbering about fifty.

For so large a number, interest is added by choosing sides. Since this is a lively game, it makes a good begin- ning and if you give each guest either a little bunch of cherries (crepe paper) or a tiny silk flag, the sides are chosen for all relay or similar games during the evening. Also partners for supper if you wish.

"Crossing the Delaware"

Small rugs of uniform size were used for the river. Bands that had been previously provided, one for each side. These were made of stout cre- tonne with a large coat size "hook and eye" for fastening. Each person was in turn bound about the ankles into the band, and privileged to cross the Dela- ware with just one jump.

If the river was entirely cleared, he was a winner for his side. If not, that at the close of the game he paid a for- feit by doing some patriotic stunt, sing- ing or reciting an appropriate rhyme, dancing an old time favorite, telling a Washington story etc. etc.

The prize-winners were given a box of candied cherries to enjoy while they sat in regal state as audience for the entertainers. It was more fun than we had had for a long, long time.

Note—We have a free leaflet of games for Washington's Birthday. It contains also ideas for invitations and refreshments. Please send a self-ad- dressed envelope.

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S. C. Rhode Island Reds	15.00
Mixed or Broiler Chicks	9.00

1c less in 500 lots, 1c less in 1,000 lots. 25 chicks add 2c. 50 chicks add 1c. Full count, live arrival guaranteed. Parcel Post pre- paid. Bank reference. Order direct from this ad or write for free circular.

CHERRY HILL POULTRY FARM, Wm. Nace, Prop. McAlisterville, Pa.

BABY CHICKS

	25	50	100	500
Wh., Bl., Br., and Br. Leghorns	$2.75	$5.50	$10	$49
Rock, Reds and Wyandottes	3.50	7.00	13	64
Heavy Broilers	3.25	6.50	12	59
Light Broilers	2.75	4.50	8	39

Twenty-four page catalogue free. 19 years in busi- ness. Hogan tested flocks. Postage paid. 100% delivery.

JOHNSON'S HATCHERY, ICKESBURG, PENN'A

WEIKS CHICKS

Our vigorous, healthy, and strong chicks will mature into big broilers and early-laying pullets. S.C.W. Leghorns $13.00, B. Rocks $15.00 per hundred. Discount on larger quantities.

Send for free catalogue and valuable chick manual

WEIKS POULTRY FARM Kleinfeltersville, Pa.

LANCASTER QUALITY CHICKS

Our Chicks come from flocks culled for Egg Pro- duction and Standard Quality by poultrymen trained at the Ohio State University. OUR CATALOG is chicken from cover to cover. Write for it.

Lancaster Farms Hatchery, R 33, Lancaster, O.

BABY CHICKS Delivery after Feb. 15. Full count and quality guaranteed

	25	50	100	500	1000
Tom Barron Bred	$3.50	$6.50	$12	$58.75	$115
White & Brown Leghorns	3.25	6.25	12	58.75	115
Anconas & Black Leghorns	3.25	6.25	12	58.75	115
White & Barred Rocks	3.75	7.25	14	68.75	135
Rhode Island Reds	3.75	7.25	14	68.75	135
Mixed chicks, all breeds	2.75	5.25	10	48.50	95

Write for catalog and special discount on early orders.

Hatchery Chicks for Greater Profits ULSH POULTRY FARM AND HATCHERY Port Trevorton, Penn'a

Penn'a State "Supervised" CHICKS

Flocks inspected by officials from the Penna. Dept. of Agri. Our 19th year—established 1910. Get our low prices on Reds, Rocks, Leghorns and Minorcas. Member I. R. C. A. Catalogue free. THE KEYSTONE HATCHERY, (The Old Reliable Plant). Richfield, Pa.

BARRON LEGHORN CHICKS

From Large Type Barron English S. C. White Leghorns. Hens weigh up to 7 pounds. Extra Quality Chicks from free range selected stock any week after Feb. 11th at $16 per 100, $77 per 500, $150 per 1000. 100% Live Arrival Guaranteed. 10% books order. Catalog free.

ROBERT L. CLAUSER, Box N, Kleinfeltersville, Pa.

PENN'A CHICKS

have vim and vigor—hatched by men with 18 years experience, from culled flocks. Prepaid and 100 per cent guar- anteed. S. C. White and Brown Leg- horns, 11c. Rocks, 12c. Reds and Min- orcas, 14c. Mixed Broilers, 8c each; $80 per 1,000. Circular free. Our slogan Service after Delivery.

PENNA. HATCHERY, Liverpool, Pa.

BABY CHICKS

Tancred Str. Wh. Leg'hns,	$12	per 100
White Leghorns	11	per 100
Barred Rocks	14	per 100
R. C. Reds	14	per 100
Heavy Mixed	12	per 100
Light Mixed	9	per 100

500 lots 1c less—1,000 lots 2c less. 100% live delivery guaranteed. Order from this ad or write for free circular.

C. F. LEISTER, McAlisterville, Pa.

LOOK—QUALITY CHICKS

This quality is bred in the chick through rigid culling and breeding. Guaranteed satisfaction. 15 varieties, Light breeds, 12c. Heavies, 14c. White Wyandottes, 16c. Send for our instructive catalogue.

MILTON POULTRY FARM, Hatchery. Dept. 7. Milton, Pa.

COCOLAMUS HUSKY CHICKS

	25	50	100
Tancred Strain S. C. White Leghorns	$3.50	$6.50	$12
Egg Lay Strain Brown Leghorns	3.50	6.50	12
Pure Strain Barred Rocks	4.00	7.50	14
S. C. Rhode Island Reds	4.00	7.50	14
Mixed or Broilers	2.75	5.00	9

Special prices on 500 and 1,000 lots, all heavy breeds. Free range flocks. Free circular and price list.

COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

BABY CHICKS

Ready for shipping Jan. 4, 1929. Barred Rocks, White Rocks, White Leghorns. Parkway Hatchery. Geo. J. Sipple, Box 25, Swineford, Pa.

Kline's Barred Rocks

Blood-tested stock. Penna State College mates. Strong chicks guaranteed. Hatches every week. Low prices.

S. W. KLINE, Box 39, Middlecreek, Pa.

CHICKS Pure bred, Blood tested, free range breeders Leghorns, An- conas, 12c. Rocks, Reds, 14c. Wyandottes, Orpingtons, Min- orcas, 15c. Black Giants, 20c. 100% live deliv- ery. Catalog. Chick Manual Free.

REIDELTON FARMS, Washingtonville, Pa.

Big Chicks from Big Eggs



	25	50	100	500	1000
Wh., Bl., R. C. & S. C. Br. Leghorns, Anconas	$3.75	$7.00	$13	$60	$118
Bl. & Wh. Rocks, R. C. & S. C. R. I. Reds	4.50	8.00	15	71	138
Blk. Minorcas, Wh. Wyandottes, Bf. & Wh. Orpgtn.	4.75	8.50	16	67	144
Bf. & Wh. Minorcas, Bf. & Part. Rocks	5.00	9.00	17	88	80
S. L. Wyandottes, Jersey Giants	5.00	9.00	17	88	80

Assorted light breeds $2.50 per 100 straight. Assorted heavy $11.75 per 100 straight. Hatched in NEW IMPROVED DISEASE-FREE ELECTRIC INCUBA- TORS. They are LARGER and STRONGER than just ordinary incu- lator chicks, in most cases larger than MEN HATCHED.

AMAZING EGG PRODUCTION IN ALL BREEDS

Customers report 3,358 eggs from 32 White Wyandotte pullets in six months, flock average 104 eggs per Bird. 17 eggs on eddied day and laying during moulting season. David Zuercher, Berne, Ind., Br. Rocks laying at 5 months old. Roy Smith, Superior, Nebraska, much pleased. Satisfied customers everywhere. Have paid $50.00 for Male Breeders; $35.00 for Females. Hatching from best egg strains in America. Postpaid, 100% live delivery. Beautiful Four Color ART BOOK FREE. "GOOD LUCK CHICKS FOR GREATER PROFIT."

Good Luck Chicks

NEUHAUSER HATCHERIES, Dept. 46, NAPOLEON, OHIO

HILLPOT Quality Chicks

Leghorns Rocks Reds Wyandottes

Hillpot Quality Chicks, because of their splendid health and vigor, actually require less time and attention than average chicks. They mature more quickly with minimum loss, thus cutting down rearing cost. They lay heavily and continuously. It is these vital factors that reduce the egg-cost and give the big profits that have won a national reputation for Hillpot Quality Chicks.

SEND FOR MY VALUABLE CHICK BOOK. IT IS FREE.

W. F. HILLPOT, Dept. 128, FRENCHTOWN, NEW JERSEY

20TH CENTURY "MARVEL" CHICKS

Special Mating Imported Barron S. C. White Leghorns

Our flocks for this very Special Mating consist of 350 YEARLING hens carefully selected by an Expert Poultryman. These hens weigh not less than 4½ pounds, and up to 6 pounds. They produce better than 250 eggs per year, per hen, imported from TOM BARRON of England.

Standard Bred "MARVEL" Winter Layers

THOUSANDS OF PLEASED CUSTOMERS can tell you about the splendid chicks and wonderful profits made by our Marvelous High Class, Heavy Laying, Standard Bred, American Cert-O-Cubi Matings for 29 years. Pure-Bred, carefully culled for size, type, color, vigor and egg laying ability. Look at the low prices—100% Live Delivery Guaranteed—you can safely order from this advertisement. References: Commercial Bank, Dun or Bradstreet.

	50	100	500	1000
S. C. Wh., Br., Buff, Blk. Leghorns, Anconas	$7.00	$13.00	$60.00	$115.00
Barred and Wh. Rocks, R. C. and S. C. Reds, Blk. Minorcas	8.00	15.00	70.00	135.00
W. Wyandottes, Buff Orpingtons, Buff Minorcas	8.50	16.00	75.00	145.00
Impt. Barron W. Leghorns, W. Minorcas, Parks' Hog.	9.50	18.00	85.00	165.00

Heavy Mixed, $12.50 per 100; Light Mixed, $9.00 per 100; White Pekin Ducklings, 25c each.

C. O. D. Shipments: We ship 20th Century Chicks C. O. D. (pay postman on delivery) if you prefer. Get our FREE illustrated catalog. Tells all about our money-making chicks. C. O. D. plan, imported matings, etc.

20th CENTURY HATCHERY Box Y NEW WASHINGTON, OHIO

HERE: NEARLY EVERYONE RAISES Full Blooded "AMERICAN" Quality Chicks.

	50	100	500	1,000
American or English S. C. Wh. Leghorns	$6.75	$13.00	$62.00	$120.00
Hollywood White or Brown or Buff Leghorns	7.25	14.00	67.00	130.00
Tancred White Leghorns, Anconas, Barred Rocks	7.75	15.00	72.00	140.00
R. C. or S. C. Reds, White Rocks, Parks' Rocks	8.25	16.00	77.00	150.00
White Wyandottes, Buff Orpingtons, Black Minorcas	9.25	18.00	87.00	170.00
Brahmas, Columbian Rocks, Blue Andalusians	11.25	22.00	105.00	200.00

Light Mixed $9.00 a hundred. Mixed, any breeds, our selection, $10.00. Heavy Mixed, $12.00 a hundred.

Get our NEW CATALOGUE—It proves to you the SUCCESS our Customers have with our chicks. Breeders culled and Bred for High EGG PRODUCTION in Winter when eggs are de- manding large premiums. Reference Curwensville National Bank. 100% Live Arrival. Depend- able Service. Order Early.

AMERICAN CHICKERIES, Box 218, Grampian, Pa.

WRITE for this Chick Catalog

BIG FREE Catalog

Our Hollywood White Leghorns are headed by cockerels (dams' records 300- 200 eggs per year) direct from Hollywood or by sons of above. English and Tancred Leghorns if you prefer. We also hatch Barred and White Rocks, Reds, Wyand., Anconas, Blk. Orp., Dark Br. and Buff Leghorns. L. V. Caldwell of Mesopotamia, Ohio, made $122.90 on 50 chicks last year. T. E. Walker, Dover Center, Ohio, says, "I can't recommend New London Chick Hatchery too highly." Write for catalog which tells all about our stock. Prices are attractive. Write today.

NEW LONDON CHICK HATCHERY COMPANY, Box 2, New London, Ohio

ERLAY CHICKS



Ohio Accredited Leghorns—Rocks—Wyandottes—Reds. Leghorns—Well bred selected females mated to only Pedigreed cockerels from official R. O. P. hens producing from 200 to 280 eggs. Rocks—British Columbia Breeding with high egg production. Wyandottes—From stock bred by Canada's best breeders. Reds—Heavy Layers—Excellent type and color. Every chick Ohio Accredited. Ten Free Chicks with each 100 ordered now. Write for literature today.

ERLAY POULTRY FARMS, Box 2, Delaware, Ohio

F. G. Keiner A. L. Everitt

"$10,000 Yearly with Pure Tancred Leghorns"

LARGER EGGS—LARGER EGG YIELD—LARGER BIRDS—LARGER YEARLY PROFITS

BABY CHICKS From the CREAM of the World's Best Egg Bred Stock. We have one of the largest and best flocks of Pure Tancred Leghorns in the State. The oldest trapnested strain in existence, twenty-three years trapnested backed by 300- egg blood for generations. Prices greatly reduced this season. Special proposition for early orders. Get our Beautiful Free Catalogue and price list.

FISHING CREEK POULTRY FARM, Box 4. LAMAR, PENNA.

HUBER'S RELIABLE CHICKS

Ten Free Chicks—On orders booking before March 15th, we give 10 Chicks free with each 100 ordered.

When we say RELIABLE—we mean RELIABLE in every way. Breeding stock of high- est quality of 19 years of careful development. Special attention paid to health of flocks and records kept. CATALOG FREE—CHICKS SENT C. O. D. IF YOU WISH. Write for details—get our illustrated catalog which tells all the story. Our prices reason- able. A book on Raising Chicks worth many dollars given free with each order of $10.00 or more. Big discount for early orders.

HUBER'S RELIABLE HATCHERY, N. Main St., FOSTORIA, OHIO

YOU NEED THIS CATALOG!

TEN CHICKS FREE

On orders placed before Feb. 15, we allow 10 chicks free with every 100 ordered. Write for details. Every chick buyer should know about Hoytville Chicks. Our beautiful illustrated catalog tells all about them. Your copy sent on request. Guaranteed chicks.

OHIO ACCREDITED CHICKS—ALSO BABY DUCKS

Every bird in our breeding flocks is banded and a record kept. Our flocks are in- spected by experts trained and authorized by Ohio Poultry Improvement Associa- tion. Find out about our guaranteed plan. Sixteen Breeds. We have limited number Chicks from Ohio R. O. P. pedigreed stock. Write today.

HOYTVILLE ACCREDITED HATCHERY, 157 Main Street, HOYTVILLE, OHIO

5 Lb. LEGHORNS

The old reliable heavyweight stock. Produced high up on Pennsylvania's healthy mountain top. Get your chicks from certified record strains above 300 eggs. R. O. P. Hollywood, Tancred, Barron Matings. Hatch weekly pure white eggs up to 24 ounces per dozen. Beautiful Color Plate Leghorn Catalogue Free.

FARM SERVICE Route S-10 TYRONE, PA.

BABY CHICKS

100% Live Delivery	Postage Prepaid 50	100
Wh. and Br. Leghorns	$6.00	$11.00 $20.00
Buff and Bl. Leghorns	6.00	11.00 52.50
Anconas	6.00	11.00 52.50
Barred Rocks	6.50	12.50 60.00
Wh. and Buff Rocks	6.50	12.50 60.00
R. C. and S. C. Reds	6.50	12.50 60.00
S. C. Bl. Minorcas	6.50	12.50 60.00
Wh. and S. L. Wyandottes	7.50	14.00 67.50
Buff Orpingtons	7.50	14.00 67.50

All absolutely first-class, pure-bred stock from culled flocks. Prompt shipments.

JAMES G. KREICI, 9507 Meech Ave., Cleveland, Ohio

100% Live Arrival	100	500	1000
Ferris Strain W. Leghorns	$12	$52.50	$110
Everlay Brown Leghorns	12	52.50	110
Brsom's Barred Rocks	14	67.50	130
White Rocks	14	67.50	130
Owens' R. I. Reds	14	67.50	130
Black Minorcas	14	67.50	130
Mixed Chicks	9	42.50	80

JUNIATA POULTRY FARM CHIX Box P, Richfield, Pa.

BABY CHICKS

For March and April Delivery, 100% live arrival guaranteed.

	25	50	100	500	1000
White Leghorns	$3.50	$6.50	$12.00	$57.50	$110
Barred Rocks	4.00	7.50	14.00	67.50	130
Rhode Island Reds	4.00	7.50	14.00	67.50	130
Silver Laced Wyandottes	4.50	8.50	16.00	75.00	
Light Mixed	3.00	5.00	9.00	42.50	80
Heavy Mixed	3.50	6.50	12.00	57.50	110

These chicks are hatched from healthy free range stock. Write for Catalogue.

THE RICHFIELD HATCHERY, Box 166, Richfield, Pa.

FOR GREATER PROFITS Hatchery Chicks

CHICKS FROM JANUARY TO SEPTEMBER, 1929

Barred and White Rock, White Wyandotte, Rhode Is- land Reds, White Leghorns, Anconas and heavy mixed. Our flocks have been culled by Mr. Lloyd Baker a graduate of Pennsylvania State College, also having several years practical experience. Write us your wants.

Dept. G. L. R. WALCK HATCHERIES Greencastle, Pa.

ULSH'S Superior CHICKS

White Wyandottes	$15.00 per 100
White Rocks	13.00 per 100
Barred Rocks	13.00 per 100

Special prices on 500 and 1,000 lots. 100% live delivery guaranteed.

JAS. E. ULSH. Beaver Springs, Pa.

STRICKLER'S SUPER-QUALITY CHICKS

High Egg Production Bred. Healthy, Vigorous

Large size Tancred-Barron English S. C. White Leghorns, 278-316 egg line matings. No lights used; chicks are extra hardy and vigorous. These quality pin chicks shipped parcel post prepaid, 100% live delivery guaranteed at $16 per 100; $47 per 300; $77 per 500; $150 per 1,000. 10% books order; catalog free.

LEONARD F. STRICKLER, Box F, Sheridan, Pa.

Valley View Chicks

	25	50	100
S. C. W. Leghorns	$2.50	$6.50	$12.00
B. Rocks & R. I. Reds	4.00	7.50	14.00
Heavy Mixed	2.50	6.50	12.00
Light Mixed	2.75	5.00	9.00

500 lots 1c less; 1,000 lots 1c less. Free range. 100% live delivery guaranteed. Circular.

VALLEY VIEW POULTRY FARM, N. J. Ehrenseller, R. 2, McAlisterville, Pa.

HERBSTER'S QUALITY CHICKS

Barred Rocks, R. I. Reds and White Leghorns, good strong, livable chicks, true to breed, which develop into profitable birds. Get our low price and catalog. Hatch all year.

HERBSTER'S POULTRY FARM, (Formerly Brookfield Poultry Farm.) Box 171, McClure, Pa.

CHICKS Will ship C.O.D.

	25	50	100
S. C. Reds	$4.00	$7.50	$14.00
Barred Rocks	4.00	7.50	14.00
White Leghorns	2.50	6.50	12.00
Heavy Mixed	3.50	6.50	12.00
Light Mixed	2.75	5.00	9.00

500 lots 1c less, 1,000 1c less. Free Range. 100% Delivery. Circular.

W. A. LAUVER, McAlisterville, Pa.

LONG'S LARGE TYPE ENGLISH

S. C. White Leghorns of highest quality, hatched from two year old hens. Barred P. Rocks and asst. chicks. Get our free catalog and low prices. 100% live del. year.

TURKEY RIDGE HATCHERY, Millerstown, Pa.

Chicks, Barron Eng. White Leghorns

Common Leghorns, Barred Rocks, Light & Heavy Mixed, as low as 8c each, 100% guaranteed. "New Circular Free," Prepaid

TWIN HATCHERY, McAlisterville, Pa.

Baby CHICKS (Sniith Hatched) Rocks, Reds, Wyandottes, Leghorns, Orpingtons, Minorcas, and all leading breeds. Quality and satisfaction guar- anteed. Circular free. Early order discount.

BROOKVILLE HATCHERY, Brookville, Pa.

Blood Tested Barred Rock Chicks

Low prices. Write for special discount on early orders and 500 lots. Healthy stock; good layers. Hatches weekly

SMITH'S VALLONIA HATCHERY, New Berlin, Pa.

Special Discounts on Quality Chicks

LITERATURE FREE Describing Our Methods

For Ordering Early, Write Now.

5% FARM LOANS 5%

More than 31,000 Farmers Have Borrowed
More than $85,000,000 from

The Federal Land Bank of Baltimore

They Like the System - You Will Like It Too

Cooperative - - Under Government Supervision

5% **No Cheaper Money Ever Offered Farmers** 5%

Write the Bank or confer with the Secretary-Treasurer of your County National Farm Loan Association

List of Associations in Pennsylvania and West Virginia follows:

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Name of Association	Secretary-Treasurer
Adams Co.	C. E. Stable, Gettysburg
Allegheny Co.,	Henry S. Bepler, Wexford, RD 1
Armstrong Co.	G. H. Burns, Jr. Burns Bldg., Kittanning
Beaver Co.	H. H. Wilson, Beaver
Bedford Co.	B. F. Madore, Bedford
Berks Co	J. W. Ferry, 616 Washington St., Reading
Blair Co.	John Woodcock, Hollidaysburg
Bradford Co.	A. Carl Fanning, Towanda
Bucks-Lehigh Co.,	Linford Foulke, Quakertown
Butler Co.	E. W. Humphrey, Butler
Cambria Co.	Ivan J. McKendrick, Ebensburg
Cameron Co.,	(Inc. in Clinton & McKean Co.)
Carbon Co.	Alan S. Loose, Mauch Chunk
Centre Co.,	Miss Alice I Thompson, State Col.
Chester Co.	S. E. Howell, West Chester
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Clearfield Co.	J. A. Frank, Curwensville
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Columbia-Montour (Inc. Northumberland)	C. W. Dickson Berwick Sav. & Trust Co. Bldg., Front St., Berwick
Crawford Co.,	Leland Culbertson, Meadville
Cumberland (Inc. Franklin),	Emmett Woods, Carlisle
Dauphin Co.	W. R. Zimmerman, 1827 North St., Harrisburg
Elk Co.	C. R. Bickard, Box 117, Ridgway
Erie Co.	Thos. W. Spofford, 512-515 Masonic Temple, Erie
Fayette Co.	M. B. Porter, Scottdale
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Lycoming Co.	W. F. MacVeagh, R.D. 3, Muncy
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Monroe Co.,	L. A. Achtermann, Hollinshead Bldg., 2 N. 7th St., Stroudsburg
Montgomery Co.	A. R. Krieble, Worcester
Montour Co.	(Included in Columbia Co.)
Northampton Co.	S. J. Cooper, Portland
Northumberland Co.,	(Included in Columbia-Montour and Union-Snyder)
Perry Co.	(Included in Juniata-Perry)
Pike Co.,	(Included in Wayne and Monroe Co.)
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Snyder Co.	(Included in Union-Snyder)
Somerset Co.	W. C. Trexal, Somerset
Sullivan Co.	J. H. Thayer, Dushore
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Venango Co.	Miss Helen Guyton, Franklin
Warren Co.,	P. E. Nelson, Allen Block, Warren
Washington Co.	J. C. Judson, Washington, 9 Court Square
Wayne-Pike Co.,	A. G. Rutherford, Honesdale
Westmoreland Co.,	A. Scott Christner, Scottdale
Wyoming Co.	R. E. Frear, West St., Tunkhannock
York Co.	S. U. G. McCreary, R. D. 5, Dillsburg

WEST VIRGINIA

Name of Association	Secretary-Treasurer
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Braxton Co.	(Included in Calhoun)
Brooke Co.	(See Pan Handle)
Cabell Co.	L. M. Boulittie, (Day & Night Bldg., Huntington
Calhoun Co.	Elliott Chenoweth, Grantsville
Clay Co.	(Included in Calhoun)
Doddridge Co.	(Included in Ritchie Co.)
Fayette Co.,	(Inc. in Summers & Greenbrier)
Gilmer Co.	E. M. Wilson, Normantown
Grant Co.	W. C. Mouman, Petersburg
Greenbrier Co.	Miss Florence Gobeen Lewisburg
Hampshire Co.	L. V. Thompson, Romney
Hancock Co	(See Pan Handle)
Hardy Co.	J. W. F. Combs, Fabius
Harrison Co. (only)	C. W. Louchery,
Jackson Co. (Putnam),	M. C. Archer, Ripley
Jefferson Co.	F. L. Bushong, Charlestown
Lewis Co.,	F. S. Linger, 13 Notary Ave., Weston
Lincoln Co.	Mrs. Lillian F. Sieffey, Hamlin
Marion Co.,	Chas. Shaver, Nat'l Bank, Fairmont
Marshall Co.	(See Pan Handle)
Mason Co.	R. H. McNeill, Point Pleasant
Mercer Co.	W. W. Rogers 1st Nat'l Bank Bldg., Princeton
Mineral Co.	Emory Tyler, Keyser
Monongalia Co.	W. H. Ashcraft, P. O. Box 133, Morgantown
Monroe Co.	R. M. Humphreys, Union
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Ohio Co.	(See Pan Handle)
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Pleasants Co.	(Included in Ritchie Co.)
Pocahontas Co.	P. T. Ward, Marlinton
Preston Co.	L. F. Everhart, Terra Alta
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Randolph Co.	LeRoy See, Elkins
Ritchie Co. (inc. Doddridge, Pleasants)	Wetzel, Tyler and B. F. Patton, Harrisville
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Summers Co. (inc. Fayette),	E. S. Allen, Hinton
Taylor Co.	G. W. Ford, Grafton
Tucker Co.	W. K. Pritt, Parsons
Tyler Co.	(Included in Ritchie Co.)
Upshur Co.,	Will T. Burnside, Buckhannon
Wayne Co	C. E. Walker, Wayne
Wetzel Co.	(Included in Ritchie Co.)
Wirt Co.	Hugh Prather, Elizabeth
Wood Co.	A. D. Ireland, Parkersburg

(Continued from page 12.)

H. Gibson, Preston; 5, Wm. Gibson, Preston; 6, R. L. Campbell, Summers.

Any other dent, high altitude: 1, J. W. Johnson, Monroe; 2, R. W. Johnson, Monroe; 3, Wm. Gallien, Doddridge; 4, Wm. Gibson, Preston; 5, Alva E. Moore, Pocahontas; 6, C. A. Craig, Preston.

Single ear, any variety, high altitude: 1, E. W. McClung, Monroe; 2, J. W. Johnson, Monroe; 3, R. W. Johnson, Monroe; 4, C. A. Craig, Preston; 5, White Stalnaker, Randolph; 6, A. L. Campbell, Summers.

Sweepstakes corn grand champion: D. S. Reed, Jr., Ohio.

Wilson soybeans: 1, Arthur Sheets, Harrison; 2, Fred Smith, Harrison; 3, M. W. Fulton, Morgan; 4, Harvey W. Horner, Harrison.

Oats: 1, R. A. Beeghley, Preston; 2, Bruce Morgan, Preston; 3, F. K. Jenkins, Preston; 4, W. D. Long, Harrison.

Buckwheat: 1, R. A. Beeghley, Preston; 2, A. L. Campbell, Summers; 3, R. A. O. Kelly, Preston; 4, Bruce A. Dodge, Preston.

Four-H corn, first year: 1, Harold Williams, Harrison; 2, James W. Williamson, Jackson; 3, Wm. Davidson, Morgan; 4, Boyd Kniceley, Braxton; 5, Victor Copenhaver, Harrison; 6, Louis Copenhaver, Harrison.

Four-H corn, second year: 1, Elden Bowers, Mineral; 2, Wm. Gallien, Doddridge.

Leading exhibitor: 1, Arthur Sheets, Harrison; 2, A. L. Campbell, Summers.

Leading county: 1, Preston; 2, Marshall; 3, Ohio; 4, Wirt; 5, Monroe; 6, Summers. Harrison county by virtue of having already won the county cup three years was not eligible to this competition but had the highest score of any county.

The county winners and their scores in the corn judging contest follow: Greenbrier, 850; Wirt and Ohio, 760; Harrison, 710; Fayette, 660; Preston, 540.

Individuals placed as follows in the corn judging contest: 1, E. F. Sydenstricker, Greenbrier; 2, F. E. Burton, Wirt; 3, Irvin Ingram, Wirt; 4, E. B. Romans, Greenbrier; 5, W. E. McClung, Greenbrier.

House Dress Contest Awards

Prize winners: 1, Mrs. Nellie G. Owens, Jefferson county; 2, Mrs. Gilbert Scott, Randolph county; 3, Mrs. Ella Moore, Harrison county; 4, Miss Bertby Collman, Harrison county.

Judging contest winners, all made a perfect score, alphabetically arranged: Mrs. Ida Burnside, Harrison county; Miss Marguerite Burroughs, Lewis county; Mrs. C. O. Hayhurst, Monroe county; Mrs. W. R. Hogue, Ritchie county; Mrs. Mabel Hunter, Monongalia county; Mrs. T. Y. McGovran, Kanawha county; Mrs. E. B. Robinson, Harrison county; Miss Mabel St. Clair, Monongalia county; Mrs. Helen St. Clair, Monongalia county; Miss Gladys Steele, Monongalia county.

Mixed Varieties of Corn for Silage

(Continued from page 9.)

husk, tying up the stover in bundles, setting these up again, hauling them to the barn where they are usually heaved up to the top of the barn hay or straw mows or an overhanging mow. Then on a cold winter day thrown back down on the barn floor (likely as not half the bands will be cut by mice), fed to the cows which will eat not over seventy-five per cent. The other twenty-five are thrown into the manure to make a fellow either cuss or feel like it when he hauls out the manure. This system too seems to me about as near a perfect solution of how to keep down the corn borer as any one I know.

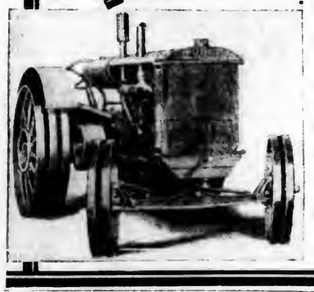
Now how do you think this system has affected the milk yields of our cows? We belong to the cow-testing association, so I can tell you exactly how it acted on fourteen cows that we had the last year of the old system where we put all silage corn in the silo and fed the stover dry, and the next year when silage corn and stover were in the silo.

From April 1, 1926, to April 1, 1927, these fourteen averaged 7,009 pounds of milk and 342.4 pounds of butterfat. From April 1, 1927, to April 1, 1928, these same fourteen averaged 7,833 pounds of milk and 388.9 pounds of butterfat, a gain for each cow of 824 pounds of milk and 46.5 pounds of fat apiece. Figure this out at the price of milk or fat and see whether it has paid us, and remember we averaged 24 cows these two years.

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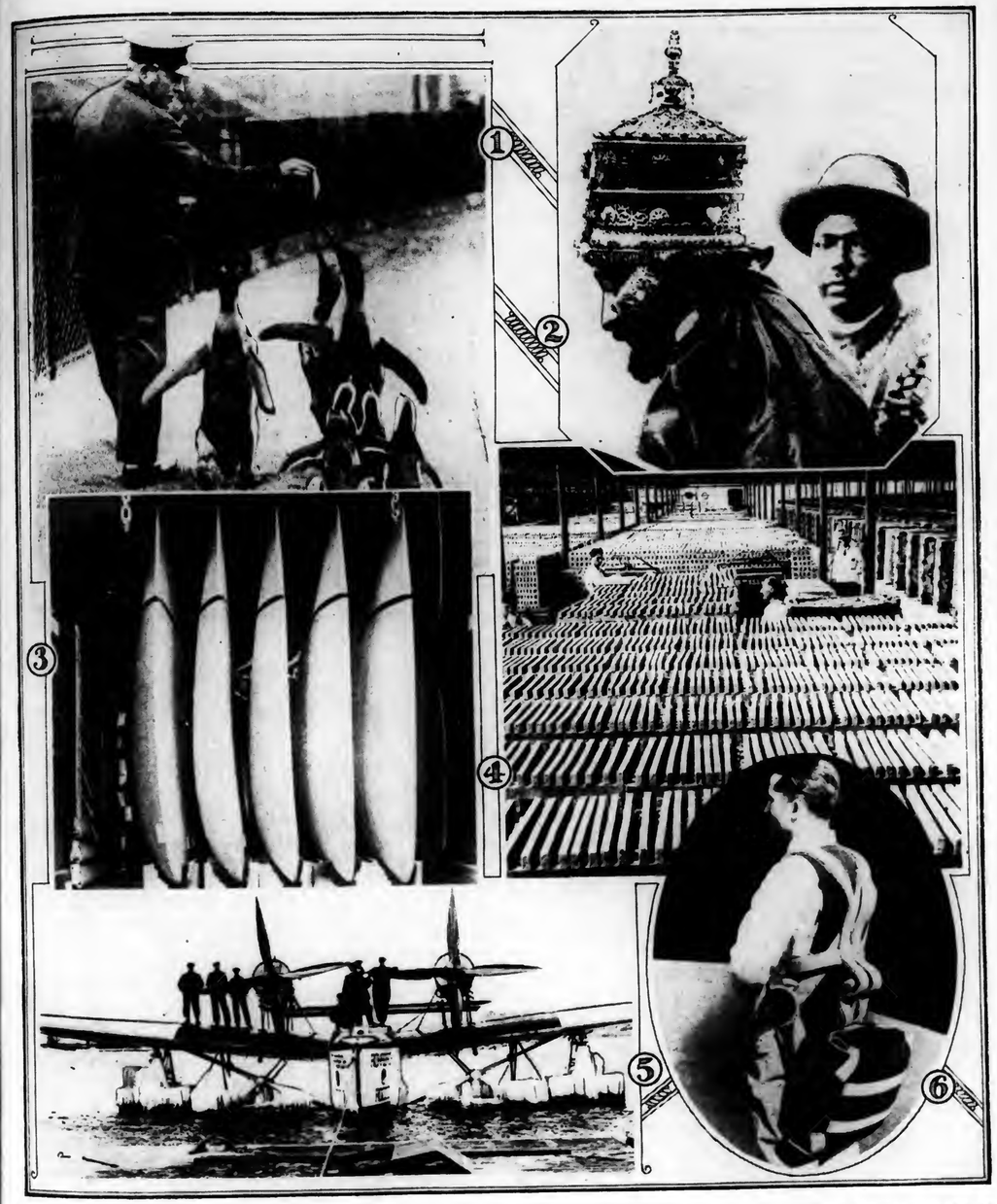
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PASSING EVENTS IN PICTURES



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1. Photo shows a group of penguins, the short-legged, flightless, aquatic birds, getting their afternoon meal of fresh fish from their keeper in a London zoo. It looks as if the four tiny ones will have to go without theirs.

2. A fine study of the new King of Abyssinia—King Tafari—wearing the ancient crown of Abyssinia which is valued at $500,000. It formerly belonged to the Emperor Theodor and was captured by Lord Napier of Magdala, and finally restored by King George in 1924 during the visit to England of the consort to the Queen of Abyssinia.

3. How navy ships airplane wings. Photo shows method of packing five airplane wings and numerous spare parts in a single freight car, developed by the U. S. Navy Department. The wings are stood on the leading edge and are held securely during the journey.

4. One thousand tons of soap bars. Photo shows a glimpse in the great soap works of Port Sunshine in England, where thousands of tons of soap are manufactured daily. Liquid soap is run into the cooling room where it solidifies and it is then cut into slabs and again into bars. They are shown stacked for drying.

5. Huge hydroplane in winter garb. The hydroplane "Rocco" of the German Airplane Association, landing at her home port, Travemunde, Germany, with a heavy layer of ice on her pontoons.

6. First civilian parachute instructor. Photo shows Archie Atherton, famous Marine Corps parachute jumper, who has become the first civilian parachute instructor in the United States. He instructs the students at an air school here on the proper method of using the "chute."

Pickett's Gap

By HOMER GREENE

Copyright, 1928, The Perry Mason Company.
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"GOOD-BY, grandpap!"

"Good-by, Dannie! Get to school in time, and don't forget to look after the sheep."

"All right, grandpap! Don't you forget about the new suspenders."

"No, indeed, I sha'n't!"

"Good-by!"

The old man drove away, and Dannie sat on the gatepost and watched him until the turn in the road, as it wound through the narrow canyon of Pickett's Gap, shut him from sight.

He was a picturesque figure, this old man, as he faced the climbing sun and started on the ten-mile journey to town. His long white hair, combed straight back from his forehead, curled gracefully on his broad shoulders. His complexion was as clear, his cheeks as pink-tinted, his blue eyes as bright and piercing as if he had been seventeen instead of seventy. But above his woolen shirt, open winter and summer at the throat, where once a muscular neck, like a bronze column, had risen from his chest, now appeared the wrinkles and the hollows which betoken weight of years.

His manners and his moods were no less eccentric than his looks. There were few people in that region who had not, at one time or another, felt the shock of his blunt speech. Yet here and there some one, usually poor and friendless, would be found grateful enough to testify to Abner Pickett's kindness of heart.

He was more than kind to Dannie. Dannie was his grandson, it is true, but the whole countryside knew that Dannie's father had been driven from Abner Pickett's door when Dannie was a baby. The cause of this estrangement and severity was still a mystery, which even the gossips did not dare to solve.

Abner Pickett kept his own counsel, and Charlie Pickett never came back to explain. Not that the old man did not care. No one believed that. No one could believe it who saw him every day. He had the Pickett pride. His father had brought it with him when he came from New England into Pennsylvania and purchased from the commonwealth the four-hundred-acre tract on which he built the homestead.

Abner Pickettt inherited with the place a pride in keeping it intact. He had intended to hand it down to his only son, Charlie, although he had no high idea of Charlie's ability as a farmer.

Indeed, it was well known that Charlie did not take kindly to farming. He was much more fond of knocking round the country with the compass and surveyor's kit that he had managed to get together, running land lines, locating corners, and laying out village plots for the people of that part of the county. And whether Dannie's grandfather was liked by his neighbors or not, it is very certain that Dannie's father was the most popular young man in the district.

No one was surprised when he married the belle of Port Lenox, the nearest up-river town, and brought her to his father's home. People shook their heads, however, predicting all manner of trouble and unhappiness for Charlie Pickett's wife in the eccentric old man's household.

ABNER PICKETT disappointed expectations, and became the devoted slave of his daughter-law. Brusque and biting to the world about him, he was to her gentle and helpful and courteous.

During her long illness, after Dannie was born, his devotion to her never ceased; and when he saw the roses begin to come back into her cheeks, he could no more restrain his delight than he could refrain from drawing his breath.

One night she grew suddenly ill again; and while Charlie and Aunt Martha did for her all that loving thought could suggest or tender care accomplish, Abner Pickett flung himself on his brown mare and galloped like a madman through the darkness to Port Lenox, ten miles away, to bring the doctor.

But no physician, no drug, not the most loving care could hold the struggling spirit in the frail body; and two days later Charlie's wife was dead.

Abner Pickett would not listen to the suggestion that her body should be taken back to her old home at Port Lenox for interment; and rather than face his wrath, her parents consented that the burial should be made in the Pickett family graveyard at the mouth of the gap.

That graveyard was Abner Pickett's dearest spot of ground. It lay in a direct line with the opening into the gap, which was barely two hundred feet distant. On the north it was bordered by the public road, on the south it was washed by the rippling waters of the brook, and on every side but the west the hills rose precipitously about it.

It was a beautiful half-acre. The sward was always fresh and green, and flowers blossomed there from May to October. Abner Pickett's parents were buried there, and his wife, and his brother and sister, and his own children who had died in infancy. Others more distantly related to him were buried there as well. And the sheltering soil also hid the bodies of some without home or friends; bodies that, had it not been for Abner Pickett's humanity, would have found interment in the potter's field.

When Charlie's wife was buried, the old man bought the most beautiful monument that the marble-cutters of Port Lenox could furnish, and had it placed at the head of her grave. It was a fluted column, with pedestal and cap, draped with chiseled flowers. Looked at from the west, it stood out tall and graceful, outlined in perfect proportion against the dark shadows of the gap or the rich verdure of the hills. And now Abner Pickett's graveyard had become more than ever dear to him.

It was spring when Charlie's wife died. Before the autumn mists trailed across the summit of her monument Abner had forbidden his son ever again to darken the parental door.

In the early gray of an August morning the young man crept into a little white-curtained room and kissed his sleeping baby. At the outer door Aunt Martha met him, and with tear-blinded eyes, clung her arms about his neck and promised to give his child her tenderest care.

A neighbor, who had risen before light, saw Charlie Pickett striding down the road through the morning mist into the shadows of the gap. For the rest, all was mystery. The years went by, and Charlie Pickett's name became only a memory among those who had known him in his boyhood and his youth.

AND here was Dannie, his son, a boy of thirteen, sitting on the gate-post and waving good-bye to his grandfather. He was a typical farmer's boy, the chum of his grandfather; and he took in the old man's heart the place once occupied by Dannie's mother.

For a long time after the last faint echo from the wheels had died away the boy sat on the gate-post, looking off toward the graveyard with its fluted column and on to the dim recesses of the gap. He was musing, wondering, wishing. It was all about his father, whom he could not remember ever having seen; who, so far as he could learn, was living somewhere in estrangement from his home. He had mentioned his father's name once to his grandfather. He had never dared to do so a second time.

The loveliness of his dead mother was a tradition, not only in the Pickett household, but in all the countryside. And yet what this boy wanted, what he longed for with his whole heart, was not so much a loving grandfather, not so much a dear mother's tenderness, as the living, breathing presence and daily companionship of a strong and stalwart father.

Ah, well! He dropped from his seat on the gate-post, and strolled up the path to the farmhouse, whistling softly. Max, his dog, came bounding out to greet him, and together they went to the sheep pasture to see that the sheep were not straying beyond bounds and tearing their wool with the brambles.

After that Aunt Martha, the housekeeper, gave Dannie his dinner-pail, kissed him good-by, as she always did, and sent him off to school.

Somehow, although Dannie was fond of his books, that day at school dragged dreadfully, and it was with a long sigh of relief that he found himself, in the afternoon, trudging down the dusty road toward home. Max, waiting for him at the gate, leaped joyfully to meet him.

He went to the house to see Aunt Martha, and then again, in compliance with his grandfather's request, and accompanied by the dog, he sauntered up to the pasture to look after the sheep. That duty performed, he went down to the flat and along the road to the potato field, where Gabriel, the steady hired man, was digging potatoes.

His name was not really Gabriel, as Dannie often explained; but every one called him that on account of his horn. He had a big tin horn, once bright with red paint and gilt bands, which he used for the purpose of driving the cows, the sheep, the poultry, and any other livestock of which he might be in charge, affecting to believe that the animals responded more readily to his signals on the horn than they would have done to the sound of his voice. He was turning out beautiful, big, red potatoes; the "Giant Rose" he called them. Now and then a few old-fashioned white pink-eyes were in the hills.

"Great crop!" he exclaimed, as Dannie came ...

"Biggest crop since the year your pa went aw...

"What did my father go away for?" asked Dan... so quickly that Gabriel, startled by the sudden... of the question, inadvertently struck the blade of h... hoe into a plump potato and split it from end to ...

"Oh, now, that's too bad!" he exclaimed, as h... stooped to pick up the severed parts, moist and ... white on the broad cut surfaces.

"That's the fust potater I've cut this season, ... even nicked," he continued, gazing ruefully at t... remains of the vegetable in his hand.

"What did my father go away for?" repeated Da... nie.

The question certainly was direct enough to d... mand an answer.

Gabriel leaned on his hoe-handle thoughtfully ... and took the matter into due consideration bef... replying:

"Well, now, I've heard one story about it eac... and another story about it another day. Differ... people has different idees. As for me, I ain't pr... pared to make no affidavy about it one way ... another. 'Don't tell what you don't know jes' b... cause it's easy,' as old Isra'l Pidgin used to say."

"Did father and grandpap quarrel?" persisted t... boy.

Gabriel pushed the loose dirt from the top of th... next hill of potatoes before he answered:

"Well, if they did quarrel—now mind ye, I ai... sayin' whether they did or whether they didn't, ... but if they did quarrel, it was a quarrel wuth listen... to, I can tell ye that. I knowed your pa; best-nat... ed, best-hearted, best-mannered young feller I ev... see in all my life.

"But," he continued impressively, "when he w... out to do a thing, he did it whether or no. And yo... grandpap! Well, you know what he ain't capable ... in the way of well-digested contrariness ain't wo... mentionin'. 'Member the dressin' down he gi... Squire Biddlecomb last spring over that breach... cow o' his?"

Gabriel chuckled for a moment and then went o...

"So, as I say, if they did quarrel, it must have be... a rip-staver. And as ol' Isra'l Pidgin used to sa... 'It takes longer for a windfall to grow up with a... timber than it does to heal up a family quarrel.'"

Gabriel never tired of quoting Israel Pidgin; b... when asked about this supposed sage, he was alw... to give but meager information. "An ol' feller I us... to know up in York State," was usually all that h... would say. There were those, however, who did n... hesitate to declare that "Isra'l" was wholly a cr... ture of Gabriel's imagination.

"Heard anything about the new railroad?" th... hired man asked, changing the subject abruptly, ... digging violently into the bottom and sides of a h... from which he had already thrown out all the pot... toes. "They say they're comin' right down acro... the farm and out through the gap to the river."

The boy knew that it was useless to questio... Gabriel further about his father, and he turned awa... disappointed and vexed.

"No," he replied impatiently, "I don't know an... thing about the new railroad, and I don't care."

"Well," continued Gabriel, leaning contemplativ... ly on the handle of his hoe, "if Abner Pickett gi... w'at it's wuth to a railroad to run through that ge... he can afford to wear a starched shirt once in ... w'ile, on a Sunday."

"Grandpap wears the kind of shirts that suit... him," replied Dannie, indignantly, "and it's nobody's ... business but his own!"

"OF course! Of course!" chuckled Gabriel. "A... ol' Isra'l Pidgin used to say: 'Blood's thick... er'n water; and' ye can't thin it by stirrin' of it up.'"

Dannie was tired and disheartened. He looke... away toward the gap and wished with all his heart ... that he might see his grandfather coming up the ... road toward home.

Some one, indeed, was coming out from the shad... ows of the rocks, but it was not his grandfather. I... was a small, black-whiskered man carrying an en... gineer's transit.

When he was well out from the mouth of the gor... he set up his instrument and adjusted it. Then he... peered through the telescope, first back into the ... shadows of the canyon, and then ahead toward the ... graveyard, into the sacred enclosure of which the ... flagman, with his signal-pole, was already advancing.

"Look, Gabriel!" exclaimed Dannie. "Look! What are they doing?"

Gabriel gave a quick glance toward the gap.

"It's the new railroad," he said. "Sure as eternity ... it's the new railroad!"

The chainmen were now in sight, measuring off ... the distances; and the flagman, standing in the very ... center of the graveyard and looking back toward the ... transitman, was holding his pole on the ground and ... balancing it with his hands to keep it plumb.

Gabriel had stopped his hoeing. Dannie had thrust ... his hands savagely into his trousers' pockets, and ... both stood gazing with wide eyes on the animated ... scene.

"What under the canopy Abner Pickett'll say to ... that beats me!" exclaimed Gabriel. "Think of it, ... Dan! A railroad right up through your grandpap's

gap; right up through your grandpap's road and ... creek; right up through—bust my bellus if 'tain't ... a-comin' right up through your grandpap's grave... yard!"

Dannie set his teeth and jammed his fists deeper into his trousers' pockets as he saw an engineer's assistant drive a stake on the graveyard eminence half-way between the fluted column and the road-side wall.

The engineers were evidently in some haste. They were setting their line of stakes along the narrow strip of land between the creek and the public road.

Already the leveler and the rodman were in sight, following up the location, and the transitman had advanced along the road to a point opposite the potato-field, where the valley widened, and the land began to slope more gently to the north and west. He leaped the fence lightly and came to within twenty feet of where Dannie and Gabriel were standing.

"Hello!" said Gabriel.

"Hello!" replied the stranger.

"Runnin' a railroad?"

"Yes. Do you own the place?"

"NO; but I work for the man that does, and I'm thinkin' it wouldn't be right healthy for ye if he was in sight."

The stranger laughed a little, showing a row of very white ... "Does he own that gap?"

"Ain't nobody else owned it for forty year."

The engineer looked back into the shadows cast by the beetling cliffs, and then up along his line of stakes.

"Well," he replied, "all I have to say is, speaking from a railroad point of view, he's got a valuable property."

He glanced ahead at his flagman and directed him to a point farther up in the field, to which point, having fixed and recorded it, he himself hastened, followed by Gabriel and Dannie.

Up to this moment the boy had not opened his mouth. Now, with the ring of rising indignation in his voice, he spoke up:

"Has this railroad got a right to run through my grandfather's land without his permission?"

"Yes," the man said, snappishly, "it's got a right to run plumb through his house; and I'm not sure but we shall if he does any kicking."

"And have you got a right to run through that graveyard down yonder?"

"Oh, such things don't count when there's a railroad to be built. Come! You're right in my line of sight. Get over in the road there if you want to see. Hadn't you better run home, anyway, and tell the old man to look out for his cattle? First thing he knows the engine will be puffing and the bell ringing and the whistle blowing right through his barnyard, scaring all his livestock into fits."

Dannie's face was white, and his hands were clenched in anger.

"This land is my grandfather's, and I'll stand where I please on it!" he declared fiercely. "And that graveyard belongs to my grandfather, and your railroad'll never lay a tie or put a rail in it while grandpap and I have breath in our bodies. And your makin' fun of an old man like him, when he ain't here, is the act of a coward!"

The boy stopped, breathless, his breast heaving and his eyes flashing. Gabriel, his face glowing with exultation at the boy's spirit, pulled his old horn from his pocket, thrust it to his lips, and gave a tremendous blast.

The engineer stopped in the middle of a record, looked the boy over again from head to foot, and then burst into a hearty laugh.

"You'll do!" he exclaimed. "Stand right where you are as long as you want to. If you don't own this farm some day, it won't be because you don't deserve to.

"I'm through, anyway," he added, glancing at his watch. "Put a plug there, John," addressing an axman, "and tell the boys to chain up. The country beyond this is open and free, with room for fifty railroads; but the gap is ours now, and the game is ours, and the Tidewater & Western may catch us if it can. Put a bench-mark on the point of that rock, Miller, and then get your tools together."

The man addressed chiseled a cross on the projecting crown of a huge rock near by, the leveler took the height of the point and recorded it, and the work of the day was done. The engineer removed the head of his transit from the tripod, and as the rest of the party faced toward the gap, he turned to Dannie.

"Well, good night!" he said. "I don't like your manners, but I admire your spunk. Shall we part friends?"

He held out his hand as he spoke, but Dannie looked at him contemptuously and did not reply.

"Oh, just as you feel about it," continued the man. "But kindly give your aged and respected grandparent this bit of advice from me: 'Don't fight the Delaware Valley & Eastern'."

The engineer waved his hand jauntily to Dannie, flung back another unanswered good night, and a moment later, with the rest of his company, he had disappeared in the dark recesses of the gap, on his way to the river and the town.

It was dark before Abner Pickett came home. Dannie waited for him at the gate, his loneliness and anxiety increasing as the minutes went by.

He knew, from long experience, what to expect when his grandfather should learn about the railroad survey through the gap and the graveyard, and he dreaded to be the bearer of evil tidings. Yet it was with a long sigh of relief that he recognized the familiar rattle of the buckboard. Abner Pickett drove up to the gate.

"Hello, Dan! Out rather late, ain't you?"

"Waiting for you, grandpap."

"Well, I'm here, and glad to get here. How'd things go today? Gabriel get the potatoes all out? Have a good time at school, Dan?"

It was evident he had not heard about the railroad, or he certainly would not have been in this cheerful frame of mind. After mature deliberation, Dannie decided it would not be advisable to break the news to him until after he had eaten his supper.

Gabriel came out to help carry the parcels into the house and put away the team.

"I got the suspenders for you, Dan—red in the middle, with sky-blue edges and pink posies on the end. How does that strike you, eh?"

"Thank you, grandpap, I'm sure they're nice."

They all went out to the barn with the team. Abner Pickett liked to see for himself that his horses were well taken care of. He seldom came from town in a more cheerful mood than that which possessed him on this night. Everything had gone to his liking during the day, and that fact was clearly reflected in his manner and conversation. When the old man went into the feed-room after the oats, taking the lantern with him, Gabriel took the opportunity to pull Dannie's sleeve, and ask, in a ghostly whisper, "Ain't heerd about it, has he?"

"No, I suppose not. Can't you tell him?"

"No, sir! Wouldn't do it for the hull farm—livestock throwed in. He'd light on me like a thousand of brick. 'Discretion is the better part of valor when there's a job to lose,' as old Isra'l Pidgin used to say."

"Well, then, I suppose I'll have to. Thought I'd wait till after he's had his s...per."

"Great scheme! 'A full stomach is twin brother to a big heart,' as old Is—sh—sh!"

ABNER PICKETT came back from the feed-room with a measure brimming full with oats, and divided the grain carefully between the two horses, talking in the meantime in the most cheerful manner of the work on the farm, and of the incidents of his trip to town.

When the task at the barn was finished they all went into the house, and the old man sat down alone to the supper saved for him by Aunt Martha. Afterward he joined Dannie and Gabriel on the side porch. The smoke from his pipe curled up through the warm, still air, and floated about among the rafters of the ceiling.

"Ain't it about time you went to bed, Dannie?" he asked gently.

"I thought I'd stay up a bit yet, grandpap; it's so warm and pleasant tonight."

"Well, I don't mind if you do."



The Cheerful Plowman

TO TOWN SATURDAY NIGHT

WE farmers all hike into town the last night of the week, and there we loaf and chew the rag and talk our local Greek. We stand around and say, "Hello, how are you, Bill and Hugh? And, hang my pictures, here is Lem, old partner, how are you? And, here comes Frank McPherson, boys! Old Frank is just the same as he was thirty years ago; he plays a winning game! By golly, here comes 'Crankshaft' Jones! How are you, Jones, tonight? How is your stand of Durum wheat? Are any weeds in sight? Hello, Mike Feegan, bless your heart; you're still the same, you bet! How are your brothers, Pat and John, and Barney, too, and Hel? Let's have a little game of pool and then a bite to eat! No candy, thanks! I'll have a smoke! Nick Heikert's cutting wheat!"

The things we say, the things we do, seem pretty small and light when we meet at the county seat each week for half a night; but, hang it all, the human touch is what we fellows crave, and without that we'd soon grow stale and totter to the grave. The things we say, the things we do, are chaff, of course they are, they do not rake the dollars in to pay for gas and car; but human touch is human touch, and while we live, I swear, just go to town the proper night and you will find us there!

J. E. T.

After that there was silence for a time. Then there was the sound of a footstep on the walk, and a man came up out of the darkness. It was David Brown, the next neighbor to the west.

"Heard you were down to the river today, Mr. Pickett," he said. "Wanted to see you a minute. Thought I wouldn't disturb you till after you'd had your supper."

"JUST finished. Glad to see you. Come up on the stoop, David, and have a chair."

Mr. Brown accepted the invitation very willingly. "Thought I'd run down for a minute," he continued, "and ask about the new railroad. Thought maybe you might have heard something about it down to the river."

"What new railroad, David?"

"Why, the Delaware Valley & Eastern. I noticed they were pointing pretty straight for my place when they quit tonight."

"I don't quite understand. Has there been more talk about railroads?"

Mr. Brown turned to Dannie. "Haven't you told your grandfather about it yet?" he asked.

"Not yet," stammered Dannie. "I—I was just going to when you came."

Gabriel left the chair in which he was sitting, next to his employer, and went down and seated himself on the porch steps.

Abner Pickett looked questioningly from one member of the group to another.

"Well," he said at last, "why don't somebody speak? Are you all struck dumb? What is it about the railroad, Dannie?"

"Why, grandpap, they—the surveyors, you know—they—they—"

"Well?"

"Whacked their stakes in regardless"—broke in Gabriel, in his anxiety to help Dannie out.

Abner Pickett turned on his savagely. "Shut up, you idiot!" he commanded. "Go on, Dannie."

"Well, they ran a line up through the gap, and stopped at the upper end o' the potato lot."

It was out at last, much to Dannie's relief.

When Abner Pickett spoke again his voice was as quiet and steady as if he were discussing nothing of greater interest than crops or cattle.

"Did it today, did they?" he asked.

"Yes," replied Dannie, "today."

"Anything done to prevent 'em?"

"Why, no, I couldn't do anything. I told 'em they'd never build their railroad, though."

"Laughed at you, didn't they?"

Dannie's cheek flushed with mortification and anger as he recalled his interview with the engineer.

"Why, yes, they did; but I told 'em—"

"No matter what you told 'em; was anything done?" The rising inflection in the old man's voice warned his hearers that he was no longer able to smother the fires of anger kindled in his breast.

"No, grandpap. There were seven of 'em."

Again, in his anxiety to come to Dannie's assistance, Gabriel broke in:

"I told 'em that ii Abner Pickett was there, he—"

"Shut up, you idiot!"

Gabriel obeyed his employer's command without a word of comment. The silence which followed was broken by David Brown.

"Just thought I'd come over, Mr. Pickett, and inquire. Didn't know but maybe you might know what they were paying for right of way."

The old man straightened himself in his chair. "Right of way!" he exclaimed, scornfully; "right of way! They don't pay for it; they steal it! They pick out the best land you've got, set their stakes on it, and call it theirs. They're thieves and robbers, and cowards as well! Yes, cowards! Else why did they wait to pick out a day when I was away from home, and nobody on the premises but a thirteen-year-old boy and an idiot of a hired man? Oh, if I'd been here, I'd have told 'em where to set their stakes!"

He rose to his full six feet two inches, straight as a pine-tree, his neck and face crimson with anger, his blue eyes flashing fire.

Brown rose also. "Guess I'll have to be going, Mr. Pickett," he said. "Thought I'd just run over and see—and see if there was any news from the river."

After David Brown had gone the old man grew somewhat calmer. He took two or three turns up and down the porch, and then resumed his seat.

"Strike into the potato-field, did they?" he asked Dannie.

"Yes," was the reply, "went up through the west end of it as far as the big rock."

"Where else did they go?"

"Why, they cut across the corner of the meadow lot, and below that they ran through—"

"Well?"

"Through—O grandpap!"

The old man rose slowly to his feet again, as if impelled thereto by a dreadful thought.

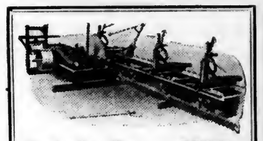
"Dannie—the graveyard?"

"Yes, grandpap."

The clay pipe which Abner Pickett had been smoking broke into a dozen pieces beneath the pressure of his clenched hand, and fell rattling to the floor. It was a full minute before he spoke again.

(To be continued.)





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Days That Are Gone

R. P. KESTER in the January 26 issue spoke of neighborhoods retrograding and asked how is it in your neighborhood?

I have been a close observer of farm conditions for seventy years and at no time have I seen as many idle farms and as little community sociality as at present.

Our township is strictly a rural community, six to twelve miles from Franklin and fifteen from Oil City. Twenty years ago there was very little manufacturing done in these cities. Farms were mostly occupied by owners. Most farmers had families of boys and girls. We had a going Grange of 150 members. There were six churches of four denominations and nine schools.

Our fathers had done the pioneer work, cut down the woods, burned the logs, rolled the stones around to get in a crop. We blasted out the stumps and stones. It required lots of man power, giving employment to our boys and girls in summer, and in winter they went to school, taught school, got wood, etc.

The urban population of our county (Venango) was about two-thirds that of the rural population. Our board of commissioners was generally composed of two farmers and we were represented in the other offices. Our tax was less than half for the same valuation. We had no political scandals.

"One Hoss Open Shay"

Our social activities were somewhat crude—we had log rollings, stone haulings, wood choppings. The Grange hall was a center for dancing, festivals, entertainments, etc. Our young people piled in sleds and with bells jingling what a merry ride to some neighbor's for a party, a taffy pull or play, and we fathers and mothers could shake a leg or play "The Bear Went Over the Mountains" with the best of them. We had spelling schools, Lyceums, oyster suppers, etc., attended by everybody from six months old to octogenarians.

We lived mostly from the products of our farms. She was a poor housewife who did not have enough fruits, jellies, preserves, etc., to open a can every day of the dormant season and the odor of bread baking and apple butter boiling was abroad in the land.

Prices for farm products were low, but the farmer's dollar bought in proportion to its value. But prosperity struck us a solar plexus blow. Franklin woke from a sleepy county seat, by the infusion of new blood and capital, to a first-rate industrial center with an unparalleled building boom. Oil City became the center of Standard Oil activities. Firms bid against each other for laborers. Our boys left the farms and flocked to the cities. The urban population trebled, the rural one shrank.

Is There a Remedy?

The cities get all the offices and are honey-combed with fraud and political graft. Oil City now ships oil-well supplies to all parts of the world, has an order for a trainload of pumps and engines for Russia.

Our Grange is innocuous desuetude. Our churches, except one, are pastorless. Half of our farms are going back to the primitive. Our social activities are nil. The telephone is the old wives' gossiping stand.

A few of our most productive and level farms where they can use modern machinery are making it pay by dairying. Instead of milk being ladled out of a push-cart on the street it takes several thousand cows to supply the sixty thousand urban population. Instead of the odor of baking bread we have the sickening one of mush, and the housewife buys her bread and canned goods at the grocery and motors to the movies. The husband migrates back and forth to the shop. The family keeps a pig, a cow and some hens and raises a few spuds.

What is the remedy? "There ain't any such animal." As long as supply is greater than demand, and Uncle Sam is spending hundreds of millions to open up further sources of supply. Our small side-hill farms will be no more profitable.

Am I a pessimist? Not on your life. There never was a time in the world's history when the man or the woman who was "it" got such a kick from life and we old "has-beens" sit by the stove and say "go to it." O. C. Sigworth.

Venango county, Pa.



VOTED FOR LINCOLN

One of Pennsylvania Farmer's oldest subscribers is Mr. Henry Skiles of Ingomar, Allegheny county, Pennsylvania. Last October he celebrated his 94th birthday. He comes of a long-lived family, three of whom lived to be over ninety-two. Mr. Skiles is a Civil War veteran, serving three years with the Fourteenth Pennsylvania Cavalry. He has voted at every presidential election for seventy years and has the distinction of voting for Abraham Lincoln.

A Kind Word for Present

THE Pennsylvania Farmer is the best farm paper that I have ever read, but several topics have been discussed that I could scarcely refrain from replying to. The one our friend Mr. R. P. Kester approached and spoke so frankly on in regard to the deterioration of the farm folks deserves a reply, as he thinks they are not the equal of a generation ago.

I beg Mr. Kester to let me assure him it is just a fancy. I think he has taken an incomplete census of the farm homes and people. If the past generation would come back they would not recognize the fine farm homes that have been erected by their children, large numbers of them lighted with electric lights and electricity doing a greater part of the drudgery that the over-worked housewife of the past had to do, listen to their intelligent conversation and hear their wonderful radio reception, see their large barns with silos and note their blooded stock.

Large trucks convey our children to consolidated schools of the finest kind, furnished with every modern convenience. Has ignorance established this?

We must all acknowledge that in deep water there is always drift-wood and some of it finds its way to the banks, and so it is with farm life, there is and always will be some people who will drift to isolated places. You will find them wherever you go. They do not constitute the vast masses of intelligent country people.

I will close hoping I may say on some future time what I think in regard to farm relief. A Forest Hiker.

Fulton county, Pa.

THE New Jersey State Department of Agriculture is seeking an appropriation of $1,500 from the State Legislature to aid federal work in fighting the corn borer. It is further seeking legislative enactment which will make cleaning up in uninfested areas compulsory. The federal government spent $44,600 in New Jersey last year in scout and quarantine work.

Top-Dressing Helps Corn

LAST spring I hauled the manure out on piles on the solid unplowed ground and when I plowed I spread it over on the plowed ground, thus saving very much horse labor.

The field had had corn on it the year before and didn't yield very well, so last spring I top-dressed it and gave one harrowing and planted on June 1st. On June 26th the hail storm greatly affected its appearance for a while, but it regained and I gave it two plowings with three shovel plows, the last one in August.

In the latter part of August it suffered a hard storm, blowing it down in two directions, but in spite of all these drawbacks it yielded around 15 barrels to the acre, a fair crop for thin, run-down land. John B. Shank.

Franklin county, Pa.



C. C. Albaugh, Jr., and his pen of prize-winning White Plymouth Rocks. Young Albaugh is a member of the Vo-Ag Junior Class of Weston High School. His pen of White Rocks won the blue ribbon of the annual Junior Display of the Central West Virginia Poultry Association at the National Poultry Show in New York City they were adjudged the winner of the Junior Display.

It Couldn't Happen

By M. L. HAYWARD

"I WAS certainly lucky to get that $100 check from Hawkins when I did," the farmer assured himself, endorsed the check, and started for the bank on which the check was drawn. At the same time A was traveling toward the same bank with the same thought in his mind and a $200 check signed by Hawkins in his pocket, both walked up to the paying teller's wicket simultaneously, pushed the checks through the window at the same instant, and said "cash please" in perfect unison.

"Now you've got me in a box," the teller admitted, "for Hawkin's got only $275 to his credit."

"Well, that's easy. Pay my check," the farmer suggested.

"No—pay mine," A urged.

"I guess I'll play safe and pay neither one," the teller demurred.

"If you do Hawkins will sue the bank for refusing to pay at least one check when he had sufficient funds for it," the farmer assured him.

"Well, I've been paying out money on checks for 40 years, and the like of this never happened before," the teller declared.

"No, and it simply couldn't happen once in 400 years," the reader may conclude, but the official records of the Massachusetts Supreme Court show that it did happen in Chelsea, and the case may be found in 138 N. E. Reporter, 389, where the Court ruled that the bank was bound to have paid one of the checks—the right of choice, however resting with the bank.

"The two checks drawn by the customer were presented for payment at the same time. There were sufficient funds on deposit to pay one of them and in our opinion it was the duty of the bank, in the absence of custom or a rule of bankers to the contrary, to honor one of the checks, the bank having the right to make payment in any order it may decide, until the deposit is exhausted," said the Court.



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Pickett's Gap

By HOMER GREENE

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"GOOD-BY, grandpap!"

"Good-by, Dannie! Get to school in time, and don't forget to look after the sheep."

"All right, grandpap! Don't you forget about the new suspenders."

"No, indeed, I sha'n't!"

"Good-by!"

The old man drove away, and Dannie sat on the gatepost and watched him until the turn in the road, as it wound through the narrow canyon of Pickett's Gap, shut him from sight.

He was a picturesque figure, this old man, as he faced the climbing sun and started on the ten-mile journey to town. His long white hair, combed straight back from his forehead, curled gracefully on his broad shoulders. His complexion was as clear, his cheeks as pink-tinted, his blue eyes as bright and piercing as if he had been seventeen instead of seventy. But above his woolen shirt, open winter and summer at the throat, where once a muscular neck, like a bronze column, had risen from his chest, now appeared the wrinkles and the hollows which betoken weight of years.

His manners and his moods were no less eccentric than his looks. There were few people in that region who had not at one time or another, felt the shock of his blunt speech. Yet here and there some one, usually poor and friendless, would be found grateful enough to testify to Abner Pickett's kindness of heart.

He was more than kind to Dannie. Dannie was his grandson, it is true, but the whole countryside knew that Dannie's father had been driven from Abner Pickett's door when Dannie was a baby. The cause of this estrangement and severity was still a mystery, which even the gossips did not dare to solve.

Abner Pickett kept his own counsel, and Charlie Pickett never came back to explain. Not that the old man did not care. No one believed that. No one could believe it who saw him every day. He had the Pickett pride. His father had brought it with him when he came from New England into Pennsylvania and purchased from the commonwealth the four-hundred-acre tract on which he built the homestead.

Abner Pickett inherited with the place a pride in keeping it intact. He had intended to hand it down to his only son, Charlie, although he had no high idea of Charlie's ability as a farmer.

Indeed, it was well known that Charlie did not take kindly to farming. He was much more fond of knocking round the country with the compass and surveyor's kit that he had managed to get together, running land lines, locating corners, and laying out village plots for the people of that part of the county. And whether Dannie's grandfather was liked by his neighbors or not, it is very certain that Dannie's father was the most popular young man in the district.

No one was surprised when he married the belle of Port Lenox, the nearest up-river town, and brought her to his father's home. People shook their heads, however, predicting all manner of trouble and unhappiness for Charlie Pickett's wife in the eccentric old man's household.

ABNER PICKETT disappointed expectations, and became the devoted slave of his daughter-in-law. Brusque and biting to the world about him, he was to her gentle and helpful and courteous.

During her long illness, after Dannie was born, his devotion to her never ceased; and when he saw the roses begin to come back into her cheeks, he could no more restrain his delight than he could refrain from drawing his breath.

One night she grew suddenly ill again; and while Charlie and Aunt Martha did for her all that loving thought could suggest or tender care accomplish, Abner Pickett flung himself on his brown mare and galloped like a madman through the darkness to Port Lenox, ten miles away, to bring the doctor.

But no physician, no drug, not the most loving care could hold the struggling spirit in the frail body, and two days later Charlie's wife was dead.

Abner Pickett would not listen to the suggestion that her body should be taken back to her old home at Port Lenox for interment, and rather than face his wrath, her parents consented that the burial should be made in the Pickett family graveyard at the mouth of the gap.

That graveyard was Abner Pickett's dearest spot of ground. It lay in a direct line with the opening into the gap, which was barely two hundred feet distant. On the north it was bordered by the public road, on the south it was washed by the rippling waters of the brook, and on every side but the west the hills rose precipitously about it.

It was a beautiful bailiwick. The sward was always fresh and green and flowers blossomed there from May to October. Abner Pickett's parents were buried there, and his wife, and his brother and sister, and his own children who had died in infancy. Others more distantly related to him were buried there as well. And the sheltering soil also hid the bodies of some without home or friends, bodies that, had it not been for Abner Pickett's humanity, would have found interment in the potter's field.

When Charlie's wife was buried, the old man bought the most beautiful monument that the marble-cutters of Port Lenox could furnish, and had it placed at the head of her grave. It was a fluted column, with pedestal and cap, draped with chiseled flowers. Looked at from the west, it stood out tall and graceful, outlined in perfect proportion against the dark shadows of the gap or the rich verdure of the hills. And now Abner Pickett's graveyard had become more than ever dear to him.

It was spring when Charlie's wife died. Before the autumn mists trailed across the summit of her monument Abner had forbidden his son ever again to darken the parental door.

In the early gray of an August morning the young man crept into a little white-curtained room and kissed his sleeping baby. At the outer door Aunt Martha met him, and with tear-blinded eyes, flung her arms about his neck and promised to give his child her tenderest care.

A neighbor, who had risen before light, saw Charlie Pickett striding down the road through the morning mist into the shadows of the gap. For the rest, all was mystery. The years went by, and Charlie Pickett's name became only a memory among those who had known him in his boyhood and his youth.

AND here was Dannie, his son, a boy of thirteen, sitting on the gate-post and waving good-bye to his grandfather. He was a typical farmer's boy, the chum of his grandfather; and he took in the old man's heart the place once occupied by Dannie's mother.

For a long time after the last faint echo from the wheels had died away the boy sat on the gate-post, looking off toward the graveyard with its fluted column and on to the dim recesses of the gap. He was musing, wondering, wishing. It was all about his father, whom he could not remember ever having seen; who, so far as he could learn, was living somewhere in estrangement from his home. He had mentioned his father's name once to his grandfather. He had never dared to do so a second time.

The loveliness of his dead mother was a tradition, not only in the Pickett household, but in all the countryside. And yet what this boy wanted, what he longed for with his whole heart, was not so much a loving grandfather, not so much a dear mother's tenderness, as the living, breathing presence and daily companionship of a strong and stalwart father.

Ah, well! He dropped from his seat on the gate-post, and strolled up the path to the farmhouse, whistling softly. Max, his dog, came bounding out to greet him, and together they went to the sheep pasture to see that the sheep were not straying beyond bounds and tearing their wool with the brambles.

After that Aunt Martha, the housekeeper, gave Dannie his dinner-pail, kissed him good-by, as she always did, and sent him off to school.

Somehow, although Dannie was fond of his books, that day at school dragged dreadfully, and it was with a long sigh of relief that he found himself, in the afternoon, trudging down the dusty road toward home. Max, waiting for him at the gate, leaped joyfully to meet him.

He went to the house to see Aunt Martha, and then again, in compliance with his grandfather's request, and accompanied by the dog, he sauntered up to the pasture to look after the sheep. That duty performed, he went down to the flat and along the road to the potato field, where Gabriel, the steady hired man, was digging potatoes.

His name was not really Gabriel, as Dannie often explained; but every one called him that on account of his horn. He had a big tin horn, once bright with red paint and gilt bands, which he used for the purpose of driving the cows, the sheep, the poultry, and any other livestock of which he might be in charge, affecting to believe that the animals responded more readily to his signals on the horn than they would have done to the sound of his voice. He was turning out beautiful, big, red potatoes; the "Giant Rose" he called them. Now and then a few old-fashioned white pink-eyes were in the hills.

"Great crop!" he exclaimed, as [illegible]

"Biggest crop since the year you [illegible]

What did my father go away for—[illegible] so quickly that Gabriel, startled by [illegible] of the question, inadvertently struck [illegible] fine into a plump potato and split it [illegible]

"Oh, now, that's too bad!" he [illegible] stooped to pick up the severed parts [illegible] white on the broad cut surfaces.

"That's the fust potater I've cut [illegible] even nicked," he continued, gazing [illegible] remains of the vegetable in his hand [illegible]

"What did my father go away for [illegible] nie.

The question certainly was direct [illegible] mand an answer.

Gabriel leaned on his hoe-handle [illegible] and took the matter into due consideration before replying:

"Well, now, I've heard one story [illegible] and another story about it another [illegible] people has different ideas. As for [illegible] pared to make no affidavy about [illegible] another. 'Don't tell what you don't [illegible] cause it's easy,' as old Isra'l Pidgin [illegible]

"Did father and grandpap quarrel [illegible] boy.

Gabriel pushed the loose dirt from [illegible] next hill of potatoes before he answered.

"Well, if they did quarrel—now [illegible] sayin' whether they did or whether [illegible] but if they did quarrel, it was a quarrel [illegible] to, I can tell ye that. I knowed your [illegible] el, best-hearted, best-mannered [illegible] see in all my life.

"But," he continued impressively [illegible] out to do a thing, he did it whether [illegible] grandpap! Well, you know what he [illegible] in the way of well-digested contraries [illegible] mentionin'. 'Member the dressin' [illegible] Squire Biddlecomb last spring over [illegible] cow o' his?"

Gabriel chuckled for a moment and [illegible] a rip-staver. And as ol' Isra'l Pidgin used to say, 'It takes longer for a windfall to grow [illegible] timber than it does to heal up a family quarrel.'

Gabriel never tired of quoting Israel Pidgin, when asked about this supposed sage. He was [illegible] to give but meager information. "An ol' feller I [illegible] to know up in York State," was usually all that would say. There were those, however, who did [illegible] hesitate to declare that "Isra'l" was wholly a [illegible] ture of Gabriel's imagination.

"Heard anything about the new railroad?" the hired man asked, changing the subject abruptly [illegible] digging violently into the bottom and sides of [illegible] from which he had already thrown out all the [illegible] toes. "They say they're comin' right down [illegible] the farm and out through the gap to the river."

The boy knew that it was useless to [illegible] Gabriel further about his father, and he turned [illegible] disappointed and vexed.

"No," he replied impatiently. "I don't know [illegible] thing about the new railroad, and I don't care."

"Well," continued Gabriel, leaning contemplatively on the handle of his hoe, "if Abner Pickett [illegible] w'at it's worth to a railroad to run through that [illegible] he can afford to wear a starched shirt once a [illegible] wile, on a Sunday."

"Grandpap wears the kind of shirts that [illegible] him," replied Dannie, indignantly, "and it's nobody's [illegible] business but his own!"

"OF course! Of course!" chuckled Gabriel. "As ol' Isra'l Pidgin used to say: 'Blood's thicker'n water; and ye can't thin it by stirrin' of it."

Dannie was tired and disheartened. He looked away toward the gap and wished with all his heart that he might see his grandfather coming up the road toward home.

Some one, indeed, was coming out from the shadows of the rocks, but it was not his grandfather. It was a small, black-whiskered man carrying an engineer's transit.

When he was well out from the mouth of the gap he set up his instrument and adjusted it. Then he peered through the telescope, first back into the shadows of the canyon, and then ahead toward the graveyard, into the sacred enclosure of which the flagman, with his signal-pole, was already advancing.

"Look, Gabriel!" exclaimed Dannie. "Look! What are they doing?"

Gabriel gave a quick glance toward the gap. "It's the new railroad," he said. "Sure as [illegible] it's the new railroad!"

The chainmen were now in sight, measuring the distances, and the flagman, standing in the center of the graveyard and looking back toward the transitman, was holding his pole on the ground and balancing it with his hands to keep it plumb.

Gabriel had stopped his hoeing, Dannie had thrust his hands savagely into his trousers' pockets, and both stood gazing with wide eyes on the animated scene.

"What under the canopy Abner Pickett'll say to that beats me!" exclaimed Gabriel. "Think of it, Dan! A railroad right up through your grandpap's road and [illegible] right up through—dust my hellus if 'tain't [illegible] right up through your grandpap's grave-yard!"

Dannie set his teeth and jammed his fists deeper into his trousers' pockets as he saw an engineer's assistant drive a stake on the graveyard eminence midway between the fluted column and the road-side wall.

The engineers were evidently in some haste. They were setting their line of stakes along the narrow strip of land between the creek and the public road. Already the leveler and the rodman were in sight, coming up the location, and the transitman had advanced along the road to a point opposite the cornfield where the valley widened, and the land began to slope more gently to the north and west. He helped the fence lightly and came to within twenty feet of where Dannie and Gabriel were standing.

"Hello!" said Gabriel.

"Hello!" replied the stranger.

"Runnin' a railroad?"

"Yes. Do you own the place?"

"NO, but I work for the man that does, and I'm thinkin' it wouldn't be right healthy for ye if he was in sight."

The engineer laughed a little, showing a row of dazzling white teeth. "Does he own that gap?"

"Ain't nobody else owned it for forty year."

The engineer looked back into the shadows cast by the towering cliffs, and then up along his line of stakes.

"Well," he replied, "all I have to say is, speaking from a railroad point of view, he's got a valuable property."

He glanced ahead at his flagman and directed him to a point farther up in the field, to which point, being fixed and recorded it, he himself hastened, followed by Gabriel and Dannie.

Up to this moment the boy had not opened his mouth. Now, with the ring of rising indignation in his voice, he spoke up:

"Has the railroad got a right to run through my grandfather's land without his permission?"

"Yes," the man said, snappishly, "it's got a right to run plumb through his house; and I'm not sure we shall if he does any kicking."

"And have you got a right to run through that graveyard down yonder?"

"Oh, such things don't count when there's a railroad to be built. Come! You're right in my line of sight. Get over in the road there if you want to see. You'd better run home, anyway, and tell the man to look out for his cattle? First thing he knows the engine will be puffing and the bell ringing and the whistle blowing right through his barnyard, scaring all his livestock into fits."

Dannie's face was white, and his hands were clenched in anger.

"This land is my grandfather's, and I'll stand here I please on it!" he declared fiercely. "And that graveyard belongs to my grandfather, and your road'll never lay a tie or put a rail in it while my fingers and I have breath in our bodies. And you ain't fit to be an ol' man like him, when he ain't [illegible] is the act of a coward!"

The boy stopped, breathless, his breast heaving and his eyes flashing. Gabriel, his face glowing with admiration at the boy's spirit, pulled his old horn from his pocket, thrust it to his lips, and gave a tremendous blast.

The engineer stopped in the middle of a record, looked the boy over again from head to foot, and then burst into a hearty laugh.

"You'll do!" he exclaimed. "Stand right where you are as long as you want to. If you don't own this land some day, it won't be because you don't deserve to.

"I'm through, anyway," he added, glancing at his watch. "Put a plug there, John," addressing an axman, "and tell the boys to chain up. The country round this is open and free, with room for fifty railroads; but the gap is ours now, and the game is up, and the Tidewater & Western may catch us if it can. Put a bench-mark on the point of that rock, Miller, and then get your tools together."

The man addressed chiseled a cross on the projecting crown of a huge rock near by, the leveler took the height of the point and recorded it, and the work of the day was done. The engineer removed the head of his transit from the tripod, and as the rest of the party faced toward the gap, he turned to Dannie.

"Well, good night!" he said. "I don't like your manners, but I admire your spunk. Shall we part friends?"

He held out his hand as he spoke, but Dannie looked at him contemptuously and did not reply.

"Oh, just as you feel about it," continued the man, "but kindly give your aged and respected grandparent this bit of advice from me: 'Don't fight the Delaware Valley & Eastern'."

The engineer waved his hand jauntily to Dannie, flung back another unanswered good night, and a moment later, with the rest of his company, he had disappeared in the dark recesses of the gap, on his way to the river and the town.

It was dark before Abner Pickett came home. Dannie waited for him at the gate, his loneliness and anxiety increasing as the minutes went by.

He knew, from long experience, what to expect when his grandfather should learn about the railroad survey through the gap and the graveyard, and he dreaded to be the bearer of evil tidings. Yet it was with a long sigh of relief that he recognized the familiar rattle of the buckboard. Abner Pickett drove up to the gate.

"Hello, Dan! Out rather late, ain't you?"

"Waiting for you, grandpap."

"Well, I'm here, and glad to get here. How'd things go today? Gabriel get the potatoes all out? Have a good time at school, Dan?"

It was evident he had not heard about the railroad, or he certainly would not have been in this cheerful frame of mind. After mature deliberation, Dannie decided it would not be advisable to break the news to him until after he had eaten his supper.

Gabriel came out to help carry the parcels into the house and put away the team.

"I got the suspenders for you, Dan—red in the middle with skyblue edges and pink posies on the end. How does that strike you, eh?"

"Thank you, grandpap, I'm sure they're nice."

They all went out to the barn with the team. Abner Pickett liked to see for himself that his horses were well taken care of. He seldom came from town in a more cheerful mood than that which possessed him on this night. Everything had gone to his liking during the day, and that fact was clearly reflected in his manner and conversation. When the old man went into the feed room after the oats, taking the lantern with him, Gabriel took the opportunity to pull Dannie's sleeve, and ask, in a ghostly whisper, "Ain't heerd about it, has he?"

"No, I suppose not. Can't you tell him?"

"No, sir! Wouldn't do it for the bull farm—live-stock thrown in. He'd light on me like a thousand of brick. 'Discretion is the better part of valor when there's a job to lose,' as old Isra'l Pidgin used to say."

"Well, then, I suppose I'll have to. Thought I'd wait till after he's had his supper."

"Great scheme! 'A full stomach is twin brother to a big heart,' as old Is—sh—sh!"

ABNER PICKETT came back from the feed-room with a measure brimming full with oats, and divided the grain carefully between the two horses, talking in the meantime in the most cheerful manner of the work on the farm, and of the incidents of his trip to town.

When the task at the barn was finished they all went into the house, and the old man sat down alone to the supper saved for him by Aunt Martha. Afterward he joined Dannie and Gabriel on the side porch. The smoke from his pipe curled up through the warm, still air, and floated about among the rafters of the ceiling.

"Ain't it about time you went to bed, Dannie?" he asked gently.

"I thought I'd stay up a bit yet, grandpap; it's so warm and pleasant tonight."

"Well, I don't mind it if you do."



The Cheerful Plowman

TO TOWN SATURDAY NIGHT

WE farmers all hike into town the last night of the week, and there we loaf and chew the rag and talk our head Greek. We stand around and say, "Hello, how are you, Bill and Hugh? And, hang my pictures, here is Lem, old partner, how are you? And, here comes Frank McPherson, boys! Old Frank is just the same as he was thirty years ago; he plays a winning game! By golly, here comes 'Crankshaft' Jones! How are you, Jones, tonight? How is your stand of Durum wheat? Are any weeds in sight? Hello, Mike Feegan, bless your heart; you're still the same, you bet? How are your brothers, Pat and John, and Barney, too, and Hez? Let's have a little game of pool and then a bite to eat! No ready, thanks! I'll have a smoke! Nick Heikert's cutting wheat!"

The things we say, the things we do, seem pretty small and light when we meet at the county seat each week for half a night; but, hang it all, the human touch is what we fellows crave, and without that we'd soon grow stale and totter to the grave. The things we say, the things we do, are chaff, of course they are, they do not take the dollars in to pay for gas and car; but human touch is human touch, and while we live, I swear, just go to town the proper night and you will find us there!

J. V. T.

After that there was silence for a time. Then there was the sound of a footstep on the walk, and a man came up out of the darkness. It was David Brown, the next neighbor to the west.

"Heard you were down to the river today, Mr. Pickett," he said. "Wanted to see you a minute. Thought I wouldn't disturb you till after you'd had your supper."

"JUST finished. Glad to see you. Come up on the stoop, David, and have a chair."

Mr. Brown accepted the invitation very willingly. "Thought I'd run down for a minute," he continued, "and ask about the new railroad. Thought maybe you might have heard something about it down to the river."

"What new railroad, David?"

"Why, the Delaware Valley & Eastern. I noticed they were pointing pretty straight for my place when they quit tonight."

"I don't quite understand. Has there been more talk about railroads?"

Mr. Brown turned to Dannie. "Haven't you told your grandfather about it yet?" he asked.

"Not yet," stammered Dannie. "I—I was just going to when you came."

Gabriel left the chair in which he was sitting, next to his employer, and went down and seated himself on the porch steps.

Abner Pickett looked questioningly from one member of the group to another.

"Well," he said at last, "why don't somebody speak? Are you all struck dumb? What is it about the railroad, Dannie?"

"Why, grandpap, they—the surveyors, you know—they—they—"

"Well?"

"Whacked their stakes in regardless"—broke in Gabriel, in his anxiety to help Dannie out.

Abner Pickett turned on his savagely. "Shut up, you idiot!" he commanded. "Go on, Dannie."

"Well, they ran a line up through the gap, and stopped at the upper end o' the potato lot."

It was out at last, much to Dannie's relief.

When Abner Pickett spoke again his voice was as quiet and steady as if he were discussing nothing of greater interest than crops or cattle.

"Did it today, did they?" he asked.

"Yes," replied Dannie, "today."

"Anything done to prevent 'em?"

"Why, no, I couldn't do anything. I told 'em they'd never build their railroad, though."

"Laughed at you, didn't they?"

Dannie's cheek flushed with mortification and anger as he recalled his interview with the engineer. "Why, yes, they did; but I told 'em—"

"No matter what you told 'em; was anything done?" The rising inflection in the old man's voice warned his hearers that he was no longer able to smother the fires of anger kindled in his breast.

"No, grandpap. There were seven of 'em."

Again, in his anxiety to come to Dannie's assistance, Gabriel broke in:

"I told 'em that if Abner Pickett was there, he—"

"Shut up, you idiot!"

Gabriel obeyed his employer's command without a word of comment. The silence which followed was broken by David Brown.

"Just thought I'd come over, Mr. Pickett, and inquire. Didn't know but maybe you might know what they were paying for right of way."

The old man straightened himself in his chair. "Right of way!" he exclaimed, scornfully; "right of way! They don't pay for it; they steal it! They pick out the best land you've got, set their stakes on it, and call it theirs. They're thieves and robbers, and cowards as well! Yes, cowards! Else why did they wait to pick out a day when I was away from home, and nobody on the premises but a thirteen-year-old boy and an idiot of a hired man? Oh, if I'd been here, I'd have told 'em where to set their stakes!"

He rose to his full six feet two inches, straight as a pine-tree, his neck and face crimson with anger, his blue eyes flashing fire.

Brown rose also. "Guess I'll have to be going, Mr. Pickett," he said. "Thought I'd just run over and see—and see if there was any news from the river."

After David Brown had gone the old man grew somewhat calmer. He took two or three turns up and down the porch, and then resumed his seat.

"Strike into the potato-field, did they?" he asked Dannie.

"Yes," was the reply, "went up through the west end of it as far as the big rock."

"Where else did they go?"

"Why, they cut across the corner of the meadow lot, and below that they ran through—"

"Well?"

"Through—O grandpap!"

The old man rose slowly to his feet again, as if impelled thereto by a dreadful thought.

"Dannie—the graveyard?"

"Yes, grandpap."

The clay pipe which Abner Pickett had been smoking broke into a dozen pieces beneath the pressure of his clenched hand, and fell rattling to the floor. It was a full minute before he spoke again.

(To be continued.)

TIGHT BINDING TEXT CUT OFF





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Days That Are Gone

R. P. KESTER in the January 26 issue spoke of neighborhoods retrograding and asked how is it in your neighborhood?

I have been a close observer of farm conditions for seventy years and at no time have I seen as many idle farms and as little community sociality as at present.

Our township is strictly a rural community, six to twelve miles from Franklin and fifteen from Oil City. Twenty years ago there was very little manufacturing done in these cities. Farms were mostly occupied by owners. Most farmers had families of boys and girls. We had a going Grange of 150 members. There were six churches of four denominations and nine schools.

Our fathers had done the pioneer work, cut down the woods, burned the logs, rolled the stones around to get in a crop. We blasted out the stumps and stones. It required lots of man power, giving employment to our boys and girls in summer, and in winter they went to school, taught school, got wood, etc.

The urban population of our county (Venango) was about two-thirds that of the rural population. Our board of commissioners was generally composed of two farmers and we were represented in the other offices. Our tax was less than half for the same valuation. We had no political scandals.

"One Hoss Open Shay"

Our social activities were somewhat crude—we had log rollings, stone haulings, wood choppings. The Grange hall was a center for dancing, festivals, entertainments, etc. Our young people piled in sleds and with bells jingling what a merry ride to some neighbor's for a party, a taffy pull or play, and we fathers and mothers could shake a leg or play "The Bear Went Over the Mountain" with the best of them. We had spelling schools, Lyceums, oyster suppers, etc., attended by everybody from six months old to octogenarians.

We lived mostly from the products of our farms. She was a poor housewife who did not have enough fruits, jellies, preserves, etc., to open a can every day of the dormant season and the odor of bread baking and apple butter boiling was abroad in the land.

Prices for farm products were low, but the farmer's dollar bought in proportion to its value. But prosperity struck us a solar plexus blow. Franklin woke from a sleepy county seat, by the infusion of new blood and capital, to a first-rate industrial center with an unparalleled building boom. Oil City became the center of Standard Oil activities. Firms bid against each other for laborers. Our boys left the farms and flocked to the cities. The urban population trebled, the rural one shrank.

Is There a Remedy?

The cities get all the offices and are honey-combed with fraud and political graft. Oil City now ships oil-well supplies to all parts of the world, has an order for a trainload of pumps and engines for Russia.

Our Grange is innocuous desuetude. Our churches, except one, are pastorless. Half of our farms are going back to the primitive. Our social activities are nil. The telephone is the old wives' gossiping stand.

A few of our most productive and level farms where they can use modern machinery are making it pay by dairying. Instead of milk being ladled out of a push-cart on the street it takes several thousand cows to supply the sixty thousand urban population. Instead of the odor of baking bread we have the sickening one of musk, and the housewife buys her bread and canned goods at the grocery and motors to the movies. The husband migrates back and forth to the shop. The family keeps a pig, a cow and some hens and raises a few spuds.

What is the remedy? "There ain't any such animal." As long as supply is greater than demand, and Uncle Sam is spending hundreds of millions to open up further sources of supply. Our small side-hill farms will be more profitable.

Am I a pessimist? Not on your life. There never was a time in the world's history when the man of the world who was "it" got such a kick from life and we old "has-beens" sit by the stove and say "go to it." O. T. Sigworth.

Venango county, Pa.



VOTED FOR LINCOLN

One of Pennsylvania Farmer's oldest subscribers is Mr. Henry Skiles, Ingomar, Allegheny county, Pennsylvania. Last October he celebrated his 94th birthday. He comes of a long-lived family, three of whom lived to over ninety-two. Mr. Skiles is a Civil War veteran, serving three years with the Fourteenth Pennsylvania Cavalry. He has voted at every presidential election for seventy years and has the distinction of voting for Abraham Lincoln.

A Kind Word for Present

THE Pennsylvania Farmer is the best farm paper that I have ever read, but several topics have been discussed that I could scarcely refrain from replying to. The one in which Mr. R. P. Kester approached and spoke so frankly on in regard to the deterioration of the farm folk deserves reply, as he thinks they are not the equal of a generation ago.

I beg Mr. Kester to let me assure him it is just a fancy. I think he has taken an incomplete census of the farm homes and people. If the past generation would come back they would not recognize the fine farm homes that have been erected by their children, large numbers of them lighted with electric lights and electricity doing the greater part of the drudgery that the over-worked housewife of the past had to do, listen to their intelligent conversation and hear their wonderful radio reception, see their large barns and silos and note their blooded stock.

Large trucks convey our children to consolidated schools of the finest kind, furnished with every modern convenience. Has ignorance established this?

We must all acknowledge that in deep water there is always drift-wood and some of it finds its way to the banks, and so it is with every big flood, is and always will be some people who will drift to isolated places. You will find them wherever you go. They do not constitute the vast masses of intelligent country people.

I will close hoping I may say at some future time what I think in regard to farm relief. A Forest Hiker.

Fulton county, Pa.

THE New Jersey State Department of Agriculture is seeking an appropriation of $1,500 from the State Legislature to aid federal workers in fighting the corn borer. It is further seeking legislative enactment which will make cleaning up in uninfested areas compulsory. The federal government spent $44,000 in New Jersey last year in scout and quarantine work.

Top-Dressing Helps Corn

LAST spring I hauled the manure and put out on piles on the solid unplowed ground and when I plowed I spread it over on the plowed ground, thus saving very much horse labor.

The field had had corn on it the year before and didn't yield very well, so last spring I top-dressed it and gave the harrowing and planted on June 1st. On June 26th the hail storm greatly injured its appearance for a while, but it regained and I gave it two plowings with three shovel plows, the last one in August.

In the latter part of August it suffered a hard storm, blowing it down in all directions, but in spite of all these setbacks it yielded around 15 barrels to the acre, a fair crop for thin, run-down land. John B. Shank.

Franklin county, Pa.



C. C. Albaugh, Jr., and his pen of prize-winning White Plymouth Rocks. Young Albaugh is a member of the Vo-Ag Junior Class of Weston High School. His pen of White Rocks won the blue ribbon of the annual Junior Display of the Central West Virginia Poultry Association at the National Poultry Show in New York City they were adjudged the winner of the Junior Display.

It Couldn't Happen

By M. L. HAYWARD

I WAS certainly lucky to get that $300 check from Hawkins when I did," the farmer assured himself, endorsed the check, and started for the bank on which the check was drawn. At the same time A was traveling toward the same bank with the same thought in his mind and a $200 check signed by Hawkins in his pocket, both walked up to the paying teller's wicket simultaneously, pushed the checks through the window at the same instant, and said "cash please" in perfect unison.

"Now you've got me in a box," the teller admitted, "for Hawkin's got only $75 to his credit."

"Well, that's easy. Pay my check," the farmer suggested.

"No—pay mine," A urged.

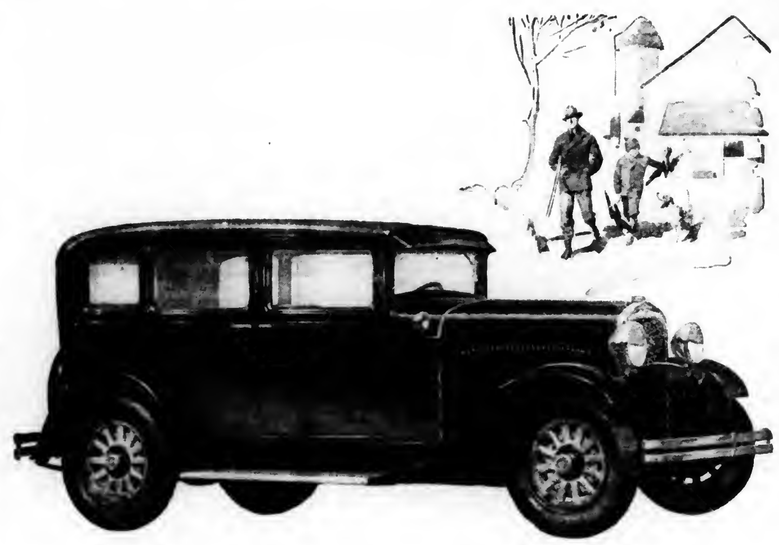
"I guess I'll play safe and pay neither one," the teller demurred.

"If you do Hawkins will sue the bank for refusing to pay at least one check when he had sufficient funds for it," the farmer assured him.

"Well, I've been paying out money on checks for 40 years, and the like'a this never happened before," the teller declared.

"No, and it simply couldn't happen once in 400 years," the reader may conclude, but the official records of the Massachusetts Supreme Court show that it did happen in Chelsea, and the case may be found in 138 N. E. Reporter, 389, where the Court ruled that the bank was bound to have paid one of the checks—the right of choice, however resting with the bank.

"The two checks drawn by the customer were presented for payment at the same time. There were sufficient funds on deposit to pay one of them and in our opinion it was the duty of the bank, in the absence of custom or a rule of bankers to the contrary, to honor one of the checks, the bank having the right to make payment in any order it may decide, until the deposit is exhausted," said the Court.



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TIGHT BINDING TEXT CUT OFF

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The Nut Tree Status

By JOHN W. HERSHEY

FOR several years now we have been talking nut trees in this paper. What progress has it made and why should it make any? To answer the first question, I find that several new groves were set out last spring, and there are several 500 to 1,000-tree groves three and four years old which will soon start to bear. Several groves are of bearing age. One owner to whom I wrote three months before the time for nuts to drop informed me that he had orders then for more nuts than he could supply. This grove at five years of age in southern Illinois, had many trees bear nearly a half bushel. At seven years old some Thomas bore three-fourths of a bushel and at nine years old (this year), the owner wrote me that a lot of the Thomas would bear two and one-half bushels per tree.

When I had to explain how growing could be done cheaply and the crop sold for a large profit or larger than for apples, basing my claims on performance of individual trees, many laughed and said, "Wait and see how the groves do." Today the time is here where we can prove that a grove tree properly fertilized and cultivated will produce two bushels per year at the same age an apple will without any cost of spraying or picking, and the nuts sell for from three to five times as much as apples.

Daily Diet

"Will the market ever become glutted?" asks S. H. Not as long as I live. Why? Because intelligent doctors are advocating proper living for health. Hospital prices are becoming prohibitive, hence the individuals en masse are looking for health and relief in other fields and are getting it in a more rational diet. God gave man his first instructions in Gen. 1-29: "I have given you every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat." In face of our national production doubling every few years we have a stiffening of retail nut values. And the beginning of the use of nuts as a daily diet is only starting.

To answer the second question I see I have stated several facts that cover it but will give another. When Moses gave, in the Mosaic law, instructions regarding besieging a city he made this expression: "And when besieging a city thou shalt not destroy the trees by forcing an ax against them; only those that he not for meat shalt thou cut for bulwarks. For the tree of the field is man's life." Can one fully comprehend the value God put on the tree for man's health and life? Can one imagine our destroying armies of today saving a nut tree or other food-bearing trees when they go on a rampage? Yet it is written, "The tree of the field is man's life."

Wayside Shade Trees

Get a picture of all the beautiful hills of Pennsylvania and the neighboring states as nude as a bald head and you can see what a horrid world we would be living in. Then again get a picture of what it would mean to have the many city shade trees and wayside trees of a valuable nut-bearing kind. In the past of course only seedlings could be had, but now the grafted varieties of black walnuts make no excuse for planting our highway with an absolutely worthless elm and others of little more value.

Imagine if you will what a utility [illegible] would be if all the land owners planted nut trees of the different kinds. Do you know that in some provinces of Germany it used to be a law, and may be yet, that a young man had to plant a certain number of English walnut trees before he could marry? Think of the conservatism of that nation and the power it developed by it. Think it over again.

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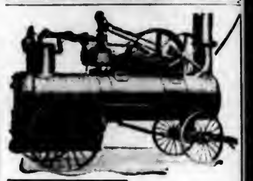
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Financial Rule for Widows

IT is a common saying that the first thing to ask of any investment is "Will it safeguard the principal?" Anything that promises more than a safe rate is to be regarded with suspicion. So if even well, strong, young and ambitious persons must look well to investments, it is doubly necessary for widows with children, old people and those prematurely aged by illness or infirmities to watch their step. More than that, widows and old people should get it into their heads once for all that they should not try to add to their savings except by economy of life, but to put forth every effort to hold to what they already have.

Along comes a widow with a snug farm, safe and secure, hers for her lifetime with absolutely no strings to it in any way. Shall she put a mortgage on the fertile acres, a safe mortgage, she listens to explain, and buy a farm that gives hers to give her growing boys more opportunities? And she really isn't asking advice, but wanting somebody's O.K. to her plan. She has it all pictured out in glowing terms. The boy who is not quite twenty is a little wild, and he wants to go away to town to get a job, so she thinks to hold him close to home by buying another farm.

A widow whose twenty-year-old son became angry and estranged when she would not carry out a plan like that threw himself into the business of farming on a rented farm to show his mother her mistake, but when he came into possession of a mortgaged farm on which he had made a substantial payment by his own efforts he was man enough to tell his mother that she had chosen wisely. At twenty he could not see any one's interests but his own, but at thirty he saw that his mother's plan in holding to what was safe had educated the younger children and taught them lessons of economy, with the farm still safe from debt and growing in value. In helping one son to see the justice of her plan, she helped all the rest to sturdy independence and safety. The young couple could risk a mortgage and get by with it, for they were young and strong, but she was middle-aged and must take no risks with the money she and her husband had worked so hard to accumulate.

But if nobody ever took a risk the world would stand still, say those who urge the widows and old folks to look around for good investments that involve debt and the need for a strong will, a clear brain and a body to endure hard work. They point to examples where great risks were taken and everything came out well, but they fail to point to the discontented grandmothers living around with their children, trying to convince themselves that they are better off than in their own homes with their own things about them, and to the unhappy old people crowded into a room or two trying to eke out a living off the odd chores income the old man makes in good weather. They risked too much and lost.

But there is a way to make progress and that is by saving a part of the income from the property now in hand. No matter how small the sum the owners will be happier and better content to have a little savings account snug and secure somewhere. Then if a farm comes up for sale very cheap, and the widow wishes to help a son or daughter she has not touched her inheritance at all. She invests what she saved from it and makes real progress.

A mortgage of that kind is quite different from the expansion to please a boy or son-in-law who may become discontented and leave in a year or so. With one farm clear and the other in her own name and more than half paid she can make financial progress as many old people and widows have done with care and economy. Just remember the rule: Hold on to what you have tightly, and do your expanding with money saved from that investment. If you have then demonstrated that you can manage and save, and whatever property you buy then will be safe.

Farm Loan Secretary.



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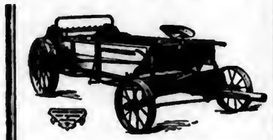
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Fig. 1—Raised under McLean County System

The Spring Pigs

IT WON'T be long now. Before many days the spring litters will commence to arrive, and in fact a few of the early ones may be here now. I was much interested in a recent contribution from friend Hiram Dobbin about pigs suffering for want of the cheapest of all essentials, water. Many hogs are raised under such conditions and, everything considered, it's a wonder how well they do with all their troubles to contend with.

At heart the hog is not the dirty fellow that we sometimes imagine. If allowed his choice he is inclined to be rather a dressy sort of an individual. He is a frequent bather and he knows full well the value of almost any kind of an oiling system in keeping his coat free from lice and glossy.

Clean and Healthy

I am a firm believer that the personal filth usually attributed to the hog been lately and which has been plow up to help in destroying worms worm eggs. From the first the made good gains and were thrifty strong. The excellent gilt shown Figure 2 is one of the litter.

A Victim of Circumstances

Now contrast the good gilt with poor runt shown in Figure 3. She longed to a man who never did lieve in pampering hog She is same age as the good Hamp but is a little matter of two hundred pou difference in weight and good knows how much more As a ter of fact she is the runt good but was born in a dark ridden filthy pen, who from first was subjected to any of hard luck you could early age she became [illegible] still is at the time of writing.

This is a cheap hog to any cost proud owner very little time, labor expense, but is this sort of thing kind of economy? She has had time to put on any flesh and has ing in her young life to "appreciate

The Hamp gilt, now bred to a boar of her own pure breeding, doubt worth anywhere from $50 to The runt might bring three. A gilt from this same Hampshire was bought by a club boy who fed her and won first place in the county fair, and right here I state that I think we older heads something to the boys and girls gaged in club work, and to the who started the idea. The kids so fully demonstrated the results can be obtained by care and good agement that it pays to stop, look listen.

If the owner of the runt pig had possessed a club boy or a girl, it's ly probable that the runt would have happened.

David Gray



Fig. 2—Result of Good Environment

is a matter of forced environment rather than personal choice. Last fall I watched for a long time the herdsman in charge of an excellent show herd of fine Chester Whites, as he took his charges one at a time to the wash rack, and there scrubbed them as white as snow with soap and water. The pigs stood quiet for the bath and showed every sign of pig enjoyment. After the bath they were placed in the show pens filled with bright clean straw of which they were also highly in favor.

In Figure 1 we have a fine thrifty sow and litter of good husky pigs. These were raised under a modified McLean system, that is farrowed in dry comfortable quarters which had been scrubbed with hot lye water and the sow's udder washed clean before the arrival of the litter. After this the sow was not allowed to get into any filth or mud holes and naturally had no infection on her udder to infect the pigs. The sow and litter were turned out on a clean lot where no hogs had



Fig. 3—Victims of Circumstances



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In the Sheep Barn

By D. S. BELL

THE period of pregnancy in ewes varies slightly according to the breed they represent. In general, ewes of the mutton breeds will yean about 147 days after being bred while Merino ewes will carry their lambs about two days longer than this. The wise shepherd, however, will increase his attentions toward the bred ewes, starting about 140 days after the ram was admitted, and he will continue his watchfulness until the last ewe in the flock has delivered her offspring. Such a program requires effort and may result in some loss of sleep, yet a reward will be returned by way of lambs and ewes saved because of timely assistance rendered by the flock-master.

Occasionally we meet those who argue that a lamb which cannot be delivered by nature's own efforts, or a lamb that is too weak to rise and seek its first meal unaided, is not worth bothering with. Perhaps these folks have experienced uniformly poor results with both the lambs and the ewes that they have helped. In such cases ill-advised or untimely aid, or crude workmanship, is usually the factor. Many ewes and lambs are saved by timely assistance properly rendered. I could cite many instances of lambs that were born into the flock in such a weak condition that they could not rise without help but which, when helped to their first few feedings, took strength and grew out into the largest lambs in the band

Too Much Attention

On the other hand, or opposed to the group mentioned, we find those who think their presence among the lambing ewes is imperative. Their fault is that of lending aid when aid is unnecessary. Too much disturbance and interference during the early stages of delivery is not beneficial to the ewe or to the unborn lamb.

Curiosity or desire to know how the affair is progressing should not prompt the flock-master to pass among the ewes unless they are quiet and admit readily to his presence. His job should be to single out, by glancing over the flock, those ewes that are restless and fretful. He should form a mental picture of these ewes that are suspected so that on subsequent trips he can identify them at once. When he locates such ewes his trips should be made more frequently just to see that all is going well.

The first true indication that delivery is actually in progress is a sinking-in on the upper flanks of the ewe. Labor pains will commence in a short time and the water bag will be expelled. Likely the ewe will continue to walk around the pen and may lie down often only to rise to her feet again. She will show signs of nervousness, impatience and perhaps irritability. As long as the ewe continues in good strength, and an abnormal presentation is not suspected or mechanical obstruction does not hinder progress, these signs made by the ewe should not urge the caretaker to rush to her assistance. Nature is simply following her own course.

When the Shepherd Can Help

When the labor pains become violent and the ewe remains lying the shepherd may and should make his first appearance in the pen with the ewe. Most often a ewe in this stage will permit the shepherd to kneel quietly beside her and make an examination to determine the position of the lamb. If he finds that the lamb is lying in normal position with the muzzle extended and lying on both fore-legs, and if the ewe's strength is not spent, he should retire quietly from the pen and allow nature to proceed. On the other hand, if he notices that the lamb is unusually large or that the ewe's strength is ebbing, he should grasp each foreleg of the lamb in turn and pull steadily and cautiously outward and downward until the leg of the lamb is fully extended—the tip of the lamb's hoof will extend

(Continued on page 44.)

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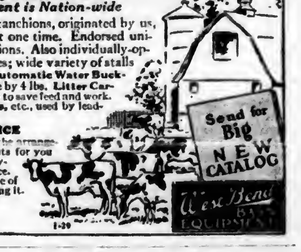
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Produce Market Review

POTATO markets in the East showed a weaker tendency during the past week and prices averaged somewhat lower. Fairly liberal supplies and generally slow demand were largely responsible for the dull condition of the market. Considerable of the Pennsylvania potatoes offered in Philadelphia were ordinary and consisted of a large percentage of stock showing wire worm injury, and misshapen tubers. There was a fair demand for well-graded potatoes of good quality and these sold at $1.50@1.60 per 120-pound sack, but there was considerable stock that brought $1.25 and even lower.

Pennsylvania is supplying a far greater proportion of the potatoes coming to Philadelphia this season than for many years. During January there were 413 cars of potatoes unloaded in Philadelphia and of this number 358 were from Pennsylvania and 14 from Maine. In the same month in 1928 we received 401 cars of potatoes of which Pennsylvania supplied 154 and Maine 180. The proportion would be even greater if the figures were available showing truck receipts from Pennsylvania this year as there has been a striking increase in the number of potatoes shipped in this way.

These figures show that the Pennsylvania grower enjoys a great advantage over the more distant producer and that the advantage is greater in a year of poor markets than in a year of high prices. Dealers cannot afford to buy Maine potatoes and ship them to Philadelphia as they could not show a profit and would lose heavily.

A glance over the other Eastern markets shows Pennsylvania potatoes bringing $1.90@2 per 150-pound sack in Baltimore, $2.25 in Washington and $2@2.10 in Pittsburgh. Bulk Pennsylvania stock brought $2 per 180 pounds in New York. Maine Green Mountains were quoted at $1.20@1.25 per 150-pound sack f. o. b. Presque Isle and New York potatoes $1.50, f. o. b., Rochester.

"Sweets" and Apples

The sweet potato market was generally dull although Philadelphia and New York reported a fairly active demand for extra fancy well-graded stock. In Philadelphia there seemed to be a better demand for stock packed in ⅝ baskets than in the bushel hampers and prices were relatively higher. Good yellows and reds brought $1@1.35 per ⅝ basket while bushel hampers brought $1.25@1.85. Yellows sold at $1.50@2.50 per bushel in New York. New Jersey kiln dried stock sold at $2.75@3.25 in Chicago and at $2.25 in Boston. The majority of Philadelphia's supply of sweet potatoes is arriving by motor truck and during January there were only 14 carloads unloaded. These were from Virginia, Maryland and Delaware. During January, 1928, there were 35 cars unloaded. The smaller number this year was due to lighter crops in the Eastern Shore sections and to increased haulings by motor truck from these states.

Apple prices were generally steady in New York and Philadelphia but receivers had difficulty in moving any large quantities at satisfactory prices. Buyers were purchasing only for their immediate needs. Shipments of apples are running larger than at this season last year. Truck receipts of apples were moderate in Philadelphia and Delicious and Staymans brought $1@1.75 per bushel with a few extra fancy lots selling at $1.85@2. Black Twigs and Yorks brought $1@1.50 and Romes $1@1.75. Fancy fruits sold at unchanged prices in New York but poorer offerings were dull and lower in price. Baldwin and Rome brought $1@2 per bushel and Delicious $1@2.25.

The mushroom market improved considerably during the week, both in Philadelphia and New York. Pennsylvania celery held steady and most of the root crops such as beets, carrots, parsnips and turnips sold at unchanged prices.

Dairy and Poultry Products

The Eastern butter markets were unsettled during the week. Receipts were larger at practically all markets. Prices fluctuated considerably from day to day as the market was very sensitive to small changes in supply and demand. Ninety-two score butter closed at 50c per pound in New York and 51c in Philadelphia. The outlook for the market is rather unsettled as dealers express varied opinions. Some believe that prices are now so high that they are curtailing consumption while others expect continued high prices.

Receipts of nearby fresh eggs in Philadelphia were comparatively light and good whites were quoted at around 42c per dozen and mixed colors at 41c. Storage through the West and Southwest still continue a strengthening factor, as receipts from these areas were smaller than normal for this season. Dealers anticipate increased arrivals in the near future and the market is sensitive and will react quickly to any change in the supply. Storage eggs sold more readily on account of the scarcity of fresh eggs. Nearby white eggs dropped 2@3c per dozen during the week in New York. Brown eggs were also lower but did not drop as sharply as whites. Heavy receipts of Pacific Coast white eggs were the chief weakening factor. Fresh nearby white eggs ranged from 37@44c per dozen, browns from 38c to 45c and mixed colors from 31c to 44c.

Receipts of live fowl by express were light in New York but freight arrivals were fairly liberal. Light fowl were firm but heavier fowl showed a weaker tendency. Pullets, chickens and broilers were in fairly active demand. Leghorn fowl brought 30@31c and colored breeds 31@32c. Broilers brought 36@40c and pullets 32@35c. Receipts of fresh dressed poultry were rather light from both eastern and western sections and the market was about steady.

W. R. W.

Philadelphia, Feb. 9, 1929.

Glimpses of the Farm Markets

THE market unrest usual at this time of year began to show itself in early February, says the U. S. Department of Agriculture. Increasing supplies of butter, eggs, lambs, potatoes and early vegetables, combined with frequent weather changes to unsettle the conditions affecting prices. Crop news begins to show more effect on the grain markets near the end of winter and prices after the January rise had a setback the month. Most feeds and good hay have been selling well during cold weather at fairly steady prices. Cotton, hogs, dairy products and most fruits and vegetables have not shown any great or long continued change in market position so far this month.

Potatoes.—City prices of potatoes are fairly well maintained at recent levels. Carlot movement is again increasing; with 600 to 1,000 cars daily. The country market on western New York Round Whites closed at mostly $1 per 100 pounds, and $1 was still near the average of prices in the Chicago carlot market. Imported stock from Bermuda sold at $9@10 per barrel in New York.

Sweet potatoes.—Shipments of sweet potatoes at 25 to 50 cars daily are moving at about half the rate of a year ago. Supply and demand are reported moderate in city markets. Most sales of New Jersey stock ranged $2@2.25 per bushel in eastern markets and most Maryland stock $1.50@1.75.

Onions.—Midwestern yellow onions advanced 25 cents, reaching $5@6 per 100 pounds in large distributing centers, compared with New York arrivals at $4@5.50 and Massachusetts stock at $3.75@4.50. With available shipping stock much less than last season, onion holders are confident.

Cabbage. A steady general price range of $45@50 per ton prevailed on New York and Wisconsin Danish-type cabbage early in the month in city consuming centers. Texas is expected to have a crop of 127,400 tons of cabbage this spring or nearly 40 per cent more than in 1928.

Butter.—Features of the butter market are the very light storage holdings, moderate visible domestic supplies, practically no probability of imports in any volume for the present and finally the great buying power of the public. New York, Boston and Chicago held a firm position, with supplies barely equal to the demand. One strengthening factor on the market was the possibility of curtailed production on account of the prolonged cold weather which prevailed during early February throughout the greater part of the heavier producing sections. The cheese situation is unchanged, trading slow and demand limited.

Poultry. Prices of dressed poultry are being maintained above those of a year ago, for practically all classes. Receipts at the markets are running lighter than a year ago by about five per cent. Stocks holding are lighter than a year ago. These facts indicate a supply situation which points to a maintenance of the higher prices as compared with last spring. Especially so, since there has been no evidence of slackening of demand, although the poultry market became a little weaker early in February under pressure to keep supplies cleaned up closely.

Eggs. The fresh egg situation has shown the usual reactions to changes in production and arrivals at the markets. Early in January sentiment weakened in early February because of the sharp break in Pacific Coast white eggs, but recovered later. The movement of storage eggs has been rather slow and the market was firm in that class of goods. General tendency of the egg market is downward as a matter of course this time of year, subject to temporary weather conditions.

Grain. The grain market weakened slightly during early February and then declined from previous higher levels. Reports of more favorable weather prospects in Argentina, together with fairly large offerings of domestic grain, weakened the corn market and other cereal grains followed the decline in corn prices. Demand was held about steady with country and interior elevator offerings. Cottonseed meal prices were about steady with country and spot demand quiet in most markets.

Hay. Timothy hay prices were somewhat irregular. Offerings were ample to accommodate current requirements at most markets. Dairy inquiry was especially active for alfalfa and good quality hay.

Wool. The trend in domestic wool prices has been irregular. One 64-finer delaines sold in eastern markets a fraction of a cent higher. In eastern grease, while 48's-50's sold at 50 cents in the grease. A fair demand was reported for Western wools of good to choice grades and quality.

Miscellaneous Produce

Philadelphia

Eggs.—Extra firsts, 41½c; firsts, 40c; seconds, 39½c; storage, 29@32c; selected and candled fresh eggs, 48@50c; select in cartons, 50@52c.

Butter.—Creamery, tubs, 92 score, 51@55c; 88@89 score, 47@47½c.

Poultry.—Fowls, 31@33c; Leghorns, 30@32c; springers, 32@36c; broilers, 37@38c; old roosters, 23@25c; ducks, 28@33c; turkeys, 30@40c; rabbits, pr., 18@20c; guineas, per pair, $1@1.85.

Strawberries. Fla., auction sales, 32-qt. crate, mostly 48c per qt.; pony refrigerator express, best, 45@50c.

Apples. U. S. No. 1, per bbl., Virginia Yorks, $5.50; Penn'a Yorks, $2.50@2.75; Md. per bu., Staymans, $1.00@1.75; nearby ⅝ bskts., Delicious, $1@1.25; Romes, 65@90c; Staymans, 65c@$1; Yorks, 65c@85c.

Cranberries. Per ½ bbl., N. J., $2@4.

Celery. California crates, large rough, $2.50@3.50; nearby bunches, wired, 15@25c.

Potatoes. Pa. round whites, per 120 lbs., $1.40@1.60; N. J. ⅝ bskt., 35@45c.

Sweet potatoes. Md. and Del. bu. hamper, No. 1 yellows, $1.20@1.75; N. J. ⅝ bskts., $1@1.25.

Broccoli. Texas, per bu., $1.25; lettuce crates, 85@2.25.

Beets. Crates, bunched, 85@2.50; nearby ⅝ bskts., 50@90c.

Brussel sprouts. Calif., drums, 80.

Collards. Va., Norfolk section, bbl., 75c@$1.

Carrots. Nearby ⅝ bskts., $1@1.50.

Cabbage. New, Fla., ½ bbl. hampers, 75c@$1.25; Texas, 100-lb. crates, 85@3.

Kale. Va., bbls., $1.50@1.75.

Lettuce. Calif. Iceberg, crates, 4 to 5 doz., $5@6; Fla. ½ bbl. hampers, Romaine, 75c@$1.

Onions. Ind. 100-lb sacks, U. S. No. 1, yellow, $5.25@5.50; New York, $5.25@5.50.

Mushrooms. Nearby, 3-lb. bskt., 40@$1.15.

Parsnips. Nearby, ½ bskt., 75c@$1.

Rutabagas. Nearby, 100-lb. sacks, $2.25.

Turnips.—Nearby, ⅝ bskts., purple tops, 25@50c.

Peppers.—Fla., crates, 85@3.

York

Butter. Creamery butter 55c@58c; country, 45@50c; separator, 55@60c.

Poultry. Hens, 22@26c.

Vegetables. Potatoes, 75c@$1.10 per bu.; cabbage, 50@90c per bbl.; lettuce, 50@90c bbl.; spinach, 20@25c ¾ pk.; turnips, 15c ¾ pk.; onions, 18@25c ¾ pk.; celery, 5@15c stalk.

Lancaster

Butter. Country butter 54@60c; creamery, 52@60c.

Poultry.—Chickens, dressed, $1.25@2.50 each; springers, 75c@$1.25 each; ducks, $1.50@2.75 each; squabs, 25@50c each.

Eggs. Fresh eggs, 40@44c.

Vegetables. Beets, 10@15c per bunch; egg plants, 20@30 each; string beans, 40@45c per ¾ pk.; beans lima, 40@45c per pt. box; cabbage 10@20c per head; carrots, 8@15 per bunch; cauliflower, 20@40c per head; celery, 10@25c per bunch; cucumbers, 10@15c each; spinach, 15c per ¾ pk.; peppers, 5@8c each; endive, 5@10c per head; lettuce 10@20c per head; mushrooms, 25@30c per pt. box; onions, 20@25c per ¾ pk.; green onions, 8c per bunch.

Potatoes.—Per bu. 65@75c.

Sweet potatoes. 20@25c per ¾ pk.

New York

Butter. Creamery, higher than extras, 51@51½c; extras, 50½c; seconds, 46@46½c.

Eggs. White eggs, current receipts average extras, 41c; extra firsts, 40c; firsts, 38c; mediums, 40@40½c.

Poultry. Live, by express fowls, 32c; chickens, 28@30c; broilers, 30@40c; ducks, 17@28c.

Apples. Eastern and Southern, bu. bskts., Romes, $1@2; Wealthy, $1@1.75; Delicious, $1@2.25; McIntosh, $1.50@3.50; barreled stock, No. Spy, $3@7; York Imperial, $2.25@3.5; mixed varieties, $2.75@3.50.

Potatoes. L. I., 150-lb sack, $1.40@2.75; Maine, $2@2.25.

Sweet potatoes. Jersey, best bskt., $1.50@2.75.

Baltimore

Butter. Creamery, higher, 51@52c; rolls and dairy prints, 25@28c; packing stock, 24c; butterfat lb. 49@50c.

Eggs. Md. Pa. nearby firsts (loss off), 37@38c; western firsts, 33@36½c; southern 30@36½c.

Live poultry. Hens, old, 2½ lbs. and over, 28@29c; small to medium, 24@28c; Leghorns, 26@27c; young chickens, 32@34c; broilers, small, 2½ lbs. and over, 37@40c; roosters, 17@18c; ducks, 24@26c; pigeons pair, 20 to 25c; squabs, 40@50c; turkeys, 30@32c.

Apples. [illegible] per bbl. $3@6.25; per bbl. $3@6.

Potatoes. Per 150-lb sack, $1.75@2.25.

Sweet potatoes. No. 1 bbl. per bbl. $3.75. Yams, per bbl., $2.25@3.50.

ALLEGHENY COUNTY MEETIN

THE Allegheny County Livestock Association held its annual meeting in the auditorium of the Chamber of Commerce at Pittsburgh last Saturday. The meeting and the attendance were good altho appearing despite the worst weather of the year. Dr. R. G. Bressler, Secretary of Agriculture was the speaker of the day. Henry Ehy county agent viewed the year's work which has been highly successful and is backed by the classes of farmers. Ely Vaughan of the Workhouse offered his farm for experimental and demonstration plots as per interest and that offer will be accepted. The Association's officers have been invited to the jail by the Court House and County Commissioners to supervise extension work in every way to the advantage of their legal ability. The following were chosen for the current year: President, R. K. McEwen Clinton Hill community; vice president, C. W. Stevenson McKees Rocks community; secretary, A. Powers, Hampton community; treasurer, W. H. B. Hilliard Pittsburgh. Board of directors: Walter Beck Carnegie; C. P. Shenot, Wexford community; A. B. Craig, Sewickly community; Walter Stevenson Elizabeth community.

BOSTON WOOL MARKET

Boston, Feb. 8. The volume of business in the wool market has been very small, says the U. S. Department of Agriculture Market News Service. Demand was practically for the finer grades on which prices were slightly easier. Quotations on medium and coarse domestic wools have been fairly steady although little business on them was reported.

Further business in Ohio delaine fleeces and delaine wools was transacted during the past week. Most lots of the type of wool brought 45@46c in the grease while some shrinking lots of the shorter delaine fleeces moved at ½c a pound in the grease, within this range. The scouring basis price for the fine delaine wool is very little above $1.10 per pound. Lower grades were offered. Occasional lots of 56s staple and bright fleeces sold at 55@56c in the grease.

Domestic Wool Quotations Grease Basis Ohio and Similar

[illegible] 70s, 80s, (finer) strictly combing 65c; 70s, 80s, (finer) French combing 64; 70s, 80, (fine) clothing [illegible] combing 58; 60s, (½ blood) French combing 58; 60s, (½ blood) clothing [illegible] 56; ½ blood strictly combing [illegible] 56; ½ blood clothing [illegible] 48; ¼ blood strictly combing [illegible] 50s, 40s, 44 fronting and braid [illegible]

Farmer's Business Letter

THE hog market closed this week about 25 cents higher than a week ago, in spite of a rather liberal run of 240,000 head, a figure compared with 196,000 last week and 245,000 the same week last year. Seven markets had 716,000 hogs this week, against 669,000 last week and 803,000 the same week last year. For the year to date seven markets have received 4,204,000 hogs, against 4,833,600 on the same date last year and 3,809,000 two years ago. Shipping orders were strong here this week, and that helped the market. The run this week included 53,000 hogs direct to packers.

The top of the market reached $10.40 late in the week. Average price of the week was $9.80, against $10.55 last week, $8.15 the same week last year, and $12 two years ago. Average weight at 231 lbs. is about normal.

January showed a big accumulation of pork. Lard in storage at seven leading packers points increased from 47,072,618 pounds on January 1 to 92,141,436 pounds on February 1, the latter figure comparing with 18,042,125 pounds on the same date last year. Total meats (pork) increased from 243,810,168 pounds on January 1 to 280,988 pounds on February 1, the latter figure comparing with [illegible] pounds on the same date last year.

Reports indicate that hogs are getting little scarce in the country, and there is some feeling that hog prices may work up to the point where it will be difficult to move into consumption the great amount of product in store. If anything, the hog price sentiment is not quite as bullish as it was a month ago.

Slow Beef Trade

In general, the cattle market this week showed little change from the low spot in the middle of last week, though the good to choice kind gained a little. Top steers last week sold at $15, against a top of $15.50 early last week. Average prices showed a loss this week, being the first week in 25 cents under a week ago, and also a nickel of $2 less than a year ago. Receipts this week at 46,000 were moderate, about the same as last week, 3,000 more than the same week last year, and 9,000 less than the same week two years ago. For a month past the fresh beef trade has been anything but active, dead at times to accumulation in coolers. Hides are lower, showing a cent or two to six cents as compared to the first of the year and as much as ten cents six months ago. It is believed that all prices of beef have had an adverse effect on demand. But apparently there will be less beef to come. January slaughters of stockers and feeders showed a reduction of near 50 per cent as compared to last January, which was a fairly small one. During the month probably 100,000 fewer cattle went to the country than the average from 1920 to 1927.

For the year to date only 82,000 cattle have been received at eleven markets, against 988,000 a year ago, 1,086,000 two years ago, 1,024,000 three years ago and 1,249,000 four years ago.

Lambs Still High

Fat lambs lost a little ground this week, a matter of 10 to 15 cents on the top, and the average price at $16.40 was 15 cents lower, but still more than a dollar higher than last year. Feeder lambs are selling with a shilling of prices to fat lambs, with a strong demand. Not many lambs available for feeding are offering. A new crop on feed westerns was made this week at $17.75, against $17.65 last week. Top yearlings sold at $16.25.

The run of sheep and lambs here this week was moderate at 58,000, 13,000 less than last week and 10,000 less than the same week last year. The supply of California lambs at 14,500 was 4,000 less than last week. It is estimated that 1,500,000 lambs are still to come from Colorado, the Arkansas Valley and the Scott's Bluff section of Nebraska, against 1,525,000 at the same time last year. The fact that early high prices have failed to bring any big runs is cited as an indication of a decrease in future lamb prices, and people also of only moderate supplies available. The lamb market has behaved in an unexpected manner, that traders are reluctant to offer predictions as to what it may do.

For the year to date 1,267,000 sheep and lambs have been received at eleven markets, against 1,279,000 last year, 1,258,000 two years ago, 1,073,000 three years ago and 992,000 four years ago.

Quiet Grain Trade

Chief interest in the grain market centers in the possible ice damage to the winter wheat. Farmers seem inclined to the belief that extended damage will be revealed. Prof. W. C. Etheridge of Missouri says that where seeding was done with a grain drill the ice may bridge across the drill ridges, leaving small air spaces in the hollows where the rows of plants are growing. In the case of corn, the main factor at the moment is injury to the Argentine crop from drouth, which continues to be emphasized in reports from that country. European demand for corn has held up well in spite of high prices, and is expected to continue. The grain market was quiet this week, with only minor price fluctuations.

Chicago Milk Prices

The Chicago milk price was set at $2.65 a cwt. by Dr. Clyde King of Philadelphia, who arbitrated the dispute. The producers had demanded $2.85 in place of the $2.50 offered by dealers. The situation was complicated by efforts of Chicago officials to make political capital out of it. Price sheets were not pressed with the decision, but in one respect it was a decided victory for them, as recognition, which was given recognition, and future financial security being awarded one cent a cwt. on all milk marketed, whether or not by members of the association. For the first time the big dealers did business through the association officials.

Wisconsin Sells Cows

Last year the state of Wisconsin exported $2,000 dairy cattle to every other state in the Union and to eight foreign countries. Illinois was the big buyer, taking 26,143 head; next came New Jersey, with 11,903; then New York, with 5,981; Pennsylvania with 5,456, and Iowa, with 4,868. Probably these exports of dairy cattle had a total value of near $10,000,000 that went into the pockets of Wisconsin farmers, not a bad sum many years ago, but enough to set good dairy blood to improve it in herd production and to eliminate disease.

Tobacco Trade

The Wisconsin tobacco pool has announced the sale of the last of the 1927 leaf tobacco in its warehouses, consisting of 700 cases, of which 655 cases were cigar leaf and the rest cigar leaf filler. The demand for 1928 assorting crops appears to be good. Some of the buyers are acquiring southern assorting crops from the pool and others are closing contracts for crops with the growers. The indications are that there is not as much assorting tobacco in the 1928 crop as was earlier expected. The prices paid by the buyer to the producer have a wide range and are from 16 to 25 cents per pound to bundle delivery. These have been no sales of stemming crops announced.

Cigarette Tax

In Illinois and Wisconsin a state tax on cigarettes is being promoted, to relieve the general property tax. Iowa levies a tax of two cents a package on cigarettes. A joint made in 1927 at the bulk of cigarettes are smoked by people who pay little or no property tax.

Watson.

Feb. 9, 1929.

Livestock Markets

PITTSBURGH

Cattle

MONDAY'S supply was only 15 carloads but was sufficient. Buyers all bid lower and sellers on the cattle losing 25 to 50c below those of last week, in some cases 75c below. Heavy steers were hit the hardest good ones selling at $12@12.25, three at the outside, as also was good as usually come to this market. Best handy weight steers here brought $12 and even good though not thoroughly finished. Yearling and light weight steers were off the last at $11.50@11.75 and mostly killers at $11@11.25. Good light steers brought $10.50@10.75 and ordinary and plain $9@9.75. Not enough heifers were offered for sale to be good to bring over $10 here. Good cows brought $8@8.25 with something better a little more. Medium cows moved a little slow. Canners ranged from $3@4. Bulls were about steady, specials 25 taking good butcher kind and some at $6@6.50.

Choice grain-fed steers, 1,200 lbs. or over	$12.25@12.50		
Good to choice do	11.75@12.25		
Fair to good, do	11.25@11.75		
Plain heavy steers	10.00@10.50		
Choice handyweight steers, 1,000 to 1,150 lbs.	11.75@12.00		
Fair to good, do	11.50@11.75		
Ordinary to fair, do	11.00@11.25		
Common, do	10.50@10.80		
Good light butcher steers	9.75@10.00		
Fair to good light steers	9.25@9.75		
Common to medium, do	8.50@9.25		
Inferior light steers	7.50@8.50		
Feeders	Nominal		
Stockers	Nominal		
Choice heavy bulls	10.00@10.25		
Choice handy butcher bulls	10.25@10.50		
Good handy bulls	9.75@10.25		
Fair to good bulls	9.25@9.75		
Common to fair bulls	8.00@8.50		
Inferior bulls	7.00@7.50		
Choice fat heifers	10.25@10.75		
Good to choice heifers	9.75@10.25		
Fair to good heifers	9.25@9.75		
Common to fair heifers	8.50@9.25		
Choice fat cows	9.25@9.75		
Good to choice fat cows	8.75@9.25		
Fair to good cows	8.00@8.75		
Common to fair cows	6.00@7.50		
Canners and cutters	3.00@4.00		
Fresh cows, calf at side	50.00@150.00		

Monday's Representative Sales

Steers

No.	Wt.	Pr.	No.	Wt.	Pr.	No.	Wt.	Pr.
10	1312	12.25	20	1282	12.25	9	1242	12.25
21	1303	12.00	6	1181	12.00	5	1128	12.00
25	1052	12.00	14	989	12.00	16	1241	11.75
18	1082	11.75	21	1117	11.75	11	1060	11.75
14	1007	11.75	11	956	11.75	9	943	11.50
10	1210	11.25	20	1187	11.25	27	956	11.25
15	1002	11.25	50	986	11.25	5	910	11.25
4	857	11.25	8	1067	11.00	10	972	11.00
23	952	11.00	17	886	11.00	50	805	11.00
75	690	11.00	17	1209	10.85	25	952	10.80
13	900	10.75	3	1107	10.75	11	993	10.75
9	1001	10.60	15	1055	10.50	26	982	10.50
10	1050	10.25	1	825	10.25	7	887	10.00
28	949	10.00				25	981	10.00

*—Mixed

Hogs

Monday's supply was light, about 32 doubledeck carloads. Trade was active at steady to a shade better prices. Bulk of the sandy weight, heavy mixed and heavy hogs here 210@215 a new going at $10.80. Light pigs of 140 pounds or over went along with sandy weights at good, the lighter ones around $10. Pigs were not so numerous as in the recent past and sold better around 50 and weights ones more. Good sows brought $9 largely, a few $9.25. Pre-ailing and non-favors sluggish hog markets in the east latter.

Heavy, 250 lbs. or over	$10.50@10.75
Heavy mixed	10.75@10.80
Medium, 180@200 lbs.	10.75@10.80
Heavy Yorkers, 165@180 lbs.	10.75@10.80
Light Yorkers, 125@150 lbs.	9.50@10.00
Pigs, 100@110 lbs.	8.75@9.25
Roughs	8.75@9.25
Stags	6.00@7.50

Sheep and Lambs

About 9 carloads were on sale, including some held over from last week. The sheep market is hard to describe. A few choice handy wethers might be sold up to $11, but most of the sheep coming here lack finish and are hard to sell except at bargain prices. The market was evidently weak and lower, but there was a lack of sales on which to base quotations. The top at $10.50 is an estimate based on opinions of sellers rather than on transactions. The lamb market was easier, good handy weights going at $16.75, medium kind at $14@15, bargain and culls at $11@12. Pennsylvania State College marketed 142 lambs, 47 westerns at $17, 47 native medium weights at $16 and 48 mediums at $15.25. The westerns cost $13.25 at Chicago and averaged here $14. The native shorn lambs cost $12 in Tioga county and averaged here 79 lbs. The merinos cost $11 in Greene county and averaged here 62 lbs. All lambs were tied two ways. Further report will be made of these lambs.

Good to best wethers	$10.00@10.50
Fair to good wethers	9.50@10.00
Good mixed	9.75@10.00
Fair to good, do	8.50@9.50
Common to [illegible]	6.00@8.00
Inferior sheep	4.00@6.00
Good to best spring lambs	16.50@16.75
Medium lambs	14.00@15.50
Culls and throwouts	11.00@13.00

Calves

Monday's supply was 800 head. With Lent just ahead the market broke another dollar, best veal calves going at $10.50. Medium kind brought $12@14 and common, sold on down.

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are short cuts to finding out truths. The truths about everything you want to buy. The names in advertisements are names of solid reputation. The labels in advertisements are symbols of satisfaction. It pays to read the advertisements, for then you know what is good. The products they tell you about are being bought, tested constantly. The fact that they're still being advertised is alone proof of their worth.

TIGHT BINDING TEXT CUT OFF

To the Farmers *of America:*

DECREASING yields, poorer quality and later maturity are noticeable tendencies in field crop production in many sections of the United States.

These trends make for higher producing costs and increase the hazards of agriculture.

Many soils are losing their power to produce healthy, profitable crops. Loss of necessary soil constituents has caused this unfortunate condition.

A considerable portion of the available nitrogen, phosphorus and potassium necessary for large crop production has been shipped off in crops or carried away by erosion or other agencies active in tilled fields.

Soil lime losses are heavy and continuous. Lime shortage reduces the power of the soil to make available the plant food already in the soil, and to best utilize applied fertilizers. Lime makes soil alums insoluble and corrects soil acidity. Any fertile soil is filled with beneficial bacteria. Plants and soil bacteria require lime and the same foods. In case of a shortage the bacteria get theirs first and hold out on the plants. On certain crops—potatoes, for example—best grown in acid soils, the application of excess lime is detrimental. The quantity of lime should be decided by the state college or experiment station.

All of which means that in order to carry on a proud and profitable agriculture, these losses must be made good by materials brought in from the outside and placed within reach of the roots of the growing crop. Crops should be fed an ample balanced ration—the live-stock method of feeding.

Properly made, correct-ratio fertilizers, liberally applied, increase yields and decrease growing costs. They improve quality and increase the feeding and sales value of the crop.

Liberal application is an important phase of successful plant feeding. Better amply fertilize a smaller acreage than half feed a larger.

Best quality fertilizers, properly used, return better than three dollars in crop value per dollar invested in plant food.

There is an appreciable difference in makes of fertilizer of the same analysis as to their ability to grow crops on varied soil types, their crop-producing power, and their influence on the time of maturity. There is also a great difference in their mechanical and chemical condition. Coarse, lumpy, sticky goods do not drill evenly and produce uneven growth.

Much money is wasted in preparing, shipping, hauling and applying fertilizers filled with filler. We are using the word "filler" in the sense of adding sand or similar "no good" substances to high-grade fertilizer ingredients merely to reduce the analysis of the finished fertilizer from what it would be were sand not added.

All of these factors have had full consideration in the preparation of Armour's Higher Analysis "Big Crop" Fertilizers for spring application. They are manufactured under the most careful scientific direction and control. They are so made as to give a quick, vigorous, ample, early growth of stalk or vine while moisture conditions are good, and then turn to the main business—the growing and quick maturing of a well-fed crop. In the corn belt their use has shortened the time between planting and silking from two to three weeks; under cotton, between seeding and blossoming, fully two weeks, decreasing frost and other weather risks.

Armour's Higher Analysis "Big Crop" Fertilizers are filler free; are in fine mechanical condition, dry, friable, drillable; are made from the highest grade plant food materials. There is more plant food in each bag; there is less freight to pay on each pound of plant food; less handling and a cheaper plant food cost on the farm than with the lower, slower "horse and buggy" grades of fertilizer.

President

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A High-Producting Herd

Milking time on the farm of Ira M. Eby, Lancaster county, Pa. The herd at present includes 18 cows and quite a number of heifers.

Mr. Eby is a member of the Garden Spot Cow-Testing Association and last year made an average of 11,457 pounds milk and 376.9 pounds butterfat. This was the highest average for the Association. Luke W. Martin.

Farm and Dairy

By L. W. LIGHTY

THOUGH the earth is ice and snow-bound a number of corn planting questions have come to my desk. This pleases me, as I remember the day when very few folks thought of seed corn until the ground was ready to receive it.

Thinking, planning and questioning before acting is commendable.

Most questions relate to silage corn. We want the largest quantity and the best quality but what will give us this? Should we plant the same variety for the silo as for the crib? Corn is very susceptible to cold, yet we ripen good crops of corn in the coldest New England states. It is a hardy, dwarf, quick-growing variety and makes but little silage. For this reason growers north of the parallel 40 often get seed corn from farther south requiring a longer season to grow and yielding a larger quantity of feed. This is doubtless a very good plan if practiced thoughtfully within bounds. We are slowly coming to understand that we must not demand too much quantity at the expense of quality.

Very frequently I have observed the effects of great quantities of immature silage in the higher latitudes and altitudes. The odor of the silo was like a vinegar barrel. The cattle learned to eat the material but it was very laxative and not very nourishing and always where much was fed the cattle were emaciated and showed an unhealthy condition. The silage was soft, sloppy and the liquid drained from the bottom. I found not a few herds fed largely on such silage with a little hay and oats, straw and some grain and the owners truthfully told me they were not making anything out of their herd.

Even a cow cannot make something out of nothing. If the cow is to make us a profit she must have the ability and the material with which to do it and many of the cows referred to may have had the ability but they had hardly material enough to live on not considering the making of milk. We are getting away from this but it is slow work and many of us find difficulties.

Corn Must Be Mature for the Silo

When we come down to parallel 40 on the lower elevations (700 feet or less) we may and usually do plant the same seed variety for both our silage and crib corn and we get quantity and quality. But when we go farther north it is advisable to plant a longer season and larger growing variety for the silo than we grow for crib ripening. But much care must be exercised, so we use a variety that will mature in our season to make good quality silage.

In the territory where I grew corn many years we have 120 to 140 days between frosts and that allows a very large corn not only to mature but to ripen solid. But if I move north a hundred miles they have no assurance of much over 100 days between frosts. There most of our corn will mature in the silo but it will not ripen. Go a second hundred miles and on the elevations 90 days between frosts is the limit and there a short season corn must be planted.

I personally know many growers who found where they can secure dependable seed corn annually for their conditions and always grow a full quantity of good quality of silage. I know communities where this method is practiced in a sort of cooperative way. This is as it should be and is entirely practical.

By maturity for the silo we mean the ear will develop until the starch in the grains assumes a pasty form. This condition indicates the greatest quantity of digestible matter in the entire plant. Or in other words we get the greatest amount of nutrients or actual feed.

The man who fills his silo with corn that is just tasseling out, as is too often done, is fooling himself and is unsuccessfully to feed the cows. Much of the mass is innutritious fiber and water which should be supplied by way of the water tank. It is none too early to assure ourselves that we have a supply of seed corn that will fill the silo with the best feed next autumn.

The Corn for the Crib

While silage is exceedingly valuable in cattle feeding in the earlier days of the silo our enthusiasm ran away with us in a measure. We tried to make believe dairying or cattle feeding could not be profitable without the silo. Many experiments have demonstrated that an acre of corn fed in the form of grain and stover may give about as much income as fed in the form of silage.

In the Corn Belt there are still many farmers who grow corn for the silo only and the majority of them are doing excellent work, but still too many have not learned the full value of entirely reliable seed corn. They take risks and often have to plant over or be satisfied with a poor stand to start with.

So much has been said and written about this matter that we might think further effort was useless but if only one takes the trouble to investigate a few weeks after corn planting time he will be convinced that many farmers plant seed corn that is poor to almost worthless in adverse conditions and such conditions hold two years out of three. Select and test the corn and be not satisfied with less than 90 per cent strong germination if at all possible to secure such.

Plant Yellow Corn

One man says, "I planted white corn for years, but am told yellow corn is better. Is this so?" I recall the day when the farmer asked this question and the man of science told him there was no difference only in the color of the grower. Not a few farmers shook the head at this dictum and went on believing they got the best results from yellow corn. Today the matter is quite different. Careful tests have proved clearly that yellow corn has superior qualities and the old farmers' observations were quite correct. I admit we older fellows were wrong too often, but if the learned scientist would be willing to stand up and say the same thing we would feel better, and we would know he was telling the truth even if it hurts.

The Unsurpassed Crop

After two score years in the feeding pen and the milking alley, working and keeping records of production and costs, I am very thoroughly convinced that in this Corn-Belt country the dairy farmer and cattle feeder can grow a crop that surpasses or even equals corn. No other crop will yield as much digestible, palatable and nutritious feed as the corn crop to the acre. In addition to this no other crop of any such value can be grown as quickly as corn. Considered as a grain it is more generally useful and valuable than any other grain we can grow. It is an unsurpassed feed for the cow, horse, hog, sheep and even I know folks who cook it for meal and dogs thrive on it. As a feed for humans it is most excellent. Once I offer no apology for recurring to the culture of this crop quite frequently.

Unbalanced Feeding

While much has been said about the unbalanced ration a great many farmers still get a very greatly unbalanced feed most of the winter. The price of the protein feeds looks so high and the other feeds and some mixtures are so bulky and so much lower in price that many folks are induced to feed a very one-sided ration and that always is wasteful.

While the average cow will live and even in a way thrive on good roughage and a little corn and less bran she will not be able to give you a profitable flow of milk. Let us not forget that the cow always takes her living out of the ration if it is in it and only what is left after that will be used to make milk. While only three and a half per cent of the milk is proteids that part is made from protein as investigations show and if she does not get the protein needed to make the casein and albumin she will reduce the quantity of milk until she has enough protein for the purpose.

If, therefore, you want the maximum amount of milk the cow can yield you have to supply the needed protein for that quantity of milk and that is why the balanced ration is so important.

How Much Silage?

One with no experience asks how much silage the cows should have per day. It is well not to feed too heavily at first if the cows never had any silage before. Some cows will likely refuse to eat it at first. That was my experience two score years ago. After seeing the rest of the cows clean the trough they started nibbling and before long ate it all right. As a rule, about 30 pounds per day is nearly right, but some cows will take more and some not so much. We want the cows to eat a reasonable amount of hay with the silage, besides it is important to give the cow enough and yet keep her appetite keen by never cloying her. Hence it is not a good plan to have a fixed quantity per cow but give her as much as she will take and look for a little more. The amount specified is not far from that mark.



CLARK O. LEBO
Cow Tester

Wayne County Cow-Testing Association



J. E. McKEEHEEN,
County Agent

THE Wayne County Cow-Testing Association finished its second year December 1, 1928, with 22 whole year members. There were 510 cows in the association during all or part of the year.

The Jersey herd of S. O. Snedeker is the association in the average production of butterfat, with 409.4 pounds of butterfat in 7,557 pounds of milk. Two Jersey herds belonging to W. Hauenstein and George Rosener had an average production of over 400 pounds of butterfat for their herds. The registered Holsteins belonging to Clarence Mosier leads in a production of milk with 11,199 pounds and 369 pounds of butterfat. There are two herds producing over 300 pounds of butterfat.

The results for the association for the two years are as follows:

Ave. No. Cows	Lbs. Milk	Lbs. Fat
418.17	7,228	341.8
416.30	7,253	339.8

The results for the association are as follows:

Total ave. no. cows in Association,	416.30
Average per cow in:	
Pounds of milk	7,253
Pounds of butterfat	339.8
Percentage of butterfat	4.7
Value of product	$264.02
Cost of pasture	9.76
Cost of roughage	45.46
Cost of grain	63.25
Total cost of feed	118.47
Value of product above feed cost,	145.55
Returns for $1 expended for feed,	2.23
Feed cost per 100 lbs. of milk	1.63
Feed cost per lb. of butterfat	.35

Individual Herd Records

Eighteen herds with an average of five or more cows exceeded an average production of 300 pounds of butterfat. A complete list of these herds follows:

Owner's Name and Address	Ave. No. Cows	Breed	Lbs. Milk	Lbs. Fat
O. Snedeker, Waymart, R. 1	13.17	R.&G.J.	7,557	409.4
W. Hauenstein, Waymart, R. 1	16.83	R.&G.J.	7,986	402.1
George Rosener, Aldenville	11.16	R.&G.J.	7,996	401.2
Clarence Mosier, Pleasant Mount	11.00	R.H.	11,199	397.9
C. G. Erk, Prompton	30.08	R.&G.J.;G.H.	8,218	373.3
Foreman Lester, Seelyville	9.17	R.G.H.&G.	8,636	369.4
T. Box, Honesdale, R. 3	8.00	R.J.	6,873	368.3
A. Robinson, Seelyville	9.00	R.J.	7,511	363.2
Homestead Farms, Honesdale	39.83	R.&G.G.	7,390	362.7
Edward Rosener, Aldenville	12.25	R.&G.J.	6,809	357.2
George Erk, Seelyville	31.67	R.J.	6,211	340.5
S. F. Hauenstein, Waymart, R. 1	17.50	R.J.&G.H.	7,019	338.5
H. Ledyard, Jr., Waymart, R. 1	21.08	G.J.	6,134	332.5
Russell Spencer, Pleasant Mt.	16.83	G.H.	8,506	318.7
Edward E. Welsh, Seelyville	9.33	R.A.&G.J.	7,242	314.4
A. Trevethan, Honesdale, R. 1	19.33	R.&G.H.;J.	8,312	312.3
B. Clark, Honesdale, R. 1	16.83	R.&G.H.	8,674	311.5
C. Smith & Sons, Seelyville	23.67	R.J.	5,702	309.3

Compiled by S. O. Sidelmann.



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Chicago, 600 Jackson Blvd.
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Large 10-ounce package, 60c at drug, feed, hardware and general stores. Mailed postpaid if your dealer is not supplied. Booklet, "Dairy Wrinkles," mailed free.

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TIGHT BINDING TEXT CUT OFF



An Account *with your soil bank*

YOU would not try to overdraw your bank account. You should be equally sure that you do not overdraw your soil fertility account. The point frequently is reached where the soil becomes so depleted that profitable crop production becomes impossible.

Farmers of foresight anticipate such conditions before they occur. They follow a carefully planned rotation involving the regular and plentiful use of commercial fertilizers for each crop grown.

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In the Sheep Barn

(Continued from pagt 39.)

about three inches beyond the tip of the nose when the leg is fully drawn. If the head of the lamb is unusually large, as is frequently the case, progress is slow and delay may cause injury to the lamb.

In these instances, the operator should place one hand on the outside of the ewe just above the vagina. A gentle, squeezing pressure with the thumb and forefingers just back of the lamb's head and a steady pull outward and downward on the extended forelegs of the lamb will complete delivery. A liberal application of raw linseed oil to the ewe's parts will aid in securing maximum dilation without injury. Carbolized oil or sweet oil will serve almost equally as well as the raw linseed oil.

There is just one other normal position for the lamb, aside from the one described of forefeet and muzzle extended, that will permit unaided delivery. This position is hind feet first with the tail lying between the legs. All departures from either one of these positions can be classed as abnormal and should be corrected before delivery is attempted. The successful correction of these abnormal lyings is the real test of the lamber's ability, and experience is his greatest teacher.

Knowledge of Anatomy

A thorough knowledge of the anatomy or skeleton make-up of the lamb, however, will aid the attendant to promptly and correctly determine the position of the lamb. If he inserts his hand—and this should never be done until after the hand is thoroughly cleansed, disinfected, lubricated, and the fingertips trimmed close—and his fingertips encounter the lamb's ribs the lamber knows at once that the presentation is sidewise to the passageway. Likewise, if the fingertips encounter the crown of the head, the pin bones of the buttocks, the jagged processes of the spine, these all picture the lamb's position to the experienced lamber and he knows immediately what must be done and how to do it.

Unfortunately, there are no specific directions that will apply to all of these cases alike. Each one is a problem in itself. The lamb must be placed in normal position. It is a critical moment, but the operator must not become excited. Clear thinking together with cautious and precise workmanship are imperative. In practically all cases of abnormal presentations the lamb must be returned to the lamb bed. Gentle but firm pressure on the unborn applied during the time between the expulsive efforts that nature causes the ewe to exert, will usually accomplish the desired aim. This pressure or force should never be greater than is in keeping with safety, and just holding rather than pushing should be the policy when the ewe attempts to expel the lamb.

If progress is not being made in returning the lamb, due to violent and frequent expulsive contractions, assistance should be summoned. The assistant should straddle the ewe, place one hand in each of her rear flanks, and elevate her hind-quarters. This procedure will lessen the pressure exerted by the ewe and the weight of the lamb will cause it to drop back. Correction of the position can then be made.

There is one suggestion that is worth mention just at this point. It often happens that the hind feet and tail of the to-be-born lamb can be brought into the pelvic passage with greater ease and safety than the usual position of head and forelegs in the arch can be attained. A lamb can be delivered with ease and safety in this position. One precaution is paramount in making this shift in position of the lamb: the hoofs of the lamb's hind feet should rest in the palm of the operator's hand when the lamb's position is being changed inside of the ewe. This precaution safeguards against tearing or rupturing the ewe—a fatal catastrophe when it happens.

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We have been having trouble with our cream not gathering. We have only one cow. The cream seems all right, but if we churn two or even four or five hours it just looks frothy. Not a sign of butter particles, but when we let it stand it will separate in a way, the richness all coming to the top. It doesn't look like butter but just like heavy whipped cream.
C. M.

THE trouble you mention is quite likely to happen at this time of the year when only one or two cows are giving milk and these are well advanced in their period of lactation. The difficulty is increased when no silage, roots or other succulent feed is available and the cow is being fed largely on such feeds as timothy hay, corn meal, etc.

When the weather is cold the temperature of the cream is also apt to be low and this increases the difficulty in churning. It may be necessary at this time of the year to raise the temperature of the cream to between 65 and 70 degrees Fahrenheit before it will churn. If it were possible for you to secure some cream from a cow recently fresh to mix with that from the cow which is giving you the trouble you would probably have very little further difficulty.

Some linseed meal or gluten feed would have a tendency to produce soft fat and should form a part of the grain mixture. Silage and roots are also helpful as feeds in producing cream that is easy to churn.

It will probably be desirable to ripen the cream to a somewhat higher acidity than is normally desirable in order that the churning may not be unduly prolonged.
A. A. Borland.

Milk Costs

What has been your findings on the cost per hundred pounds of milk in Pennsylvania? Would be glad to have some data on the costs if you have them.
Mrs. J. H. Smith.

THE cost of producing 100 pounds of milk depends pretty largely on whether the cow is a high milk yielder or whether she is a low producer.

Investigations by the farm management specialist of the Pennsylvania State College including data from 8,631 cows, showed that the complete cost of producing 100 pounds of milk for cows yielding 3,000 to 4,000 pounds of milk is $5.26. These costs included current expenses, feed, labor, hauling milk, interest and depreciation on the investment, for decrease in inventory value of the cows.

Credit was given for the returns other than milk. Cows producing from 4,000 to 5,000 pounds of milk charged $4.15 to produce 100 pounds. For cows producing from 5,000 to 6,000 pounds of milk the cost per hundred weight was $3.59. Cows producing 6,000 to 7,000 pounds of milk produced 100 pounds for $3.26. Those producing 8,000 to 9,000 pounds of milk charged $2.99 for 100 pounds. Cows producing 9,000 pounds of milk and over yielded 100 pounds for $2.50.

The average yield of milk for all the cows in the study was 6,782 pounds and the average cost for producing 100 pounds was $3.23. You will understand that these costs included charges for feed at market prices, and charges for all labor at the market price. It also included interest on the investment, depreciation, etc.
A. A. Borland.

DAIRYMEN ORGANIZE

Dairymen of Marshall county, W. Va., are organizing an association among farmers there for promotion of better livestock and better marketing of their products. This county along the Ohio River is rapidly growing as a dairy community, till now it ranks second in its state. Wheeling is so close that it affords an unusual market for farm products.

A banquet was held recently at Moundsville, with about 150 dairymen and their wives present. Prof. H. O. Henderson and J. V. Hopkins of W. Va. University; L. L. Rummell of The Ohio Farmer, and T. K. Wolfe of Richmond, Va., were speakers.

The county agent, L. L. Lough and Mr. Hopkins are now endeavoring to form a dairy improvement association for this section of West Virginia.
L. L. R.

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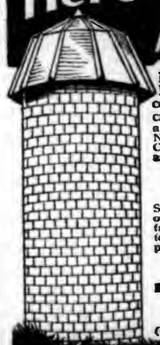
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Veterinary

By Dr. J. F. SHIGLEY

Caked Udder

I have a cow that has a caked udder six weeks before she comes fresh and continues for two months after she is fresh. It cakes and becomes very big. She is in good health and has a good flow of milk. Age 10 years. Reader.

Regular exercise and a laxative diet are desirable in these cases. Oil meal and bran will aid in keeping the bowels open. Do not feed much grain during the last week of pregnancy if the udder is showing signs of causing trouble.

Horse Not Thrifty

I have a horse which does not seem to have a very good appetite. His oats do not digest right. He does not eat as much hay as I would like. Seems weak and is thin. J. B.

To give a satisfactory answer to this question, kindly state the age and weight of the horse and the kind of hay and grains available.

Abnormal Teat

I bought a heifer a few days ago, and she came fresh the 9th of this month, and when we began to milk her we discovered she had an abnormal teat. The teat seems to be double but the milk comes out up too far on the teat. Is there a remedy for this? Could you scar the upper one with a hot iron and close it up, or would this cause the teat to get sore and the udder to take? M. W. F.

This is a very aggravating and annoying thing with which to deal. To close an extra and superfluous opening the point of a red hot iron may be used, rubbing with a pointed stick of caustic potash or even the scraping of the edges with a surgical knife and taking a stitch or stitches to draw the edges together. Now the trouble with any such procedure is the possibility, and even I may say the likehood, of quite a little inflammation which may affect the quarter quite severely. The proper time for any such procedure is when the cow is dry. If the condition is too annoying, you may decide to take a chance on correction now, otherwise you will wait until the cow has completed her lactation period.

Lump at Throat

I have a cow, seemingly healthy, that has had a large flabby lump at her jaw for quite a while and has lately developed another lump at her shoulder. The one at her jaw seems to choke her wind somewhat and she has to cough at frequent intervals. Will you kindly advise me whether lancing is advisable and whether these lumps affect her milk or meat? H. R. S.

One of the first questions I would raise would be whether your herd has been tested for tuberculosis and if this animal passed the test successfully. Abscess formations of this kind may be associated with tuberculosis. Of course an abscess may occur because of an infection or injury and independent of any general systematic infection. If pus is present in the enlargement, the abscess should be opened. The principal thing to keep in mind though, is to ascertain if these enlargements have any relation to any other body disorder.

Epilepsy or Fits in Young Pigs

What ails pigs when they are all right until you feed them, and then they just lie down and squeal, Can you give me a cure for them.

Mrs. F. A.

The presence of intestinal worms will cause these spells of epilepsy, commonly called fits, and accompanied by the usual symptoms of such a disorder. The important thing in these pigs is to get rid of the intestinal worms and to do this you will find quite effective worm capsules that are made for this purpose. It is advisable really to secure these worm capsules through your veterinarian inasmuch as he will be able to buy from a biological firm that sells only to the veterinary profession and puts out a high-grade capsule. I really believe that it is best to obtain the services of your veterinarian at least to treat the pigs the first time or until you are familiar enough with the procedure to handle it yourself. If the worms are gotten rid of these pigs should straighten up and come along in good shape.

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... CHICKS C. O. D. 100 Rocks or Reds $11.00, ... Leghorns, $12.00, heavy mixed, $12.00, light, ... $9.00. Pullets, $17.00, $14.00, $12.00. Delivery guaranteed. Catalog free. Miller's Hatchery, Box 67, McAllisterville, Pa.

... SUNNYFIELD EXTRA LARGE Single Comb ... Black Minorcas, exclusively. Chicks, Eggs, Stock. ... Extraordinary large, exceptionally large ... white eggs, two matings, low prices Catalogue. ... Sunnyfield Minorca Farms, Grampian, Pa.

... REGAL DORCAS WHITE WYANDOTTES Eggs, ... Chicks, Stock. 336-Egg Record Ledger North ... American contest Winter layers. Excellent type. ... Fine matings. Low prices. Catalogue. Keiser's ... White Acres, Grampian, Pa.

... AMERICAN SPOTTED ANCONAS. Record Layers, Lay large white eggs. Extra large type. ... Exceptional markings. Fine matings Low prices. ... Catalogue. American Ancona Farms, Grampian, ...

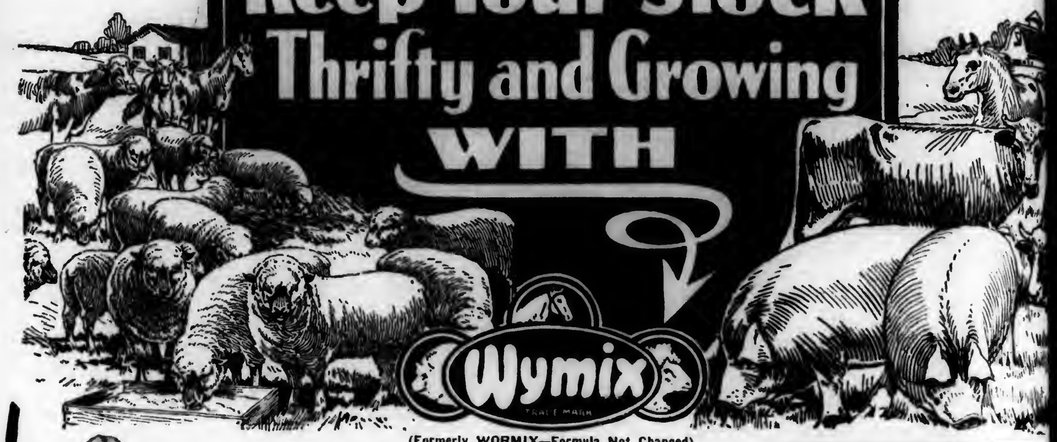
... CHICKS from heavy laying strain Barred Rocks, ... 12c. Mixed, 10c. 100% arrival guaranteed. Circular free. R. J. Ehrisman, Box 50, McAllisterville, Pa.

... BABY CHICKS from 100% Pure Tancred strain ... direct Maryland State Certified Blood-tested ... and three year old Beto and pedigreed sires ... 300 egg matings for five generations on ... both sides. Also breeding cockerels from same ... high record matings. Guaranteed quality. Whitehof Farm, Clear Spring, Md.

... QUALITY CHICKS—WHITE LEGHORNS, 10c. ... Barred Rocks, Reds, White Wyandottes, Black ... Minorcas, 12c. Buff Rocks, Handorpes, 13c. Heavy ... mixed, 11c. Light mixed, 9c. 5% discount on ... cash orders received before February 15 Plum ... Creek Poultry Farm, Sunbury, Pa

N. J. AGR'L EXPT STATION
FEB 1929

Keep Your Stock Thrifty and Growing WITH



(Formerly WORMIX—Formula Not Changed)



SIDNEY R. FEIL

Registered Pharmacist
Graduate National Institute of Pharmacy; Graduate Cleveland College of Pharmacy.
Formerly asst. to Dr. Nathan Rosenwieg, while chief chemist of the Ohio Food and Dairy Commission.
Prop., The Ivo-San Laboratory.

Send No Money—30 Days' Trial

I will send you and every other reader of this paper a 3 pound package of my **concentrated** medicated salt, the widely used **CONDITIONER, TONIC and APPETIZER,** on 30 days trial, so you may see for yourself, and know from actual use on your own farm animals —without risking a single penny—that WYMIX is the best, cheapest and easiest-to-feed conditioner, tonic, appetizer and preventive, you ever fed.

Also I will prove to you—before you pay —that Wymix saves half the usual cost, and saves you all the bother, trouble and work of catching, handling and dosing each animal. Your hogs, sheep, goats, horses and cattle, **DOCTOR THEMSELVES with WYMIX.**

Runts, scrubs and culls eat profits. Poor condition of stock is responsible for tremendous losses. When your farm animals don't grow or gain—when they are at a standstill—when they don't do any good generally, they need a well-balanced conditioner and tonic; **they need WYMIX.** Why have runty, scraggly, rough-looking, poor-growing pigs and other stock, when, without your paying a single cent in advance, you may test this remarkable gemedy, and prove to your own complete satisfaction, that WYMIX will keep them clean internally, give them a keen relish for their feed and make such a marked improvement in their condition, that they will grow faster on their usual feed, and make greater profits for you?

As Mr. Frank Acker, Wadsworth, O., says:

"My fattening hogs, with WYMIX before them all the time, did better than any hogs I have had for several years. Their appetites were wonderful up to the last. Before feeding WYMIX, it was discouraging to raise hogs, but with WYMIX, it is a pleasure."

Send No Money---30 Days' Trial

Just fill out the coupon and mail it. I'll send you a 3 pound package of **WYMIX**—you add 17 pounds of salt to it—or 17 pounds of wood ashes or coal ashes—and you'll have the best live stock conditioner, tonic, appetizer and preventive, **guaranteed effective,** which will last 40 hogs or sheep about 30 days. Feed according to directions given in the book I'll send with it. At the end of 30 days, if you aren't fully and completely convinced that **WYMIX** does all I claim and if it does not prove better than anything you ever used, just write and tell me so, but don't pay for it. But if you decide it gives your animals keen, healthy appetites, makes them thrive better, improves their condition—and shows you clearly, beyond doubt, that **it pays to feed WYMIX,** then send me only $1. You be the judge.

Scrubs Don't Top Market

No live stock raiser makes money feeding scrubs—or animals not in good condition. The right kind of conditioner and tonic turns losses into profits. **WYMIX** is the best conditioner for livestock of all kinds. Put it where your stock can get it any time; they'll doctor themselves. **WYMIX** keeps your animals thriving; keeps them on their feed and growing every day. You'll be surprised how much better they'll do; fewer feed-lot troubles; fewer set-backs. They'll thrive better—look better—do better—fatten and grow faster and make bigger profits in less time. No need to pay fancy drug prices for salt or other fillers. When you make your own conditioner and tonic with **WYMIX,** you add your own salt, save half the usual cost, and have a better remedy. I could fill this whole paper with proof like this sent by Mr. M. G. White, Grand Valley, Penn'a:

"After using Wymix, I had better success with my sheep than ever. No other conditioner proved as good. The lambs were stronger and made better gains than any previous year that I raised sheep."

Before you decide upon which conditioner you'll feed to put your stock in good, thrifty, growing, profitable condition, be sure it is backed by actual proof of merit—not empty claims. I furnish such proof; in addition I back it with a valid

Money-Back Guarantee

While I offer here to send you a 3 pound package of **WYMIX** on 30 days trial and guarantee it to do all I claim or no pay, still if you prefer to make a test on more animals, I'll send you one or more of the larger packages, upon receipt of price listed below, with the understanding that, if it does not do all I claim, **I'll refund your money promptly, without question or red tape.** You take no risk.

PREPAID PRICES

One	15-lb. pkg.	makes	100 lbs.	$ 3.50
Four	15-lb. pkgs.	make	400 lbs.	13.00
One	90-lb. bag	makes	600 lbs.	18.00
Three	90-lb. bags	make	1800 lbs.	50.00

(West of Denver, 6c a lb. more)

Each 15 lbs. makes enough medicated salt to last 100 hogs, sheep or goats, or 25 head of horses or cattle, about two months.

SIDNEY R. FEIL, Prop.
The Ivo-San Laboratory
4612 St. Clair Ave., Dept. 35, Cleveland, Ohio



THE IVO-SAN LABORATORY,
4612 St. Clair Ave., Dept. 35, Cleveland, Ohio

Send me, prepaid your $3 test package of Wymix. I will feed it as directed, will report results in 30 days and, if it does as claimed, I am to send you $3. If it doesn't, you are to cancel the charge.

Name .....

P. O. .....

R. D. ..... State .....

If you order larger size, give Shipping Station below:

.....

Pa.F.2-16-29

I Prove Every Claim for

Wymix
TRADE MARK

Stops Losses—Conditions Lambs

"After having lost 25% of my lambs I started to feed WYMIX. It stopped further losses and worked wonders in conditioning and fattening those which survived." H. S. Stehman, Lancaster, Pa.

No More Sheep Lost

"I lost a large number of sheep until I began to feed WYMIX. It proved to be a great medicine, as I haven't lost a sheep since." Geo. M. Ferris, Sandy Lake, Pa.

Feeding WYMIX Insures Gains

"I never used a finer hog remedy than WYMIX. It has proved a real tonic for the herd. Last fall one of my hogs didn't do any good—weighed only 150 lbs. a week before Christmas—started it on WYMIX and on Feb. 1st it dressed 228 lbs."
Henry J. Yahn, Crooksville, Ohio

Pigs Grow Fast

"I had a bunch of fall pigs which were so badly out of condition I couldn't even offer them for sale; in fact I couldn't have given them away. Am feeding WYMIX—and am amazed at their improvement—thriving and growing fast right through the cold weather."
R. C. Eichelberger, Marysville, Pa.

Sheep Improve 100 Per Cent

"Two years ago I lost 3 lambs and the rest of the flock were not in good condition. Since then I have been feeding WYMIX; as a result my sheep have kept in fine condition and my lambs were extra, without a single loss. Mr. C. ..., of State College who had a sheep demonstration here last June, said my sheeps' condition had improved 100 per cent.
C. V. Baker, LeRaysville, Penn'a.

Conditions Calves and Sheep

"I used WYMIX on my sheep and calves, and have never seen its equal for toning and conditioning stock. My sheep and calves are improving and putting on weight fast."
L. W. Ramsey, Belington, W. Va.

Sheep Winter Better

"Last winter I used 15 lbs. of Wymix on 30 head of sheep. They never wintered better and their lambs have done better."
C. D. Guthrie, Marklesburg, Pa.

No Use Looking Further

"When you have once found WYMIX, there is no use looking further for a conditioner, appetizer and stock tonic."
James C. Birtcher, Pisgah, W. Va.

Worms In Poultry

Don't worm your chickens with any preparation containing salt. Use

POULTRY Wormix

to expel the dangerous, large roundworms which infest the small intestines of chickens and other fowls. It contains no salt—costs but little—easy to feed—safe and sure. Mixed with mash, fowls doctor themselves. Sold on a money-back guarantee. Sent prepaid anywhere in United States, upon receipt of price.

One-Pound Can, $1. Six One-Pound Cans, $5. Each pound worms 100 fowls.

PENNSYLVANIA FARMER

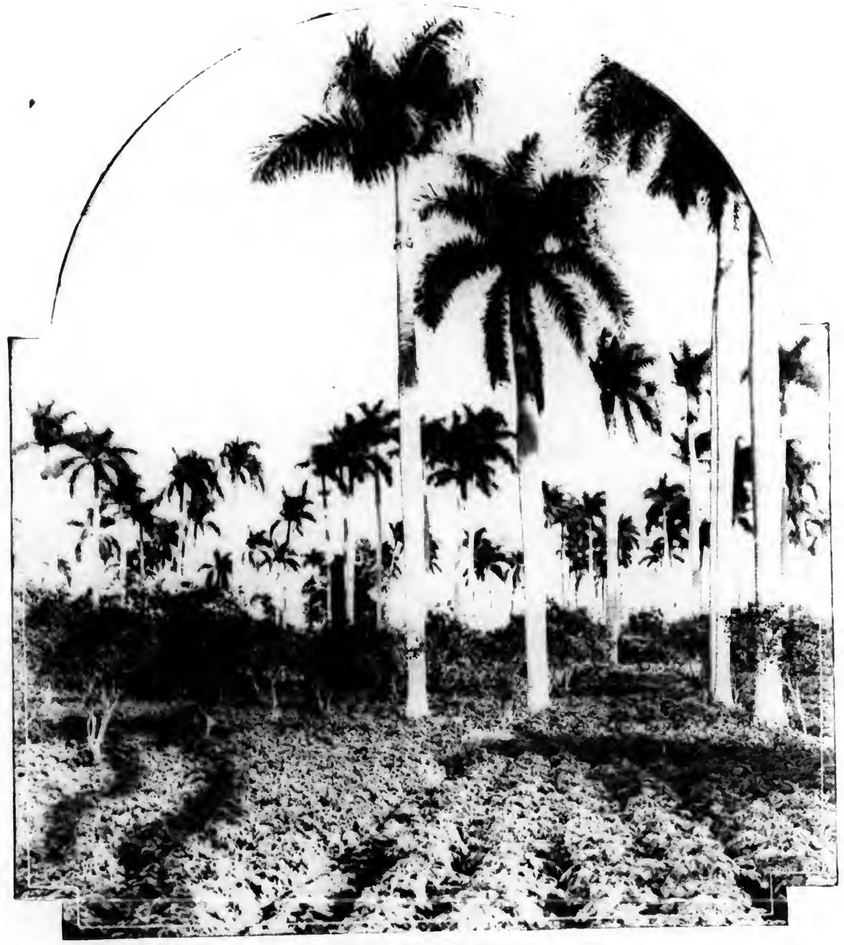
Published Weekly

Established 1877

Consolidated with

PENNSYLVANIA STOCKMAN *and* FARMER

February 23, 1929



A Potato Field in Cuba

TIGHT BINDING

COVER EVERY HILL with a SILVER DOLLAR



ACCURACY of drop is one of the outstanding features of the Case E-B Corn Planter and the desired number of kernels in each hill are dropped so close together you can cover them with a silver dollar. This important feature, plus unusual accuracy of check and even depth of planting, insures a well-planted field—easy to cultivate thoroughly and quickly.

The Case cell drop planting mechanism is simplicity itself—positive discharge—no cracking of seed—easy to adjust.

The Case Planter is exceptionally well made and simple in construction—90 less parts than on many planters. The long, diagonal braces from the pole—an exclusive Case feature—hold the frame rigid, assuring accurate planting. Extra fine performance—extra long life.

There is so much to be gained by a first class planting job—higher yield—easier, better and faster cultivation—that unusual care should be used in selecting your corn planter.

See this outstanding machine. Your Case dealer will explain its many advantages. Or write direct to factory for interesting, illustrated pamphlet.

Est. 1842

Tractors
Threshers
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Hay Balers
Silo Fillers
Plows
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Full line now includes

E-B ~ OSBORNE ~ GRAND DETOUR

QUALITY MACHINES FOR PROFITABLE FARMING

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Seeds of Highest Quality

Rohrer's Sure Pay Seeds are carefully selected, thoroughly recleaned and rigidly tested. Purity, vigor and high germination are definitely established before any seeds are sold. These extra processes result in seeds of highest quality and assure you of bigger and better crops. Send for samples now!

Alfalfa
Clovers
Grasses
Timothy
Seed Oats
Seed Corn
Field Peas
Garden Seeds
Seed Potatoes



We make no charge for bags and pay all freight expenses.

To the left is pictured our Spring 1929 catalog. From cover to cover it is full of facts that will interest you. Write for it today!

P.L. ROHRER & BRO. Box 2, Smoketown Lancaster Co., Pa.

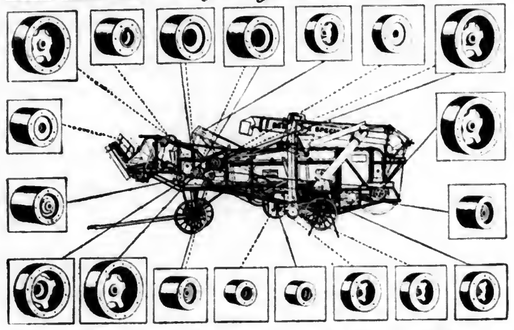
Farm Facts and Fancies

By ALVA AGEE

THERE are so many things about finance that I do not know that ... may not be important to ... me of them specially, but I ... I ... how to measure ... ...

ANOTHER GREAT IMPROVEMENT on the RED RIVER SPECIAL

more than ever··· *the finest, fastest, cleanest thresher*



22 Rockwood Weather-proof Fibre Pulleys—

Once again, it is Nichols & Shepard that offers the thresher buyer a great new improvement. As in 1925, in 1926, in 1927, and in 1928, another great and real improvement is offered in the Red River Special 28x46 and 22x36.

The Red River Special Line for 1929

Threshers
22 x 36
24 x 46
30 x 52
32 x 56

Combines
5 Sizes
Prairie Type

Tractors
N & S
Lauson Belt
4 Sizes

Nichols & Shepard Corn Picker—Husker

Practically all builders of threshing machinery recognized the value of the Weatherproof Fibre Pulley by making it standard for the main belt drive. Some followed Nichols & Shepard's lead and placed them on a few other drives, but now 22 of these superior power-transmitting pulleys are standard equipment on the Red River Special 28x46 and 22x36.

And Why Belts will never slip on their gripping fibrous surface. The time, expense, and trouble of lagging is completely done away with. The perfect balance of these pulleys will save power and by cutting down on vibration that comes from out-of-round cast iron pulleys, they will add to the life of the machine.

Our new book "More than Ever the Finest, Fastest, Cleanest Thresher" will show you all the improvements that feature the Red River Special Line. Send the coupon for your copy.

NICHOLS & SHEPARD COMPANY
In Continuous Business Since 1848

THE NICHOLS & SHEPARD COMPANY, 305 Marshall St., Battle Creek, Mich.
Please send me the Book—"More Than Ever The Finest, Fastest, Cleanest Thresher."
Name..... R.F.D..... City..... State.....
I have.....acres of grain. My tractor is a..... h.p..... make.
If you have a thresher, state size and make.....

The RED RIVER SPECIAL *Line*

READ THE ADVERTISEMENTS TO RECOGNIZE PRODUCTS THAT ARE WORTHY OF YOUR CONFIDENCE

Double the dollars at harvest with OSPRAYMO SPRAYERS



Reaches the topmost boughs

High pressure, low upkeep, slow depreciation

Every Ospraymo Machine is strong—built to last and for hard usage, easy to keep in order. Equipped with the reliable Ospraymo automatic system of agitation, throttle valve, a pressure regulator and gauge.

Stiff brushes on the revolving paddles clean the suction strainer on every turn — prevent pipes and nozzles from clogging—prevent costly delays in orchard, grove or field



Brushes prevent nozzle clogging

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Ospraymo gets all plant enemies

Insist on an Ospraymo when you buy and put an end to your spraying problems. Send for our illustrated catalog. We help you select a sprayer suited to your needs. Find out about the best. Address

FIELD FORCE PUMP COMPANY
Dept. M Elmira, N. Y.

World leaders for 47 years

THE SPRAYER THAT NEVER CLOGS

NESHAMINY GARDENS

By R. P. KESTER

WE had fresh green peas for dinner last evening which cost only twelve and one-half cents a pound in the pods! The green grocer also had new lunch beets at eight cents, fresh strawberries at sixty cents a quart, and other produce at little greater cost than the products we sell in summer time. All of which goes to show what changes have taken place in production and distribution in the last few years and explains why producers must revise their business methods so as to meet the changed conditions.

• • •

Within the last few years people in general and housewives in particular have learned a great deal that our mothers and grandmothers never dreamed of about the variety of food stuffs to use in order to secure the proper vitamins for growth and health. Fruit, fresh vegetables, eggs and milk have come to occupy a more important place in the diet and command a higher price than ever before. We decided to try the experiment of giving it a counter in our produce stand back of the tables of cinders. The railroad company charged us a carload rate of $1.20 per ton freight, which amounted to $25. The car was placed on a dealer's siding and the load hauled from there for $25. With a big two-ton truck unloading the cinders right from the car and the truck moved along the track as the work progressed, the whole job was completed in a couple of hours. Of course, we had to have a road we can travel at all times, which will require a certain amount of cinders each year, but the durable the better. We got the carload of cinders at road expense that one time and used it for patching later.

• • •

Last year winter with its repeated freezes, thaws and rains made it impossible necessary to do something about our driveway at Neshaminy Gardens. We had hoped that the ground would stay frozen during the winter and thus make it unnecessary to make a road, but Old Man Weather Man decreed otherwise. Rather than being unable to use the lane for different times we decided to try the experiment of giving it a coating of cinders. The railroad company shipped us a carload of cinders, charging $1.20 per ton freight, which amounted to $25. The car was placed on a dealer's siding and the load hauled from there for $25. With a big two-ton truck unloading the cinders right from the car and the truck moved along the track as the work progressed, the whole job was completed in a couple of hours. Of course, we had to have a road we can travel at all times, which will require a certain amount of cinders each year, but the durable the better. We got the carload of cinders at road expense that one time and used it for patching later.

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• • •

A long but interesting letter from a reader in Maryland who says he does not want his letter published receives a number of subjects treated in this column. He mentions as one of the reasons for the decadence of rural population the necessity of parents sending their children to the city schools because there is no high school in the neighborhood. He says: "Boys and girls of farmers there now. Just recently two classes were graduated and sixty-four were graduated. I have received three letters from that article was published in all but one of the sixty-four."

• • •

Because several people have written in response to my request for information on patching tomatoes I believe the following letter from a Bucks County writer will be of interest:

"I notice in a recent issue of Pennsylvania Farmer that you are trying to solve the problem of keeping tomatoes clean by mulching. This has been a serious problem with us, also. On a small area it would be easy to do, but we plant about four acres and this amount makes it quite a task.

"Three years ago we tried oats and rye. This helped some, but did not prove entirely satisfactory. Last year we sowed one-half to rye and the other half to red clover at the last cultivation. We find the red clover best, as it forms a denser mat and the tomatoes were cleaner. We did not notice any decrease in yield because of the cover crop.

"I consider clean straw ideal, but the cost of straw and labor to apply it is too great. This year we are going to try mulch paper. From all accounts it is proving to be the ideal mulching material. The Department of Agriculture has conducted a series of experiments covering four years. The results are available to those who write the Department at Washington, D. C.

"For our four acres the cost would be about $58, or two cents for each tomato plant. But this cost is small when compared to the benefits. The report states that the yield was increased 44 per cent, and there is little expense for cleaning the tomatoes."—Wm. K.

• • •

Last winter with its repeated freezes, thaws and rains made it impossible necessary to do something about our driveway at Neshaminy Gardens. We had hoped that the ground would stay frozen during the winter and thus make it unnecessary to make a road, but Old Man Weather Man decreed otherwise. Rather than being unable to use the lane for different times we decided to try the experiment of giving it a coating of cinders. The railroad company shipped us a carload of cinders, charging $1.20 per ton freight, which amounted to $25. The car was placed on a dealer's siding and the load hauled from there for $25. With a big two-ton truck unloading the cinders right from the car and the truck moved along the track as the work progressed, the whole job was completed in a couple of hours. Of course, we had to have a road we can travel at all times, which will require a certain amount of cinders each year, but the durable the better. We got the carload of cinders at road expense that one time and used it for patching later.

Friendly Talks

By Edgar L. Vincent

WHAT a joy it is to boost a good product!

When we go to town with a load of potatoes, it is a pleasure to work, no hard sell and enough to sell at a fair price for them. If we have a few quarts of extra nice apples or other things on the farm, why then we can look customer right in the face and tell the buyer that we have a superior article and expect a living price for it.

Just here is a lesson most farmers have to learn. It makes for happiness, prosperity and success to grow the best things possible and sell them at a fair price.

We have come to a time in the world's history when the line is drawn very close between the good and the bad, or even the indifferent, to win out as a farmer, a man must sell well when he goes to town with his products; he must have the finest possible products, he must be master of the secret of successful selling, he must have the mastery of a genuine good article and simple, and he must not be afraid to boost his own eggs, apples, potatoes and other produce.

And let us remember this today: a joy to do business with a good hearted man who has good things to sell

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Vice-President ..... Geo. M. Slocum
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Standard Farm Paper Unit.

Vol. 100 Pittsburgh, Pa., February 23, 1929 No. 8

Some Acute Angles of the Tax Question

Diagnosis of Financial Ills Is Easier than the Cure

By R. W. STIFFEY

THE tax question is a knotty complex problem. It is more full and more dreadful and harassing and tiring on this question than on any other subject, prohibition perhaps excepted.

Some there are who know nothing about the tax question but don't know it. Others, knowing, know nothing about it and know it well. The best I can do is to [illegible] some order [illegible] should have a large and [illegible] I perceive we are groping in the main.

Almost everybody [illegible] about taxes. Some for good reasons, scarcely any reason. At last all [illegible] are responsible for the greatly increased [illegible] public purposes due to the expansion [illegible] we are "restricted" as the lawyers say, and have no [illegible] nation on the globe and has filled the land with millionaires.

It used to be thought that the goodness of God [illegible] upon us the richest, most varied and [illegible] resources in the earth coupled with the [illegible] industry and genius of the American people [illegible] with it, but [illegible] the thought [illegible] old fashioned, a [illegible] national [illegible] are interested and unable to be convinced [illegible] the world are [illegible] wealth is called into being [illegible] and diligently pursued, amassed [illegible] spent for [illegible] who specially deserve it best to be distributed and get [illegible] among the people and so [illegible]

With such a [illegible] influences at command [illegible] and can be [illegible] With this magic [illegible] and people [illegible] [illegible] [illegible]

PENNSYLVANIA FARMER

Consolidated with
PENNSYLVANIA STOCKMAN *and* FARMER

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Volume 100, Issue No. 8 Established 1877

WHEN DAVE SHOULD WORRY

DAVE SLOAN, who as county agent has done so much constructive work in Bradford county, Pa., is the subject of an indecent attack by a journal maintained by sundry Holstein insurgents at Harrisburg. We mention it merely to suggest that as long as these fellows assail him Dave may be pretty sure he is doing the right thing. When, if ever, they commence to praise him he may begin to worry about having made some mistakes.

A PLAIN FARMER

ONE by one our old friends are cut down by the scythe of Time. Last week, as a sheaf ripe for the harvest, John G. Paxton of Washington county, Pa., was gathered into the Great Granary at the age of ninety-two. He was a plain farmer, making no great noise in the world but an example to any generation of farmers. He lived all his long life without reproach in one community, sixty-five years of it on one farm. He raised a family of seven useful and honorable men and women. He served his country as a soldier in the Civil War and served his community in every movement for its advancement. He was a successful dairyman, a pioneer in the improvement of livestock, and a student of the lessons of agricultural science. We cannot despair of agriculture while it produces such successful and useful citizens, or of humanity while it yields such wholesome characters.

PROPERLY DEFEATED

THE perennial idea of helping farmers by curtailing trade in their products cropped up this season in the Caraway bill (S. 1093) to restrict future trading in cotton and grain. It was defeated in the Senate last week by a vote of 47 to 27. This bill was designed to prohibit the sale or purchase of cotton or grain futures by any person not intending to deliver or receive the actual commodity. A few years ago such a measure would have received more serious attention than this one got, but the public and our lawmakers now have a higher appreciation of the open market than formerly. Both experience and common sense tell us that producers profit by free trading in their products, but this will not prevent the occasional recurrence of schemes to improve markets by restricting them.

TO WOOL GROWERS

TWO years ago that old and useful organization the Tri-State Sheep and Wool Growers' Association voted to hold its annual meeting in each of the three states in turn. Last year was Ohio's turn and the sheepmen of that state produced a great meeting at Cadiz. This year is Pennsylvania's turn, and the sheepmen of this state should do as well as Ohio if not better. The meeting begins on the evening of March 7 at the George Washington Hotel, Washington, Pa., and continues throughout the following day. The program is good enough for any organization of doctorasters, but perhaps the bright particular star of it is J. F. Walker, who will tell of the sheep and wool of several other continents. The editor of this paper isn't going to preside at the banquet this year, and that ought to help some. All the sessions of the Association and the wool show are free to the public.

NOT FATAL

THIS paper's circulation covers only a fraction of the country, yet we hear nearly every week about somebody being injured or killed by a bull. What must the total number of such "accidents" be? This week two reports come in from friends who want us to continue to warn stockmen against trusting a bull. George Robinson, near Berlin, N. J., was driving his herd into the barn when the bull suddenly attacked him, knocked him down and dislocated his shoulder. Mr. Robinson's brother Paul happened to be near and with a pitchfork drove the bull away, preventing more serious injuries. William W. Hall, justice of the peace at Danboro, Pa., had a similer experience. His bull made an unexpected attack, butted him down, breaking two ribs and inflicting other injuries. A neighbor whose name is not given rushed to his rescue and saved his life. No doubt both of these bulls were considered gentle, and that is why they had a chance to hurt somebody.

FOR ROAD REVENUES

WE DO not profess to know the best way to provide the money necessary for the continued development of the public highways of Penn-sylvania, but there is one correct principle which should guide such legislation everywhere. The cost of the roads should be borne by those who use them and in just proportion as they use them. If this principle is correct, and it is generally admitted to be so, the increased revenues cannot be found in increasing fees, whether license or registration, for they apply alike to all users of cars whether they use highways much or little. It is not just to require a car used comparatively little to pay the same increase in fee as one in constant use. It is not equitable to require each member of a farmer's family to pay a high driver's licen-se fee, or the same fee a constant or professional driver pays. An increase in the tax on gasoline is a certainty, and that is in line with the principle stated above. But gasoline used for tractors and other farm machines should not have to pay a tax for the benefit of highways. There are many angles to all plans for increasing revenues, and all interests should be heard thereon.

THE SECRETARY RETIRES

LAST week Secretary Jardine announced his retirement from public life. He is to become counsellor for the Federated Fruit and Vegetable Growers, which the official announcement says is "a cooperative organization with headquarters in New York City and reaches into many states in its business dealings". Secretary Jardine says: "During the past four years I have consistently held that the stabilization of agricultural production and prices is our most urgent economic need; that sound cooperative marketing associations and stabilization corporations must be the basis of aid extended by the federal government; that we should greatly increase our agricultural research; and that we must keep the domestic market for the American farmer." No doubt the Secretary is sincere in his dream of stabilization. And while we credit him with sincerity in that and in all things let us thank him for refusing to support the McNary Haugen calibre, which originated under and was advocated by his predecessor. We believe that Secretary Jardine has been a faithful public servant and wish him even better things than are likely to come to him in his new work.

REFORESTING WASTE LAND

NEARLY 7,000,000 forest seedlings will be planted on waste Pennsylvania land this spring, according to State Forester Joseph S. Illick. About 800 land owners have applied for such trees, and it is estimated that they will reforest 7,000 acres. The state's supply of most species of trees is exhausted, indicating that appreciation by land owners of this service was even greater than expected. The wisdom of covering waste land with forest trees is beyond question and it is not surprising that hundreds of farmers are planning to raise a valuable crop on their least valuable land.

STABLE PRICES

A DEPARTMENT of Agriculture economist avers that "a stable price rather than fluctuating high and low prices for farm products is needed to make farming profitable". But he leaves us in ignorance about the means of achieving a stable price while he goes on and talks about something else. We shouldn't blame him for this, for neither he nor anybody else knows how to stabilize the price of even one important commodity. Probably neither he nor anybody else would be satisfied if prices were stabilized. What every producer of every commodity really wants is a high price and the chance of getting a higher one. Why continue to prattle about stable prices when we know that prices must continue to reflect conditions, which are often unstable, and when we know also that this is exactly what we want and expect prices to do?

USE OF BANK CREDIT

RECENTLY the farmers, bankers and dealers in farm supplies in Burlington county, New Jersey, after proper discussion adopted a resolution urging farmers to use bank credit rather than dealer credit. A study of the whole matter showed that too many farmers are depending on dealers to carry them, that they are paying more for this credit than bank credit would cost them, and that cash customers are compelled to pay a part of the cost whereas they should have to pay none of it. The study showed further that the banks are able and willing to extend credit to farmers whose resources and business habits justify a loan. All this is merely good common sense from the standpoint of every interest concerned. Farmers should establish bank credit and use it just as other business men do. No man should neglect this even if he needs no credit at the time, for he cannot know when he may need it. Bankers are in the business of supplying credit, they can do it cheaper than dealers can, and it is better for them to have the notes of many good farmers than the notes of a few dealers. The New Jersey farmers, bankers and dealers are right in proposing a more economical credit system. It will save money and spare trouble for all of them; but the best thing about it is that it develops better business habits and methods on the part of those who need credit.

New Jersey Farm Comment

By G. W. HARRIS

THE third week of evening classes for poultrymen will be held at Lambertville High School on February 26 when a study of poultry house equipment will be made. The first work was on diseases of chickens and the poultrymen were free to bring birds for examination. At the second meeting the electric incubator owned by the school was started. The chicks which hatch from this setting of eggs will be brooded at the school as a part of this work.

On March 5 poultry feeding will be the course of study; March 12, brooding baby chicks; March 19, diseases of baby chicks.

* * *

ELIVAN METTER of Cohansey, heads the new Cumberland County Holstein Breeders' Association. Other officers of the Association are Howard Davis, vice-president; Harry Reed, secretary, and Fred Reune, treasurer.

* * *

MARYLAND growers and shippers last season sent to the leading markets of the country 2,329 cars of fruits and vegetables bearing federal state shipping-point inspection certificates. Demand for the shipping point inspection was greatest in the early potato producing sections where 690 cars were inspected for shipment and growers. Apple inspections totalled 395 cars and other inspections included 406 cars of strawberries, 152 cars of tomatoes, 112 cars of sweet potatoes, 57 cars of peaches and 8 cars of cucumbers.

* * *

A PUBLIC meeting of the New Jersey Poultry Council was held at Trenton on February 20 to consider the advisability of a compulsory retail egg grading law for New Jersey. Requests from poultrymen for such a law have been so dissimilar in nature that it was hoped an open forum might make clear the wishes of egg producers in the state.

Members of the New Jersey Poultry Council who took part in the conference were: Elmer H. Wene, Vineland, chairman; H. E. Wettyen, Paterson, vice-chairman; Albert E. Jones, poultry specialist, Bureau of Markets, secretary-treasurer; W. W. Otley, Chief of Bureau of Markets; Prof. W. C. Thompson, Dr. F. R. Beaudette, and L. M. Black, of the State Experiment Station, New Brunswick; Herman Demme, Sewell; M. L. Chapman, Trenton Junction; J. C. Weisel, Frenchtown; C. T. Darby, North Branch; J. P. Vreeland, Little Falls; and Louis Novins, Toms River.

* * *

THINK how many hens it would take to hatch and brood 25,000 chicks if we were to consider the time honored poultry methods. Over 2,000 broody hens to care for the chicks! It would be a man-size job to care for the hens only.

L. W. Steelman, Montgomery county, Pa., has equipped his poultry plant with a mammoth brooding system, the largest mechanical device of its kind in Pennsylvania and second in size in the entire country, which has a capacity of 25,000 chicks at one time. Mr. Steelman erected a concrete block building, rat proof and fireproof, in which cage-like units house the chicks from the time they leave the shell until they reach any age up to eight weeks. The five sections of these cages are surrounded by glass substitute in order to prevent drafts, but still admit light and sunshine.

Temperature, humidity and sanitation are under complete control of the operator. Electric fans with vents directly overhead draw in pure air from outside the building and carry it over steam coils, thence to the floor of the brooder where it is evenly distributed through the house. The heat and humidity are controlled by thermostatic regulators. When the warm air reaches the top of the room it is drawn to the outside again by suction.

Sanitation is the keynote in the operation of this brooder. Droppings fall through the meshed bottoms of each chick compartment and are easily removed by the pans underneath. Disease cannot spread through litter. No contamination is possible through the feed and drinking water, as this is placed in long galvanized troughs outside the wire cages. The mesh of the cages allow only the heads of the chicks to these troughs.

Last year Mr. Steelman brooded 4,000 chicks by the battery method with such success that he built this new broodery for operation in 1929.

* * *

VEGETABLE growers and shippers in southern New Jersey are making a protest against the closing of numerous railroad stations in this part of the state. Good roads and the increasing use of motor trucks have cut the business of the railroads and they have been forced to close many of these smaller stations. It is not known just how far this will go, but within the past few months about twenty former loading stations for fruits and vegetables have been closed by the railroads.

* * *

A RAT extermination campaign was held in Gloucester county, New Jersey, recently. With the cooperation of the U. S. Department of Agriculture, the local county agent, George Lamb, held fifteen demonstrations in many sections of the county. The campaign attracted much interest and many thousands of rats are believed to have been killed.

* * *

NEW JERSEY was represented before the Tariff Revision Committee of the House at Washington in late January by Howard B. Hancock, former president of the New Jersey Federation of County Boards of Agriculture. Mr. Hancock urged a 50 per cent ad valorem duty in place of the present rate of 15 per cent. He pointed out that recent surveys show the cost of raising an acre of tomatoes in New Jersey, for example, to be $138.75. On the basis of seven tons per acre, this means a cost of $19.40, whereas the federal authorities, estimating an average production of five tons per acre, would make on the same cost basis a $24 per ton figure. In Italy, which is the chief competitor to Eastern tomato growers, the cost of production is estimated at less than $50 per acre, or around $6 per ton.

* * *

DR. W. J. SPILLMAN, of the U. S. Department of Agriculture, will discuss the outlook of the fruit and vegetable industry before a group of Burlington county farmers at the Moorestown High School on February 26th. Doctor Spillman has traveled widely and knows conditions as they exist in most sections of the United States.

On February 27 at Flemington he will speak to Hunterdon county dairymen on the outlook for New Jersey dairymen.

* * *

THE Hunterdon County Egg-Laying Contest Committee has gone over the top with slightly over $5,000 now pledged for the erection of the buildings for the third New Jersey Egg-Laying Contest. Two possible sites are now under consideration, one on the Nief Farm near Flemington and the other on the Grossman place near Frenchtown. Both sites are favorably located, but due to the fact that the Flemington location was offered first and because plans were originally announced for this area, it is probable that the Flemington farm will be chosen. A committee of nine will be appointed shortly to supervise the construction of the contest pens.

* * *

AT the annual meeting of the Somerset County Cow-Testing Association held at Somerville in late January, Charles V. N. Davis of New Centre was reelected president for the coming year. J. V. D. Bergen of Belle Mead was chosen vice-president, and J. Harold Ten Eyck of Flemington, secretary-treasurer. In addressing the meeting, Prof. E. J. Perry, Dairy Extension Specialist from the New Jersey State College of Agriculture, reviewed the work of the Association this last year and showed that pure-bred cattle, on test, were decidedly better producers than the grade animals in the Association. Opportunity for two more herds to be added this year was quickly taken up and the Association now goes into this third year with a full membership.

* * *

A DETERMINED fight will be carried into the New Jersey State Legislature this season for sufficient funds to reclaim meadowlands in Burlington, Cumberland, Cape May, Ocean and Atlantic counties. Legislators from the southern counties are also seeking more representation on the New Jersey State Fish and Game Commission. Ocean county is the only southern New Jersey area now represented on the commission. In this same connection, steps are being taken through a bill being introduced in the legislature to increase the membership of the Commission from eight to ten. It is proposed in this way to get at least two or more members from the southern counties on that body.



Mr. Steelman's 25,000-Chick Brooder

Alfalfa in Delaware

THE growing of alfalfa is rapidly proving to be a successful part of the farming operations in Delaware, as shown by the fact that in Kent county alone over 2,300 acres of this valuable legume have been planted during the last two years, according to a survey of the total amount of seed sold by the various local dealers and distributors who are cooperating in this project by handling the northwestern-grown seed, which is the strain recommended for this section of the country.

In connection with this state-wide campaign for more and better alfalfa on our Delaware farms, a questionnaire for the purpose of learning something of the general condition of this crop at this season of the year was mailed a few weeks ago from the county extension office in Dover to those farmers in Kent county whose survey cards were returned in the spring of 1927 when this alfalfa project was started under the direction of the agricultural extension department of the University of Delaware in cooperation with the United States Department of Agriculture.

Many interesting comments and statements concerning the results which different farmers are experiencing with alfalfa, and the value of this legume as a hay crop for dairy cattle and other livestock, have been received from the various sections of the county, and the majority of these questionnaires indicate that most of the farmers are having fairly good results with the alfalfa which was sown in August of 1927 and 1928.

The alfalfa on some of the farms, however, was not in first-class condition last fall to withstand the alternate freezing and thawing reactions that usually prevail during the winter months. This unfavorable condition of the crop may be attributed to a number of different factors such as the wrong time of seeding, an unknown source of seed, poor soil, or the lack of inoculation and lime, for in practically every instance where all of these essential points have been taken into consideration the alfalfa is growing successfully.

With the cooperation of the local seed dealers in handling the right strain of alfalfa seed, and the use of inoculation, in addition to the sowing of this seed at the proper time on land that is in a high state of fertility, there should result a continued increase in the alfalfa acreage to the extent that those farmers who need this legume for hay purposes will be sufficiently supplied in the future, and Delaware will become recognized as one of the leading alfalfa producing states in the Union.

Russell E. Wilson, County Agent.

Maryland Extension Meeting

WITH county and home demonstration agents from the twenty-three counties of the state in attendance, together with specialists and other members of the service, and representatives of the United States Department of Agriculture, the annual conference of the Maryland Extension Service was held at the University of Maryland, College Park, January 22 to 25.

In addition to the consideration of the most pressing agricultural problems of the state, special attention was this year given to the proper use of extension publicity and improved public speaking as means for further increasing the efficient service of the organization to the state. Practical instruction in extension publicity and news writing was given under the direction of M. D. Bowers, extension editor, and instruction in public speaking was given by Professor L. S. Richardson of the University of Maryland.

The conference was in charge of Dr. T. B. Symons, director of the Maryland Extension Service, assisted by Dr. E. B. Bomberger, assistant director, E. I. Oswald, district agent, and Miss Venia M. Keller, state home demonstration agent.

Addresses were given during the conference by Dr. H. J. Patterson, director of the Maryland Experiment Station and dean of the College of Agriculture, Miss Florence Ward of the United States Department of Agriculture, Eugene Merritt, Morse, Salisbury and Reuben Brigham, all of the United States Department of Agriculture; J. W. Davis, president, Maryland Farm Bureau Federation; W. B. Barris, Washington, D. C., and Dr. E. B. Bomberger, assistant director of the Maryland Extension Service and chief of Maryland State Department of Markets. T. H. Bartilson.

TIGHT BINDING TEXT CUT OFF

The Human Side of Europe

Ancient and Modern Customs Form Strange Contrasts

By ELLEN S. BRINTON

THE inconsistency of various national customs is always striking in a trip such as I made this past summer. For instance I saw women in every European country cutting grain with a sickle, gathering hay with hand rakes, tending cows, cleaning stables, delivering heavy bags of coal. There are many more women than men and the economic situation is such that they must do any work available to earn a living. When working they wore clothes and shoes accordingly and nearly [illegible] their heads in a cloth handkerchief. I wished often to eastern Europe that fashion would permit me to wear one, for the sun is not hot enough to need a hat, and the handkerchief is a protection against the clouds of smothering dust.



Guard at Whitehall, London. Horse and man stand motionless for an hour, one each side of the marble gateway. This is one of the sights of London. He wears a coat of brilliant scarlet and gold braid, with white gloves and a shining helmet, high black leather boots and white breeches. A rich fur blanket is over the saddle.

But do not think because of these costumes and customs that Europeans are generally slovenly or dirty in habits. I came home thinking that we in America are still in the dark ages when it comes to public housekeeping. The streets in the towns and cities I visited were astonishingly clean compared with ours. Every telegraph pole in Prague and Vienna has a small wire basket for paper and trash. One is arrested on sight for dropping even a street-car ticket. Ashes and garbage are placed in uniform cans that are removed by the city without a trace of loose dirt or smell or exposure of contents. In Prague this is all converted into artificial fertilizers.

The rivers are so clean generally that bath houses are operated in the heart of the city, fishermen fish off the main bridges, and women bring their laundry to rivers' edge. Can you conceive of this being done along the Allegheny in Pittsburgh or the Schuylkill in Philadelphia? Naturally when I exclaimed over such examples of sanitation I was asked what we did in America. I can see yet the look of horror on one scientific expert's face when I truthfully acknowledged that our rivers were often used to carry off the city sewage.

In Czechoslovakia inconsistencies were especially noticeable. Government offices were housed in magnificent old palaces, with crystal chandeliers, and old tile stoves, but their office equipment was modern and always they had the latest type of "executive" telephones such as we see on the stage or in French pictures. Country villages had a town pump, women went barefoot, and cows did the plowing, but the homes were lit by electricity and a public community hall furnished opportunity for recreation, information and relaxation. Automobiles were luxuries for the wealthy only, but excellent trolley systems and buses gave transportation at a low rate. And the trolleys were all provided with newspapers in orderly racks for free use of the passengers.

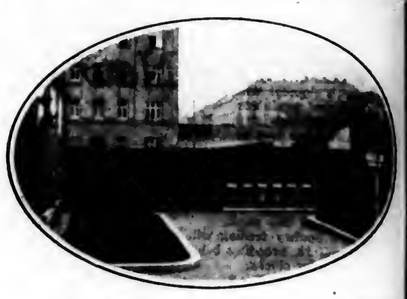
Sometime back I saw an article in this paper lamenting the present day dress and rather inferring that bobbed hair, short skirts and rolled stockings are evidence of laxity in morals of the present generation.

Perhaps they are in the United States, but in Europe these things are a matter of everyday living. Over there many artificialities of life have been cast aside as useless. This is perhaps most striking in evidence in Germany and Austria. War and revolution, starvation and scarcity of clothing brought the people generally to the level of sober necessity. Material things are again available, but there is a new conception of what is worth while and beautiful.

What I noticed was thousands and thousands of men and women in outdoor costumes—bicycling, boating, walking. The amount of brown skin visible was astonishing, but there was no comment, no attention paid on the part of any one and barelegged men and girls carrying alpine sticks and rucksacks were common sights in all towns and big cities. The girls always had bobbed hair, "windblown" (never the artificial marcel wave so much seen here—and by the way only the old women have long hair in Europe) and seldom wore a hat. Their suit would be a loose blouse open neck, and often short sleeves a very short skirt or perhaps "shorts" like the men wore perhaps [illegible] developed after war times when [illegible] children were undernourished. Sun bath[illegible] wholesale in help exercise tickets. Doctors are advising the same practices now and it is generally accepted that a reduced skin is a sign of health, but when I returned to business and sophisticated dress in this country the women were very noticeable to me. Many times I [illegible] to reduce the [illegible] brought to my attention [illegible] I left Cleveland. I was taken [illegible] a short time out of London and had the delightful opportunity of seeing all over the barn and I also even saw the wine cellar. I expected to see something unusual and was rather surprised to find just a [illegible] with a few dozen old bottles scattered around. It was very evident that liquor was not an important item in that household. Mr. Upjohn is a successful and prosperous farmer, but the fact is that three years ago daily [illegible] were served to the farm laborers. During the summer the harvest hands is expected to be served [illegible] and [illegible] daughter and the [illegible] transporting it to the [illegible]



Milk cart, Middleburg, Holland. Notice particularly the iron railing at the left background. Sidewalks are considered private property. They are scrubbed immaculately clean and the fences prevent any one from walking on them. Autos, horses, bicycles and pedestrians use the street, which is always as clean as a marble floor.



Trash cans, Vienna. This was taken at the back of one of the municipal apartments housing thousands of families and a multitude of children. The whole property was as clean as this corner. This type of can was used all over the city.

[illegible] Mr. Hunter said [illegible] and spend them [illegible] House to complain [illegible] Roumanian was not [illegible] I [illegible] of it all. I [illegible] 112 cents [illegible] and that so [illegible] did not want the [illegible] privileges."

[illegible] and American citizens councils have appealed to the [illegible] to arrange to sell milk to needy [illegible] have seen for themselves that liquor and tobacco do not go together. Milk stores and lunch rooms such as shown in the accompanying illustration are found in large cities. The German Federal Railways is making an educational campaign among its workers showing the minimum effects of liquor and has ordered special milk markets to be established at convenient points so as to have substitute drinks supplied.

In Vienna the city government (which is distinctly Red Socialist) according to their own claims has ordered that no intoxicating liquors be sold in or near the state apartment houses. Thus is a very drastic move as some 700,000 families of the working class are living in government-owned apartments and others are being erected in units accommodating 5,000 families each.

In England, Germany, Czechoslovakia and Austria I was told of educational campaigns to reduce liquor consumption and increase the use of dairy products. Sometimes the dairy industry was sponsor, other places the Red Cross or physicians or state authorities. In every case the use of coffee was encouraged because the European custom is to use quantities of hot milk with coffee. In Vienna there is a combination of whipped cream and coffee called "schlag-sober" which is simply delicious.

Germans stop in the afternoon for coffee and cakes just as the English have their tea. I was especially interested in watching the four o'clock service in a large popular restaurant in Munich. Every tray carried coffee and pitchers of hot milk with a rosette of whipped cream on top, and a glass of water. There was no liquor in sight. An excellent orchestra played classical music. The audience listened attentively and applauded with appreciation except when American jazz was played and then the silence was significant.

Every time I do the family marketing now I am thankful I live in the United States. The variety and abundance of the foodstuffs available here is amazing after one has seen European markets. I was in Europe in August, just the time of year when our gardens yield a rich harvest of fruits and vegetables and naturally I expected to find something similar over there. I saw city markets and country gardens and I ate in private homes and hotels, dining cars and pensions, but my impression is that food of all kinds was scarce, and that many fruits and vegetables did not reach the luxuriance and variety that we expect.

I saw no Lima beans, and a friend in Vienna said she had not tasted them since leaving America nearly five years ago. Sweet potatoes are seldom found out of Italy. Tomatoes are very precious and are served on a salad in paper thin slices. I did not see them growing. Peaches are as rare and costly in northern Europe as alligator pears with us. In Czechoslovakia and Austria they are more plentiful but small and unattractive.

Apples were small and [illegible] nearly knotty with [illegible] growths. The usual vegetables were [illegible] cabbage, turnips, and [illegible] were [illegible] pears and [illegible] grapes. The big purple "Belgian [illegible]" Holland.

There seems [illegible] list of fruits and [illegible] and dissected [illegible] that Philadelphia [illegible] but it is a [illegible] beans, [illegible] head-leaving plants [illegible] familiar bedding [illegible] once a week [illegible]

The [illegible] forest section [illegible] difference in [illegible] the principles are [illegible] what the European [illegible] in this twentieth century. But [illegible] warm weather in [illegible] so plentiful and cheap that [illegible] America—but not to northern [illegible]

I do not know where all the [illegible] that I can get so cheaply in Philadelphia but probably in the list would be [illegible] grapefruit from Florida and [illegible] as from the West Indies and [illegible] from New York, pears from [illegible] the North. And we can [illegible] of free trade between states and also our modern transportation and refrigeration methods. People over there are talking of the advantages of United States of Europe and what that means my guess is that foodstuffs generally will be more abundant and varied.



Old English farmhouse. Built in 1600, red tile roof, now equipped with modern bath and electric lights, and the old wine cellar in disuse. If this was a typical farm I would say the English live a very comfortable life, with plenty of help, maids in uniform and children going to private boarding school.

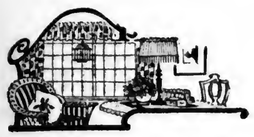
The Agricultural Missionary

THE life of an agricultural missionary has many compensations, according to Captain A. F. Slater, who spoke to the freshmen in agriculture at Penn State recently. He has been serving the people of India, through agriculture, for twelve years. India is as large as the United States, but has a population of over 300,000,000. Nine-ty per cent of the people are rural, living mainly in small villages.

India is one of the three or four great wheat exporting countries of the world, yet most of this wheat comes from tiny farms of about one and a half acres each. Manifestly there can be little, if any, use of labor saving machinery. The Indian farmers' implements are very crude. The plow usually is nothing but a crooked stick pulled by oxen. The farmer has to walk about fifty miles in preparing one acre for plowing.

All the rainfall comes during three months, from July to September, so that irrigation is necessary. Three crops a year are produced from the same land, two beside a grain. The average income of an Indian farmer and his family is less than ten dollars a month.

The cow is a sacred animal in India. Even the more intelligent Indians venerate the cow. When his appointed time comes, the Indian asks that a cow be brought near enough for him to [illegible] her tail—then he can die in peace. Sacred cattle wander all over the country and cannot be [illegible]. When calves they were branded on their [illegible] with a mystic symbol and then set apart for [illegible]. Since these sacred bulls are [illegible] stock and since they are allowed [illegible] without restraint to [illegible] crops [illegible] the [illegible] Most [illegible] Indian [illegible] Indian [illegible] Indian



The Farm Home



Sunlight and Health

By HEPSY NEFF

THE white growths we have seen on vegetables stored in dark bins and pits have raised questions which we have answered: "They have been trying to grow in the dark," by which we have meant the absence of sunlight. Only in recent years have our scientists found that nature's laws are alike for plant and tree; for men and animals. The jungle, with their heavy, tangled growth under tropical skies and long hours of sunlight abundantly prove the sun's power.

All this has a meaning for us. The soft bones of the child may be due to being fed on condensed or sterilized milk, but the best hope of cure lies in the violet rays of the sun. Disease in adult and middle life is being cured by the violet rays of the sun direct or reproduced with all their curative properties by machines now much in use in tubercular sanitariums where cloudy skies hinder the daily sun treatments. Perhaps a day will come when the violet ray machine will come within our reach just as the comforter has come into the hands of communities and individuals.

Farm readers have generally read "The Newer Knowledge of Nutrition," by that masterful scientist W. V. McCollum, who is now using more than two thousand rats in his studies of diet in relation to disease. Among the deficiency diseases are beri-beri and pellagra; the first originating among rice-eating peoples and the second a product of our own country. A member of the U. S. Public Health Service has made the statement that he would produce pellagra in any man who, for one year, would eat the foods common to sections where this disease is found. Here is a list of such foods: "Corn meal, red beans, white-flour bread, salt, fat pork, molasses, sugar and black coffee." Merely a regular use of tomato juice added to this diet will prevent pellagra, he said.

The total absence of dairy products and the vitamins of vegetables means a deficiency diet. Tomatoes are a first aid. Any dried fruit like raisins, peaches or prunes, washed clean and plumped in hot water, then dried under the direct rays of the sun, will take in vitamins as surely as growing lettuce or cabbage. If not softened enough soak over night in barely water to cover, simmer but do not boil and give the sunbath. Dry, ripened grains like red or white beans, are sources of proteins but offer no vitamins. Feeding a family in nature's way may, in time, prove to be both the best and the easiest way.

Sewing Prizes Awarded

By MRS. GERTRUDE S. STEWART

DEAR friends with the "threaded needles"—You have nearly swamped the Contest Editor with so many happy letters and useful ideas. Her own mending pile has grown mountain high while she sorted these helpful hints and tried to find the most unusual from among the many.

Finally four were up for the very last test, and discovering that they were from four different states, we waived rules and sent out four prizes for this week. Here are the winners' suggestions:

Minnie R. Proctor, Erie county, Pa., advises the use of a pin and needle cushion sewed round the head of the sewing machine—right in the center.

She also finds a scrap bag invaluable. Hers is made over an embroidery hoop, and fastened to the right of the machine. The hoop holds the opening ever ready to catch scraps that accumulate as sewing progresses.

* * *

Mrs. Frank Hoff, Mercer county, N. J., always makes a handkerchief or two of material like her little girls' dresses. Gay kerchiefs are fashionable and when the garment needs mending, there is material in the handkerchief that has been laundered and the needed patch will not show so much as if brand new patches were used.

She has just finished a "log cabin" quilt top made with savings from her scrap bag of gay prints. She did it quickly on the sewing machine, and will prove to any one that it's just as nice as if pieced by hand.

* * *

From Wirt county, W. Va., Mrs. C. C. Thorn, mother of three, sends us these hints: If you want to trim the hem line of little girls' frocks, it is easy and effective to hem it on the machine using the longest stitch. Then with colored embroidery threads decorate, using the machine stitches for a foundation for any variety of stitches. The same idea is useful if the dress needs enough added length for an entire applied hem.

Buttonholes are easily made in thin material if gem muslin is used underneath before working. Cut the hole through both materials and work like one buttonhole. Then trim away excess of muslin. This hole wears well, too.

Thin material is easily French-seamed if you use your narrow hem attachment.

An old cloth pocket fastened to the inner side of the machine holds scraps, thread and buttons in its three compartments.

* * *

Mrs. A. G. [illegible], our Maryland neighbor, is modest, but has done a valuable trick with her dye pots and pans inspired [illegible]. She tell her to cut[illegible] of windows and faded sateen hangings. She says they looked like a hopeless lot as [illegible] faded pink.

But just then a great wave of household hope and economy seized her and after repeated soap [illegible]bings she dyed the old things. Now they are a rich golden corn in hue entire first dose.

Having [illegible] magnificent for its [illegible] attached thumb hook and gave the rooms a [illegible] color by dyeing the overdrapes soft orange for the drill-worth room, rose for the sofa room and apple green for the sunniest one. Old sheets were dyed to match each room as were also the pillow cases and she says her rooms are perfectly charming. Oh! the wondrous joy of achievement!"

Baked Lentils

LENTILS [illegible] Europe and Chile, where [illegible] in a great many ways. They are [illegible] soaked and boiled until tender, and [illegible] served as a vegetable or they may be made [illegible] somewhat as tomato soup is made. The following [illegible] baked lentils served as a [illegible] Home Economics.

[illegible] pints lentils, molasses
[illegible] teaspoonful mustard
[illegible] salt

Soak [illegible] over night [illegible] four cupfuls of water and [illegible] cook until the jacket [illegible] slices and cook [illegible] of water for 15 minutes. To the pork [illegible] add molasses, salt and mustard. Place a [illegible] bottom of the [illegible] lentils and then another [illegible] pork. Cover until all of the [illegible] pork for the top. [illegible] the lentils. Cover and [illegible] and bake in a moderate oven, about one [illegible] If the liquid becomes too dry, [illegible]

"THE [illegible] Leadership organization [illegible] opportunity [illegible] fidelity for com[illegible] F. Andrews of College University at Cornell farm and home week.



It's Time to Talk About Flower Gardens

By GERTRUDE SHOCKEY

WE'VE had much pleasure and so many blossoms for every occasion, where a "seeds" flower garden has displaced a water-soaked, unwanted patch of ground at the back of the house.

Bit by bit it was cleared, and low spots filled with earth. Early as King Weather permitted it was plowed deep, deep ditches run all around to encourage good drainage. The old soil, unsunned for years, was well aired, sunned and pulverized. But the planting wasn't done until late May, owing to soppy spring days.

Flowers from elsewhere are pretty—but I want to grow my own and when we plant seeds the "joys of achievement and anticipation go hand in hand. My husband used an ordinary garden wheel plow when cultivation was needed. He and I both weeded, thinned, hugged and beetled, watered and loved it. Growing gardens like this require no special tools—only loving care.

The choicest zinnias were so big, so wondrous, that this year I shall be growing from our own seed, because, you see, our seeds garden is a part of our home, I guess.

How cheering to see a vase of heavenly blue delphiniums on the hall tabouretta, a jardinier of gorgeous zinnias near the hearth-cricket, a bowl of spikey snapdragons in a sunny window, a dining-table basket of jaunty coreopsis, airy cosmos on the piano, and nosegays of latest pansies, pinks, and "pincushions" too, upstairs in the bedrooms.

Catalogued, from A to Z, there are many lovely blossoms "ours for the growing" from seeds. A large part of failure to get strong plants and eventual fine bloom from choice seeds is due, I think, to non-performing certain [illegible] seeds and soil at planting time.

Immediately after planting of drawing earth over seeds—very shallow [illegible] seeds and deeper for larger ones—or should be patted firm together with the palm of the hand or a length of wide board. Planting after showers, when the soil is just moist enough to handle without messing, secures better results. Germinating seeds require continued moisture—the top soil should never dry out.

Not every one of us plants seeds with space so evenly but that some thinning is necessary; especially when thrifty growth begins. In thinning we can obtain healthy plants for other rocks.

With rain [illegible] and showers and breezes, poultry droppings or other stable manure [illegible] usually plants thrive [illegible] If we want to [illegible] something along a bit [illegible] a meal or nitrate of soda dug into the surrounding soil but not touching plant roots does the trick splendidly.

But don't [illegible] first outdoor plantings too much—Jack Frost is hard as nails and gives no [illegible] for his cruel unconcern about our baby plants.



Hollyhocks, though not blooming until the second season, are charming seed flowers to grow and love, like demure little children.

Oatmeal Cookies

I READ in Pennsylvania Farmer that an oatmeal drop cookie recipe was wanted, so here is an easy one:

Two cupfuls brown sugar, one cupful shortening, three eggs, one cupful sour milk, three and one-half cupfuls flour, one and one-half cupfuls oatmeal, one cupful raisins, one teaspoonful soda, one teaspoonful baking powder, one-half teaspoonful salt.

Helen H[illegible]



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TIGHT BINDING TEXT CUT OFF

When Choosing Spring Flowers

By L. L. RUMMELL



The side yard is as much a flower garden today as a plat elsewhere. A row of flaming-faced salvias at the left, snowy petunias in the center and snap dragons with a squashy mole bean, like an officer standing guard, prove that a flower garden from seeds is practical and pretty any place. G. L.

THE avalanche of spring garden catalogs is upon us! As the first ones appeared we withstood the attack and consigned them to a commodious wastebasket, but here were some big fellows that bombarded us, and we had to surrender. Deep, deep into the bowels of a seed catalog we burrowed, absorbed in feeding and digesting the choice morsels of flower education and inspiration.

No college education is needed to understand these books or to experience the thrill of living through our flower garden weeks before it is planted. Books there are and bulletins too in plenty that give detailed information on annual and perennial flowers. I like them and learn from them. Still for real enthusiasm and sound advice I would take the spring catalog of a large dealer (and one of these makes a good-sized book) and study its colored plates of flowers and shrubs, its descriptions and its advice on culture. My knowledge of gardening has come in no small degree by simply reading the catalogs. It is the safe way to keep up to date.

Some large seed firms make a specialty of flowers, and they advertise in farm and garden papers. A post card to them will bring one of these fine catalogs with its volume of knowledge.

Here is the place to buy your flower seeds, from a man who is a specialist. If I wanted to start in Shorthorn cattle I would go to a well-known and trusted breeder; if I wanted to buy a herd sire for a Poland-China herd I would get in touch with a few of the best breeders of that kind of hog. I would not go to the stockyards and expect to buy breeding stock there.



But how about our garden seeds? How many of us go to a corner grocery or a drug store and buy a mixture from highly-colored little envelopes? If only they would grow like the pretty pictures! Some may be satisfactory. I would not condemn them en masse, but it is too big a gamble to take.

Here we have one small flower bed perhaps. We want it to be the finest we can make it with flowers of size and artistic color, not just the sordid, common mongrel stuff that most everybody grows. There is no distinction there. Friends do not carry away a memory of a garden like that. They admire the unusual, the exquisite. Those scrub flowers take as much room, as much work, as much fertility—and where's the reward. It just cannot be. A whole season passes and our heart is still unsatisfied. It yearns for grandeur, for fragrance, for the last touch the artist in breeding can apply to the flower.

Before me lie a few of these latest garden catalogs. One is opened to a spread of colored illustrations of the latest creations in annuals—the doubles, supergiants, giant doubles, de luxe hybrids, large flowering, giant hybrids. That is where we stop. Each spring I eagerly await this book of more than 200 pages, and in the front are listed the "novelties and specialities." I never go any farther. The finest and latest creations from the plant breeder are none too good for my garden. Everything on my order is by name—snapdragons, petunias, zinnias, what not, it is bought by separate color and by separate name. No mixtures and no mongrels allowed.

It is now early March. What are we to order? Not many things in the perennial line are available to seed now and expect flowers yet this season. Iris, peonies, columbine, fox-glove, delphinium, hollyhocks, oriental poppy, sweet William, coreopsis, all those old favorites from our grandmother's day are out of the question unless we buy plants; and even if we buy plants we must forget peonies, iris and oriental poppies now. Few indeed are the perennials we can start from seed and get bloom this season. Gaillardia, Shasta daisy, balloon flower (platycodon), Iceland poppy, lychnis and a few others will bloom from spring seeding, but if you want perennials in your garden to bloom this year it will be better to buy the plants. If you do start them from seed by all means start them indoors or in a hotbed in early March.

Annuals will [illegible] take most of our [illegible] depend for [illegible] part on perennials [illegible] part of the garden [illegible] the gaps or to cover a season [illegible] annuals are in bloom [illegible] but they have [illegible] and in stock.

We have experimented [illegible] varieties of annuals [illegible] just a few and decided on a few [illegible] Italian Black [illegible] of a Persian rug. [illegible] are [illegible] choice and I do not mean to [illegible] in my experience [illegible] borders.

1. Zinnias [illegible] and dahlia flowered. [illegible] but more [illegible] [illegible] [illegible]

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... [illegible] ... pipes ... [illegible] ... [illegible] ... eight or ten ... [illegible] ...

I ... [illegible] ... [illegible] ... [illegible]

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Those Massachusetts Reds

By R. L. SCHARRING-HAUSEN



A Breeder's Sign in Connecticut

MOST of us who listen in on the radio nights know something about the St. Louis Blues. Practical poultrymen, however, especially those with leanings toward the heavier breeds, will be more interested in the Massachusetts Reds. Of course, these Massachusetts Reds are really Rhode Island Reds, and while I know my geography as well as my poultry, I designated them as Bay State birds because entries of Reds from Massachusetts are right up among the leaders in many of the egg-laying contests. For instance, the report of the thirteenth week of the Vineland Contest gave the pen of the Pine Hill Poultry Farm, Middlesex county, Mass., as high for the week and second for the contest, while the pen of Pine Pinecrest Orchards, Middlesex county, Mass., is in the lead for the season.

Reds are very popular all over New England, in fact, not merely because the breed originated in that section, but because Boston and other local markets pay a premium for brown eggs. Breeders are putting out some very good stock from a production standpoint, many of them being members of the Massachusetts R. O. P.



Colony Houses on a Large New England "Red" Farm

All Pullets Trapnested

Such was the flock of Massachusetts Certified Reds on the C. M. Snow farm in Barnstable county, where all pullets are being trapnested as a means of selecting the heavy layers for breeders. I was particularly interested in the results that were obtained, and was shown one pen of 120 pullets of which 30 had laid 200 eggs or more in ten months, and were still going strong. Among the Red plants I visited was the Redbird Farm, Norfolk county, Mass. This is one of the largest Red breeding farms in New England, maintaining about 5,000 birds, and is widely known throughout the United States, having shipped chicks in large numbers as far as California.

In handling the breeding end of this establishment birds are sent to egg-laying contests and others are trapped at home, and from these high-record females specially mated comes the males which head the general flocks. The entire stock is treated yearly for bacterial white diarrhea, and all reactors eliminated, in order to insure that chicks sold will be disease free.

In rearing chicks to supply the own needs the Redbird farm uses 60 12x12 A-shaped colony houses, putting 400 to 500 chicks in each. A ration containing cod-liver oil powdered milk and dried buttermilk among its ingredients is fed, while the grain part of the ration consists of [illegible] several carloads a year. In the interests of sanitation the ranges are rotated from time to time. Broilers meet with a good demand, bringing upwards of thirty cents a pound alive at the farm.

Efficient Equipment

The laying birds are kept in several long houses on the farm, all floored with concrete. These houses are all piped for running water, as are the range houses. The ration fed the layers is a simple formula mixed as follows: 100 pounds each bran, corn meal, low-grade flour and ground oats; 50 pounds meat scrap; 50 pounds dried milk; two per cent each salt and cod-liver oil. This is made up in a power mixer capable of mixing 1,000 pounds of mash in five minutes. Corn is fed as the grain part of the ration.

I asked Mr. M. to Hagopian, the owner of Redbird Farm, to tell me the history of its development.

"I started keeping chickens 18 years ago with a flock of 30 mongrel hens," explained Mr. Hagopian. "The next year I got rid of these, and got good Reds, which I continued to mate with good stock. I put the profits back into the business, and it built itself up until now it takes five men to do the work. Business is good, and I intend to keep on expanding."



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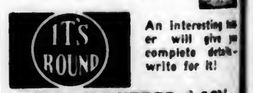
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Greenhouses for Chicks

Is it possible to raise baby chicks in a greenhouse? If not why not? I wish to use the upper part for plants and the chickens in the bottom, the greenhouse to be six feet high in the center. Charles E. Sandiford

IT is not exactly customary to raise chickens in greenhouses, but I once saw a young flock of Reds which were doing very well in a greenhouse and I see no reason why one should not be able to raise a number of chicks, yours, especially while they are small and unable to fly up [illegible] the benches. R. L. S.

Sitting Hens

Can you please [illegible] to take care of a lot of sitting hens when you set them. Is it good to set about 15 or 20 hens at one time or in separate nests. M. A. B.

MY best advice [illegible] breeding chicks [illegible] the eggs hatched at the greatest commercial hatcheries and [illegible] chicks with a [illegible] do not care to [illegible] nests in separate [illegible] shortening them [illegible] come off either [illegible] ing them to sweating [illegible] too much and [illegible] the second nests. R. L. S.

A Winter Mash

Will you tell me your mash mixture for both breeders and pullets and also your chick mash formula? Is it worth while putting tobacco in mash? V. B. [illegible]

I AM feeding the following mash to my birds this winter with success: 200 parts corn meal, 100 each bran, standard middlings, flour middlings, meat scrap, 50 alfalfa leaf meal, one gallon cod-liver oil, five parts salt, 15 calcium flour (ground limestone). I have a new mash each week and would not care to mix cod-liver oil more than two weeks ahead, as Vitamin A is not stable when exposed to air for any length of time. For a chick mash I use the New Jersey formula. I consider tobacco in the mash a good treatment for roundworms, but would not continue to feed it more than a week or so at intervals. R. L. S.

A Barn for Shelter

I would like to know about raising some turkeys. I have a barn. It is rather damp under ground. Have some concreted. Upper part of the barn I could remodel, but the top floor is about five feet from the lowest part of the ground. The other part is along side of a road and next to my neighbor, and I don't want the fowls to run on the road. Could you advise me what I could do with the barn in regard to turkeys or chickens? Wm. Hartman

I HAVE seen several flocks of chickens kept in remodeled barns and two-story buildings which did very well, and believe that you would find chickens more satisfactory than turkeys under the conditions you have. If a flock is fed a ration containing cod-liver oil and greens they will do very well in a building without ever being on the ground at all.

If the basement of your barn is damp it will not do for any sort of poultry unless you find a way to drain it or otherwise keep it dry. If you are able to do this and [illegible] sufficient light by the use of large windows, especially on the south side, it would doubtless prove satisfactory. The upper story should be ceiled at seven or eight feet, and then arranged inside like any poultry building.

In buildings of this sort it is necessary to provide ventilation, and a good way to do this is to carry the foul air out by means of galvanized iron pipes about a foot in diameter, equipped with dampers. The bottom of the pipe should be about eighteen inches off the floor and extend through the roof. R. L. S.

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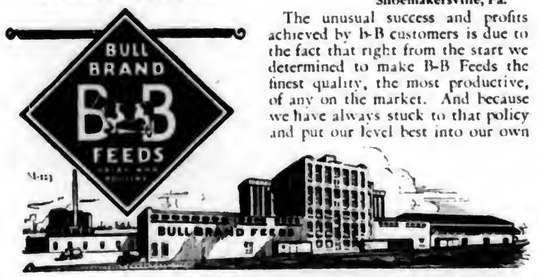
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Mrs. C. H. Conklin, Durham, N. C., on Oct. 12, 1928, wrote: "I must write you about my success with Kerlin Chicks bought in February. They arrived in perfect condition, strong, healthy and full of pep. I raised 43 fine pullets which began laying July 2nd. They have more than paid for themselves already. In July I got 420 eggs, nice large white ones. Got five dozen for them. Their production increased every month. I have raised White Leghorns for 20 years, but never found any to compare with Kerlin-Quality."

E. N. Tracy, Hampstead, Md., made $2492.90 profit from 1,000 Kerlin Chicks by the time the pullets had had one year. Mr. T. E. Dixon, Hazard, Ky., trapped four Kerlin pullets that averaged 223 eggs each. In four winter months, December, January, February, March, his 55 pullets laid 4,418 eggs.

Mrs. H. Crossland, Bristol, Pa., writes: "I am the talk of the town as I am getting so many eggs and so many neighbors are not. They ask me, 'What is the Secret of Your Success?' I tell them Kerlin-Quality."

Bargains in Baby Chicks

Yes! *"Kerlin-Quality"—300-Egg Blood Line* Chicks are truly bargains. Their cost is low. The quality is high. The net profit per bird so big. Over 50,000 satisfied customers have proved it.

Mountain bred. White diarrhoea free. Strong, sturdy, healthy. 29 years breeding for perfection. Big beautiful birds. World's Great Egg Producers.

Vitality Supreme

Many customers raise 98% to maturity—pullets laying 60 days at 6 months old. Customers obtain flock average of over 200 eggs.

Order Now!

For early fall eggs and big winter profit. You can get better chicks anywhere—regardless of price.

Get Your Chicks From the Finest Breeding Establishment in Pennsylvania.

We've put our farm at your home. Your chicks will reach you within one day from time they are hatched. 100% live delivery guaranteed. We have supplied Pennsylvania and all other states for 29 years with highest quality chicks at lowest prices. Buy from Kerlin that year—and you will make no mistake.



Big, Strong, Active Winter Layers. Big lopped-comb, clear eyed, wedge shaped money making egg machines.

Big White Eggs, that command Premium Prices. Customers report pullet eggs weighing 26 to 28 oz. to the dozen.

Big Free 4-Color Catalog

Tells how you can make biggest profits in the chicken business. Describes World's Greatest Layers. Quotes low prices on highest quality baby chicks and stock. Send for it today. BIG DISCOUNT on orders placed now—for delivery when wanted.

Free Feed With Order

20 lbs. Free Feed Prepaid with each 100 chicks.

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Stop "Keeping Chickens"—Let "Kerlin-Quality" Chickens "Keep You"

HERE: NEARLY EVERYONE RAISES Full Blooded "AMERICAN" Quality Chicks

	50	100	500	1,000
American or English S. C. Wh. Leghorns	$6.75	$13.00	$62.00	$120.00
Hollywood White or Brown or Buff Leghorns	7.25	14.00	67.00	130.00
Tancred White Leghorns—Anconas, Barred Rocks	7.75	15.00	72.00	140.00
R. C. and S. C. Reds, White Rocks, Park Rocks	8.25	16.00	77.00	150.00
Wh. and Buff Rocks	8.25	16.00	77.00	150.00
Brahmas, Columbian Rocks, Blue Andalusians	11.25	22.00	105.00	200.00
Light Mixed 40 cents a hundred. Mixed any breeds, our selection, $10.00. Heavy Mixed, $12.00 a hundred.				

Write for NEW CATALOGUE. It proves to you the SUCCESS our Customers have with our chicks. Breeders culled and Bred for High Egg PRODUCTION in Winter when eggs are making large premiums. Reference Carnegie National Bank. 100% Live Arrival. Depend-able. Order Early.

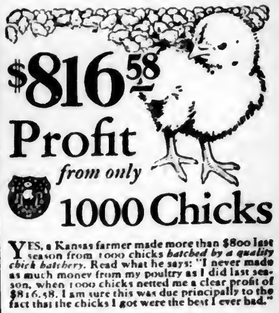
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Ten Free Chicks On orders booked before March 15th, we give 10 Chicks free with each 100 ordered.

When we say RELIABLE we mean RELIABLE in every way. Breeding stock of highest quality of 13 years of careful development. Special attention paid to health of flocks and records kept. CATALOG FREE—CHICKS SENT C. O. D. IF YOU WISH. Write for details—get our illustrated catalog which tells all the story. Our prices reasonable. A book on Raising Chicks worth many dollars given free with each order of $10.00 or more. Big discount for early orders.

HUBER'S RELIABLE HATCHERY, N. Main St. FOSTORIA, OHIO



YES, a Kansas farmer made more than $800 last season from 1000 chicks *hatched by a quality chick hatchery*. Read what he says: "I never made as much money from my poultry as I did last season, when 1000 chicks netted me a clear profit of $816.58. I am sure this was due principally to the fact that the chicks I got were the best I ever had."

You can make profits like that

Today this big poultry profit is offered to you. It is offered to anyone, whether only a beginner, or whether a poultry raiser of long experience. It is offered to anyone who will get quality chicks to start with . . . and that's important, tremendously important.

This FREE Book will guide you to bigger profits



There's one sure way to get that kind of chicks . . . the kind of chicks that pay the big money. Our big FREE book will tell you how to select them. It will give you the names and addresses of hundreds of hatcherymen who are pledged to give you exactly the quality and breed of chicks you order.

Mail the coupon TODAY

Get this book now. Plan to start a big profit flock *this season*. Don't waste another year hatching your own chicks. Let our amazing poultry book guide you to real money from your poultry this year. And we offer to send this book to you absolutely free. Just mail the coupon.

Let This Slogan Be Your Guide

FOR GREATER PROFITS Hatchery Chicks

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Name .....
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11 years reliability. Satisfied customers our specialty. Prices low prices on highest quality baby chicks and stock. Send for it today. BIG DISCOUNT on orders placed now—for delivery when wanted. Write for catalog and price list.

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Penn'a State "Supervised" CHICKS

Flocks inspected by officials from the Penna. Dept. of Agri. our 19th year—established 1910. Get our low prices on Reds, Rocks, Leghorns and Minorcas. Member I. C. B. A. Catalogue free. THE KEYSTONE HATCHERY, (The Old Reliable Plant). Richfield, Pa.

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From Large Type Barron English S. C. White Leghorns. Hens weigh up to 7 pounds. Eggs Quality chicks from free range selected stock are shipped Feb. 11th at $16 per 100, $77 per 500, $150 per 1000. 100% Late Arrival Guaranteed. 10% books order. Catalog Free.

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have vim and vigor—hatched by men with 18 years experience, from culled flocks. Prepaid and 100 per cent guaranteed S. C. White and Brown Leghorns, 11c. Rocks, 12c. Reds and Minorcas, 14c. Mixed Broilers, 9c each. $80 per 1,000. Circular free. Our slogan: Service after Delivery. THE PENNA. HATCHERY, Liverpool, Pa.

BABY CHICKS

Tancred Str. Wh. Leghorns	$12 per 100
White Leghorns	11 per 100
Barred Rocks	14 per 100
White Rocks	14 per 100
Heavy Mixed	12 per 100
Light Mixed	9 per 100

500 lots 1c less. 1000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for free circular.

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This quality is bred in the chick through rigid culling and breeding. Guaranteed satisfaction. 13 varieties. Light breeds, 12c. Heavies, 14c. White Wyandottes, 15c. Send for our instructive catalogue. MILTON POULTRY FARM, Hatchery, Dept. 7, Milton, Pa.

COCOLAMUS HUSKY CHICKS

	50	100
Tancred Strain S. C. White Leghorns	$7.50	$13.50
Ever Lay Strain Brown Leghorns	7.50	13.50
Parks Strain Barred Rocks	8.00	15.00
S. C. Rhode Island Reds	8.00	15.00
Mixed or Broilers	4.50	8.00

Special prices on 500 and 1,000 lots. All heavy laying flocks. Free circular and price list.

COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

BABY CHICKS

Ready for shipping Jan. 1, 1929. Barred Rocks, White Rocks, White Leghorns. Parkway Hatchery, Geo. J. Ripple, Box 28, Swinford, Pa.

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Dead Birds? or Cash Profits



One percent less mortality, one ounce more weight per chick—you'd hardly notice this little difference in your flock, *but it means $26.60 more income* from each ton of feed.

Isn't that reason enough for using care in selecting a starting feed? Why invite losses by experimenting with cheap feeds? Feed your chicks a ration that is *certain* to get the right results—*sure* to get them promptly on the road to extra profits?

The pictures tell the story here



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Same parentage, same living conditions, same age—but what a difference the feed makes



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Feed Them Larro Chick Starter

Feed it because its record with thousands of poultrymen has proved its superiority beyond all dispute; feed it because tests on more than 60,000 birds at the LARRO Research Farm have proved its feeding value. Feed LARRO because it builds up resistance to disease, reduces mortality, promotes growth and makes them big-boned, husky and long-lived—and *profitable!*

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POSITIV-LAY. Used in meshes by 21 State Poultry Experts. The Oyster Shell Products Co., Phila., Pa.

EGGS, Etc.—Small consignments from producers in your territory bring very attractive prices NOW. Prompt returns always. Refer to Dun or Bradstreet. Ship us your next case. ZENITH BUTTER & EGG CO., 170 Duane Street, New York City.

Poultry Problems

By H. C. KNANDEL

Tobacco Treatment

Can you send me the tobacco recipe for the treatment of worms in chickens, and what kind of tobacco to use?
L. A. Lynch.

THE tobacco dust treatment consists in using two pounds of tobacco dust containing one and one-half per cent nicotine sulphate, to each one hundred pounds of mash. This tobacco treatment is given for a week or two and then the regular mash is fed for [illegible] two and then the tobacco treatment is repeated. It is also a good plan to follow the tobacco treatment with Epsom salts at the rate of one pound per hundred hens.

• • •

Remedy for Blackhead

Can you give me a remedy for blackhead? Our turkeys have been dying with blackhead. M. S. H.

THE best remedy for blackhead in turkeys is to raise the birds so that they are free from disease. Successful turkey raisers have found that the best plan is to raise their turkeys in confinement or on range which is rotated.

Turkeys should not be allowed to roost over the same ground for any considerable length of time. Some turkey raisers use four yards. One yard is used each week and the turkeys rotated from yard to yard. It is also important that turkeys be given all their feed in hoppers. To allow the turkeys to pick feed off the ground is the best way to spread blackhead and other diseases. Furthermore, it is a good plan to raise turkeys so that they do not come in contact with other poultry.

During the next year plan to raise your turkeys free from disease by either the confinement method or the weekly rotation of the range.

• • •

Goose Production

Would I have to have water to raise geese? I have some wet land that is worthless. Would the business be a living proposition if attended to right?
J. F. S.

STREAMS and ponds are preferred for the adult stock, but are not absolutely necessary. An abundance of good drinking water should be provided. It is estimated that one acre of ground will properly accommodate ten adult geese. I do not know of any commercial goose farms in the East. Farmers usually consider this end of the poultry business as a side-line. Missouri and Illinois are recognized as the two leading states in the production of geese.

• • •

Hard Coal Preferred

I am planning to use a coal-burning brooder stove this spring and would like to know if soft coal would be all right to use as fuel, as there is a coal mine adjoining our farm. What advantage has hard coal over soft coal and what size does it have to be?

Would it be all right to put chicks of two different ages in the same brooder, provided I put the stove in the center of the house and partition the house and stove into two equal parts? I plan to put about sixty chicks in each compartment. Their age would not vary more than two weeks at the most. Geo. P. Zippey.

IT is a better plan to use hard coal than soft coal in a brooder stove. Less attention is required, more uniform heat obtained and less likelihood of chick losses when hard coal is burned. We use the chestnut size hard coal in our colony brooders.

It is never a good plan to place chicks of two different ages in the same brooder house. Since you are going to brood only a small number of chicks, why not have them hatched at one time? You will give your chicks better care, they will develop more uniformly and you will obtain better results by brooding one group of chickens under one brooder stove. It is possible to brood chicks of different ages under one brooder stove but the results do not warrant the gamble.

• • •

Big Liver Disease

We have a flock of Barred Rock hens, pullets and yearlings. They are fat and to all appearances in the best of health. Every few mornings we find one less dropped from the roost dead. Upon opening it we find the liver very much enlarged. The liver and intestines are covered with little spots or blotches from the size of a pinhead to the size of a pea. Near the liver and lights attached to it was a lump about the size of a walnut. This seemed to be composed of these little ulcers. W. O. M.

THE fatty liver disease to which you refer is apparently a new disease about which little is known. This disease is increasing greatly throughout the entire country. Tumors and cancers are many times associated with this disease. These growths are to be found on the spleen, liver, intestines and reproductive organs. This disease seems to be quite closely associated with leucemia. As yet no definite recommendation is relative to a treatment is available.

At the recent World's Poultry Congress held in Ottawa, Canada, this disease was reported by an Italian as being very serious in the old country.

Fences for Turkeys

IN the issue of January 19 C. A. M. wants to know what kind of a fence it will take to control turkeys. As I have had some experience in different ways of raising the birds I'll give you my experience in raising turkeys in confinement.

I have a brooder house 10x12 feet which is heated by an oil brooder stove. I feed a commercial feed which I find is more satisfactory than home-mixed feeds. After a few days I keep feed before them all the time.

The house is located so a lot can be built around it. It is best to have the house in center of lot. By building four cross fences from house to each side of big lot you have now four lots, then by placing four doors or openings, one leading to each lot so constructed that they can be opened and closed at will, you are ready to raise turkeys by the artificial or the scientific method the same as chicks are raised.

The idea of the four lots is to run turkeys on lot number one the first week, number two the second week, number three the third week, number four the fourth week.

I find a fence three and one-half or four feet high is just as good as higher, for it would be hard to build a fence that a turkey can't fly over. As soon as turkeys are large enough to fly clip one wing.

The most important part of the fence is to have the bottom tight. I believe an eight or ten-inch plank at the bottom is most satisfactory. If plank is not available the next best, I think, would be poultry wire three or three and one-half feet, then one foot poultry netting on bottom with one-half inch mesh. The reason for this is that they are inclined to creep through common mainbre wire. Be sure that the fence fits close to the ground.

I think this plan has the same advantage in raising turkeys as in raising chickens and they are no harder to raise this way than chickens. You can handle a large flock with the same labor as just a few, which is an important item. The cost of feed is not great and by using one lot one week and off three you keep the birds healthy, which is the most important. They will grow into big fine birds if kept healthy. Effie C. Lively.
Summers county, W. Va.



With the world's largest exclusive tire factory and the world's largest cotton fabric mills—Firestone secures large-scale economies which put supreme quality into Firestone Gum-Dipped Tires. From raw material to finished product—direct buying—direct selling—direct distribution from factory to consumer through authorized Firestone Tire Stores everywhere—Firestone saves you money and serves you better.

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For every package of luscious and delightful Mother's Oats contains a valuable premium coupon. Send now for the free gift catalog that shows the many things you can get—and start at once to save these coupons.

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You can get the regular Mother's Oats that you have always known—or Quick Mother's Oats that cooks in 2½ to 5 minutes. The same rich flavored grains—only 10 pounds of these flakes come from a bushel—except they're prepared to cook more quickly.

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MOTHER'S OATS

Mother's Oats comes in 2 styles, the Regular and Quick Mother's Oats that cooks in 2½ to 5 minutes.

Agricultural Engineering

By R. U. BLASINGAME

New Type Plows

I SEEMS [illegible] not been said on plows. A tractor plow has appeared on the market with abbreviated moldboard so as the soil is raised and fed to turn a series of blades which shatter it thoroughly. The [illegible] even by the [illegible] tractor, and [illegible] authority that [illegible] crash, requires less [illegible] sational type and [illegible] ity of disking and [illegible]

Still another [illegible] peared for hillside [illegible] it is built only in [illegible] has, however [illegible] which are [illegible] The plow bottoms [illegible] through a power [illegible] that this plow does [illegible] hillsides. One [illegible] left hand and [illegible] hand in order [illegible] down hill.

Another tractor plow [illegible] peared. It is the [illegible] but the bottoms measure 18 inches on [illegible] stead of 14 inches. This 18-inch plow was developed for [illegible] in the war against [illegible] has met with great [illegible] of work. Dr. F. L. Nason [illegible] his crop of soy beans [illegible] of plow last fall. It [illegible] deep or shallow and [illegible] of covering trash and [illegible] such as soy beans [illegible] shallow depths as [illegible]

To Test a Chimney

How can one tell when a chimney is safe or if there are any leaks in one built up through a house and covered up around it with [illegible] or wood or any other way?

THE common method for testing a chimney for leakage is to build a smoky fire or smudge in the fireplace stove or furnace, and place a wet blanket over the top of the chimney. If there are any leaks you will see the smoke leaking out.

Cistern Water

I live on a hill where running water is not available. The only supply of water is from a shallow well, the water standing 60 feet below the surface of the ground. I would like to know if rain water piped into a cistern from the house roof would be satisfactory for the laundry bath etc., or would it become impure after standing a few days? If there is [illegible] that is suitable for [illegible] give me the information [illegible]

[illegible] W. [illegible]

CISTERN water [illegible] used throughout the [illegible] with care it seems [illegible] factory.

A cistern can be built [illegible] and a wall can be built [illegible] of porous brick, which [illegible] is very satisfactory as a filter to eliminate trash from entering the cistern. A concrete box can be constructed about four feet square and four feet deep with perforations in the bottom.

Place a fine copper screen over the bottom of the filter box and put in about five inches [illegible] this put a foot of charcoal about the size of wheat grains, and then on top of the charcoal about a two-inch layer of sand. Allow the water to run from the roof through this filter and then into the cistern on one side of the porous brick wall, and pump the water out from the side opposite the brick wall in the cistern.

By doing this you will have a very satisfactory cistern and the water will be clean. The filter box should be located in the ground, or so arranged that it will not freeze up in winter.

Water from 60-Foot Well

[illegible]

[illegible] Mrs. I. K. Beaver.

I [illegible]

Is Alcohol Stove Safe?

[illegible] a modern [illegible] stove reasonably safe against fire and explosion when handled with care. I have two babies that require [illegible] at night and I thought [illegible] this purpose. Are [illegible]

YES it has been [illegible] should be but little danger [illegible] from the use of a small alcohol [illegible] as [illegible] it is not necessary to put so much wick that it cannot be [illegible] when [illegible] in a hurry. There is no danger of an explosion, and in case an alcohol fire might start it can be put out with water, being unlike oil. Another handy thing for this sort of work is the small stove [illegible] canned heat, which nearly every hardware store [illegible]

Still another method of [illegible] for warming babies' milk is to fill a large thermos bottle with hot water, then put the [illegible] in it. Again the [illegible] and [illegible] will [illegible]

Hydro-Electric Power

[illegible] As one does [illegible] more and more [illegible] [illegible] to put a turbine [illegible] plant that would furnish power enough for the [illegible] How would [illegible] the [illegible] be [illegible]

V. G. H.

SEVERAL [illegible] farmers in [illegible] have installed [illegible] plants. They seem to be working quite satisfactorily. However they are rather expensive to install, to operate a great deal of current.

If I remember correctly they all used water wheels. They used slow speed, direct current generators. I believe that a distance of one mile to transport the current will play hacon with your voltage. I believe that it will drop too low to be of much benefit. If you can secure current from a central station it will be more satisfactory.



The big HATCHERIES will soon start shipping

Do early hatches of baby chicks will soon be on their way to the buyers. Hatchery offices and farmers will have a heavy responsibility in getting the chicks to their destination in good shape.

But whether you buy a few dozen or the thousands or that's them in your care you well need starting and growing mash and need it right away. If you haven't ordered, do so at once and by all means order UBIKO All-Mash Starting and Growing Ration.

Successful poultrymen have adopted with enthusiasm the All-Mash method of feeding baby chicks because of its many tested and proved advantages. The merits of UBIKO All-Mash Starting and Growing Ration are inquestioned. Using selected finest selected meat scrap dried buttermilk, sound wholesome grains, minerals and tested cod liver oil it is scientifically proportioned and mixed that the ration of protein and carbohydrates is balanced perfectly and all the life-giving vitamins are present in abundance.

Rapid, vigorous, well-balanced growth with absolute freedom from disease and rickets is sure with UBIKO All-Mash Starting and Growing Ration. Up to twelve or fourteen weeks this is the only feed baby chicks need. It is a real life-saver—sound chick insurance. We stand back of the quality of every pound. You take no risk. Phone your dealer for what you need.

UBIKO *All-Mash Literature on request*

A request will bring you our booklet describing the UBIKO All-Mash System. Our Poultry Department will also answer free of charge, any questions about feeding, housing, culling or disease.

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1. Starting and Growing Ration
2. Developer
3. Complete Laying Ration

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Keep your chicks warm and healthy indoors. Prevents rickets, brooder diseases and deaths. Gives baby chicks sunshine full of ultra-violet rays. Makes them of winter long while prices are high. Makes plants grow much stronger and faster when used in place of glass or hot beds. Transforms cool, damp, dark, unsightly porches into warm, dry, sunlit, health rooms in which to work, read, rest or play. Ideal children's winter playroom. Saves fuel and doctor bills. Approved by thousands of users and all leading authorities. Installed with clasps and nail on ordinary window frames. Lasts for years.

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See Page 17, February 16th

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What Our Readers Say

Reclamation and Relief

PENNSYLVANIA FARMER: Your article on Reclamation and Relief seems to put light on future conditions for farming. For my part I would put it up big and black in type that would attract attention as the farm business needs a mighty lick from the Almighty and wise men. A. F. Good

Lancaster county, Pa.

High Taxes

WELL, I suppose we are square with Uncle Sam again as our taxes are paid, and they were some taxes too. Farms are assessed $25 an acre more than they would bring in market. Congress does not seem to be helping us very much. Wages are very high. E. E. Brizzee

Drove Him Off the Farm

IN YOUR copy of February 9 I saw an article on taxes of farms. In 1921 I bought a farm in Union township, Lawrence county. Farm size 72 acres. The seller's widow signed over tax receipts of 1921 at running in all to $72. In 1922 my school taxes alone were $90 in all road taxes etc. $140.50.

In 1923 [illegible] taxes on the [illegible] to $40, school [illegible] etc., in all $180. [illegible] county road [illegible] It finally drove [illegible] when I sold the [illegible]

In Defense of Cats

IN LOOKING [illegible] Pennsylvania Farmer issue of January 12th I noticed a piece by J. P. D. in regard to farm cats. I wonder if he or she realizes that farm cats like farm men and women are in two classes, those who do what they should and those who do not.

For my part I'd rather be rid of rats and mice even if it means an occasional bird. I've found that the rats and mice do more harm than the birds do good. We have an old black kitten which wouldn't take a prize at the most ordinary cat show but we would not part with her for fifty dollars. She needs only to be called and told that here is a mouse and it it is in any way possible the mouse is caught.

I. B. D. can get a Pennsylvania breed of cat as well as a Jersey breed. And too I've always found that cat and dog lovers have nicer dispositions and are better to live with than those who hate them. Emily R. Neumoyer.

Must Live in the Air!

IN YOUR edition of Feb. 2, on page twenty-seven, you show a picture, number six, with the statement that a four and one half year old boy has 30,000 hours of flying to his credit. This is an average of over 18 hours per day of his entire life. This is unbelievable. Blair Leighty.

* * *

In the Feb. 2, 1929, edition of the Pennsylvania Farmer, on page 27 "Events caught by the camera" number six, I read the description of one of the world's youngest aviators.

Please explain how the child could have been up 30,000 hours in all, when the total age of the child at 4½ years is only approximately 39,432 hours.

Jacob N. Martin.

* * *

I notice on page 27 of the Pennsylvania Farmer of Feb. 2nd where Donald MacIntosh holds the junior record of being up in the air 30,000 hours, he being 4½ years old. In order for this youngster to do that stunt he would have to be in the air almost 3½ years, 24 hours per day and 365 days per year, which would seem almost if not altogether impossible.

A number of such seemingly exag-



gerations are published in the papers in the last few months. We need to get down to fact and not such stuff that is almost unbelievable.

Medell Sharp.

Note: Several of our readers are right. This is a fact age and more license is crowded into a license to run the race in our days. Still the speed of the 20th century is not so that a five year old child can be called a veteran up mositure as well as retain the soil.

It may be allowed to get too tall, woody and begins to form a [illegible] before then it is more harm [illegible] benefit. The same may be said of other cover crops. I think Mr. [illegible] would have to admit that the [illegible] corn fields over the hills of Wyo[illegible] would be far better off with a good covering of rye on them during the winter, than the way they are without anything.

We remember some other infor[illegible] we have read in farm magazines that many of you may not be mistaken. It would [illegible] the practice of the fa[illegible] Rich farmers do not like to be [illegible] after the corn had been taken off, were thought to be the quickest [illegible] but we suspect of the stalks were [illegible] that these [illegible] seemed to be [illegible] harder to turn [illegible] were necessary [illegible] cement to [illegible] the purchase [illegible] know how [illegible] cattle contained if [illegible] bacteria. [illegible] we decided it [illegible] contain [illegible] much as a real juicy plant of [illegible] Anyway we are sure the practice [illegible] plowing them under is a good one.

We also remember listening to a [illegible] talks expect from Morgantown talks [illegible] he turned on potato growing. He emphasized the necessity of plenty of [illegible] matter. Legumes came first, [illegible] stable manure if these were not available even straw was found to be [illegible] field. Does much nitrogen do we find in straw. Not much we think, but the straw is beneficial in other ways. [illegible] more rye and other green crops were turned under the farmer wouldn't need so many clod crushing implements and his farm would be richer. F. C.

That Record Yield

IN YOUR issue of the Pennsylvania Farmer of February ninth you printed an article concerning the faces that were used to hold the two bushels of potatoes exhibited at the Harrisburg Show. Under the circumstances, we feel that we are justified in making public an explanation of the reason why those faces looked as they did.

We sold those potatoes to the representative of the Farm Products Show Commission with the understanding that they were to be stored in cold weather as we had no suitable place in which to store them. They were packed about October fourth but [illegible] had been taken out, were thawed out by the quickest [illegible] but we suspect that these [illegible] seemed to be [illegible] harder to turn [illegible] were necessary [illegible] cement to [illegible] the purchase [illegible] know how [illegible] cattle contained if [illegible] bacteria. [illegible] we decided it [illegible] contain [illegible] much as a real juicy plant of [illegible] Anyway we are sure the practice [illegible] plowing them under is a good one.

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Is This a Good Rotation?

BEING a member of the Pennsylvania Farmer family I would like to offer my criticism, not as a knocker but for possible betterment. Don't you think you could boost your article covering stock? Hogs get little or no attention and space occupied by L. W. Eighty and others along the lines of dairy and dairy cattle is not extensive enough. Why not broaden out with more detail for the farmer who wants to learn and is relying on the "trade papers" for his source of information. Also knowing of H. C. Knandel and R. I. Scharring Hausen as we do, we know that they are capable of a few additional lines.

Was very much interested in the article by Hugh Fergus covering rotation work. Being very much set against what in a rotation on account of the uncertainty in this community, I have made up my mind to eliminate it from my rotation. I am planning the following five year rotation for experiment but in talking to various "old-timers" do not find much enthusiasm. However, would like to have our respected Hugh Fergus and others comment from their experience or belief.

My farm problem seems to be that of supplying my hogs, cattle and chickens with what feed I can from about 65 acres of tillable land, so for my rotation I have laid out five ten-acre fields in which I will have corn, oats, [illegible] corn and soy beans. This gives me 20 acres of corn, ten for silage and ten for grain, the stover being used to help out my silos, thus reducing the area of hoe speedier of good silage. I like grass in good years, averages weather conditions, 20 acres of good timothy, ten of clover and ten of soybean hay.

In case of clover failure, soy beans could be planted for a plow crop and if impossible to harvest soy bean hay on account of weather conditions it could be plowed, thus improving the following corn, oats and clover yields to the extent of a value in surplus of the last roughage or at least its equal.

The ten acres of oats will be enough, for, from my limited experience, I find that I can buy oats of better quality (western) and for less money than I can grow them proper. The rest of my 65 acres I will devote to garden, chicken and hog [illegible] pasture.

Perhaps after a few years along these lines I will not be so [illegible] the possibilities of the rotation, and we would like to hear some of the pros and cons may then be prepared [illegible]

Bedford county, Pa. Harold R. Painter

Ditches for Tile

THE best thing I've [illegible] two years of [illegible] Ditches. We have [illegible] ground right in the winter. In February at least always we have weeks of open weather when it is not too the most part leave the ground and [illegible] is waterlogged. Plowing is out of the question on account of soft ground. After several weeks of right weather the ground supply would be in good shape and appreciated [illegible] the [illegible] variety of work.

If we are [illegible] hour in February and water keeps [illegible] into the new ditch we [illegible] grading to make [illegible] see the excess water [illegible] the sides of the ditch and the water tumbles [illegible]

[illegible] enthusiastic about [illegible] ditching during February [illegible] ditching once or twice [illegible] season it work is not [illegible]

In the middle of winter there does not [illegible] work [illegible] as much as when work is pressing, as we feel it would [illegible] getting the tile laid in [illegible] more months than if the dug outs were being done right ahead of the plow and when [illegible] yourself should be [illegible] team. In February the days are short and by the time the farm chores are done it [illegible] the day the hours of actual digging are not so long, which is desirable, because throwing dirt out of a ditch for ten-hour days is rather a long shift, especially when one can do it much more sensibly on shorter days.

Ditching by hand [illegible] like plowing with a team of horses, you get on thinking terms with the soil. Though I am a retired farmer now I took the team out of the barn a good many days last fall while the share tenant was husking corn—as one walks mile after mile behind the turning furrow his acquaintance with the soil is renewed and deepened and make more real. That is the way I feel when I work waist deep in a tile ditch.

The other morning I called up the [illegible] and [illegible] to [illegible] a truck load of tile to lay in the month of February. I have picked out a good digger that I am sure would not be available in April to help spade. We had not sold a load of hogs and the cost of the tile including delivery was less than the price of two pitchers. With a new pair of rubber boots over heavy wooden socks and moccasins I know I shall feel much more at home out there in the ditch with the soil to touch me and "pour" my memory.

Hiram Dobbin

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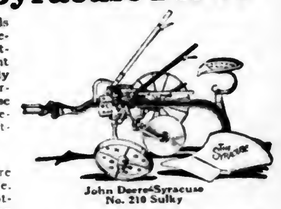
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Our Young Folks

Boy Wins with Sheep

HEADING the list of students in the state of Pennsylvania holding an enviable record in sheep breeding is J. Loyal Marquis, sophomore in the Hickory Vocational School, and second son of Mr. and Mrs. James M. Marquis, Washington county, Pa. Since his early grade-school days he has manifested a deep interest in the sheep industry, and has been unusually successful in judging general livestock.

At the State Farm Products Show, just closed at Harrisburg, he was presented with a gold medal for his excellent standing in the project work of vocational high schools of the state. He had a record of 86 points, 12 points higher than his next competitor. This score will allow him two additional credits together with the one credit usually awarded for school agricultural work carrying a project.

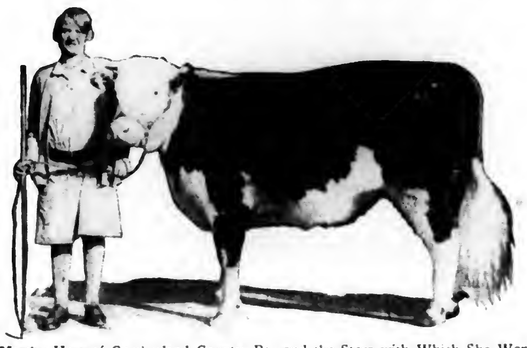
In January, 1928, in state-wide competition with other boys' and girls' clubs, the above youth, as a member of the Washington County Lamb Club, won grand championship on a pen of three Shropshire lambs at the Pennsylvania Farm Products Show at Harrisburg. For four years previous to that time he had been an exhibitor at the State Farm Products Show, and each year won first on his sheep, while last year his lambs were pronounced champions over all breeds.

Within the past year he has been devoting his attention to raising Southdowns, and at nearby state fairs this past fall his sheep won a total of $220 in premiums and $11 on wool fleeces exhibited. Of this amount $32.10 was won at the Ohio State Fair, Columbus, and the sum of $67.50 was awarded in premiums at the Maryland State Fair at Timoninm.

On sheep of the same breed exhibited at the Washington county fairs premiums amounting to $109.50 were gained, $54.50 of which was won at the Washington Fair, while $55 was awarded at the Burgettstown Fair.

Before entering the sheep breeding business the boy had shown marked ability in judging livestock and won many premiums at county fairs. At the Washington county fairs of 1924 and 1925 he stood highest in the junior stock-judging contest and as a reward was given a free trip to State College. There in the following June, during Young Farmers' Week, he contested in judging general livestock, standing second among the hundreds of entrants, some of whom were 21 years of age. In the fall of 1926, on account of his advance in age, he took part in the senior stock-judging contest at the Washington Fair at Arden, again winning first place with money reward.

Prospects of a bright future in his chosen industry seem to be looming for young Marquis who has won many friends through his associations with prominent sheep breeders of county and state. Ethel M. Patterson.



Marthy Hess of Cumberland County, Pa., and the Steer with Which She Won Grand Championship at This Year's State Farm Products Show

Want to Win a Prize?

THE Pennsylvania Farmer will give three prizes for the best cartoons, drawn by farm boys or girls, which reach us next week; the subject of the cartoon to be "Teaching the Calf to Drink". The cartoons should be drawn with black ink on white paper, so that any of them of special interest may be published.

Three prizes will also be given for the best letter of the week on "What I Would Do if I Had $500." The only restrictions on the letter is that it must not be more than 500 words in length. You may write on three sides of the paper if you can do it.

Letters and cartoons should be mailed to the Young People's Page, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

For a Washington Party

THE first game described is called "Hooray" and is quite stirring. The leader stands out before the group and makes a speech on which she has put just a little preparation. This speech should be freely interspersed with mention of George Washington. Every time she says his name she is to raise either her right or her left hand, or both hands in gestures.

If she raises her right hand the group must cry "Hooray!" until she lowers it; and if her left hand, they are to clap vigorously; if both hands, they are to clap and shout "Hooray!" until she lowers her hands. Any one who does the wrong thing at any time is to come up and stand beside her in front of the others. It won't be long until the leader has lots of company.

A Trick Game

The leader asks the group to try to be clever enough to follow her directions in the imitation ceremonial of the Washington Without Lincoln Association. Pointing to one player at a time she asks him to rise and imitate her when she says "Washington without Lincoln" at the same time waving her hands in a foolish fashion and glaring fiercely at her pupil. In all probability he will get it wrong, so she picks out another victim, changing her tactics.

The real point, you know, is to say "Washington"—without Lincoln!

Washington's Birthday

The little, young George Washington,
Our country's best beloved son,
I fear no holiday he had
Upon his birthday, as a lad;
For times were somewhat sterner then,
And boys' work harder, more like men;
While festal days, to us so dear,
Were rare in homesteads pioneer.

Oh, how surprised he would have been,
If, looking forward, he had seen
The multitude of little folks,
With gleeful mien and merry jokes,
And hatchet, flags and cherry bough,
His birthday celebrating now.
I wish he might have shared our fun—
The little, young George Washington.

THE boys and girls in schools all over the United States are speaking pieces, singing songs or having parties to celebrate George Washington's birthday, on February 22nd. I am sure you must all know the story of the hatchet; of Washington's early days as a surveyor; a soldier; general of the army; and finally President. In thinking over what I might tell you about him, I thought perhaps you would like to hear the story of his garden-bed.

One day Mr. Washington went into the garden and dug a little bed of earth and prepared it for seed. He then took a stick and traced on the earth-bed George's name in full. After this he strewed the tracing thickly with seeds and smoothed all over nicely with his roller. This garden-bed he purposely prepared close to a gooseberry walk. The bushes were hung with ripe fruit, and he knew that George would visit them each morning.

Not many days had passed when George came running into the house, breathless with excitement, his eyes shining with happiness.

"Come here! Father, come here!" he cried.

"What's the matter, my son?" asked his father.

Mr. Washington gave the boy his hand, which he seized with great eagerness. He led his father straight to the garden-bed, where on it in large letters, in lines of soft green, were written:

"GEORGE WASHINGTON"



First Holstein Calf Club for Lancaster County

Ten boys and seven girls were enrolled as members of the first Holstein Calf Club in Lancaster county. The "Conestoga 4-H Holstein Calf Club" was the name chosen for the new organization and the following were enrolled as members: (1) Grant Stoltzfus; (2) Arlene Brendle; (3) Emery Stoltzfus; (4) Melvin Souder; (5) Robert Shirk; (6) Pearl Martin; (7) Abram Martin; (8) Eli Martin; (9) Ruth Styer; (10) Mayme Martin; (11) Henry Styer; (12) Celestine Souder; (13) Charles Styer; (14) Clare Eby; (15) Irma Brendle; (16) Albert Metzler; (17) Elsie Metzler. No. 17 was not in the picture as she was sick. Luke W. Martin.

The Piece-by-Piece Mon

WHEN a rainy Saturday afterno comes and the little folks o our house must stay indoors, here i game they like to play. Each one given a piece of paper and a cray or a pencil, told to draw a head n neck and then fold it over right acro the middle of the face, so that only t neck will show. Then these are pass to their right hand neighbors and e next things each one has to draw shoulders, arms and waistline. Wh this too is folded and passed on t right hand neighbors, every one is drawn either a skirt or a pair of trou ers. The last thing to draw, after pas ing the "farm along, is a pair of fe and each one's name under t feet is then drawn.

When these pictures are opened a and passed around so that every o can see them, the children get all t laughing they can stand. You nev saw such funny looking people as t Piece by Piece men!

The next time they played it th drew pieces of animals and th is really more fun, for Walter m start out with a duck and Mary m the drawing with the feet of a cow.

This game gives the grown-up chance to recuperate from too muc "What can I do now?"

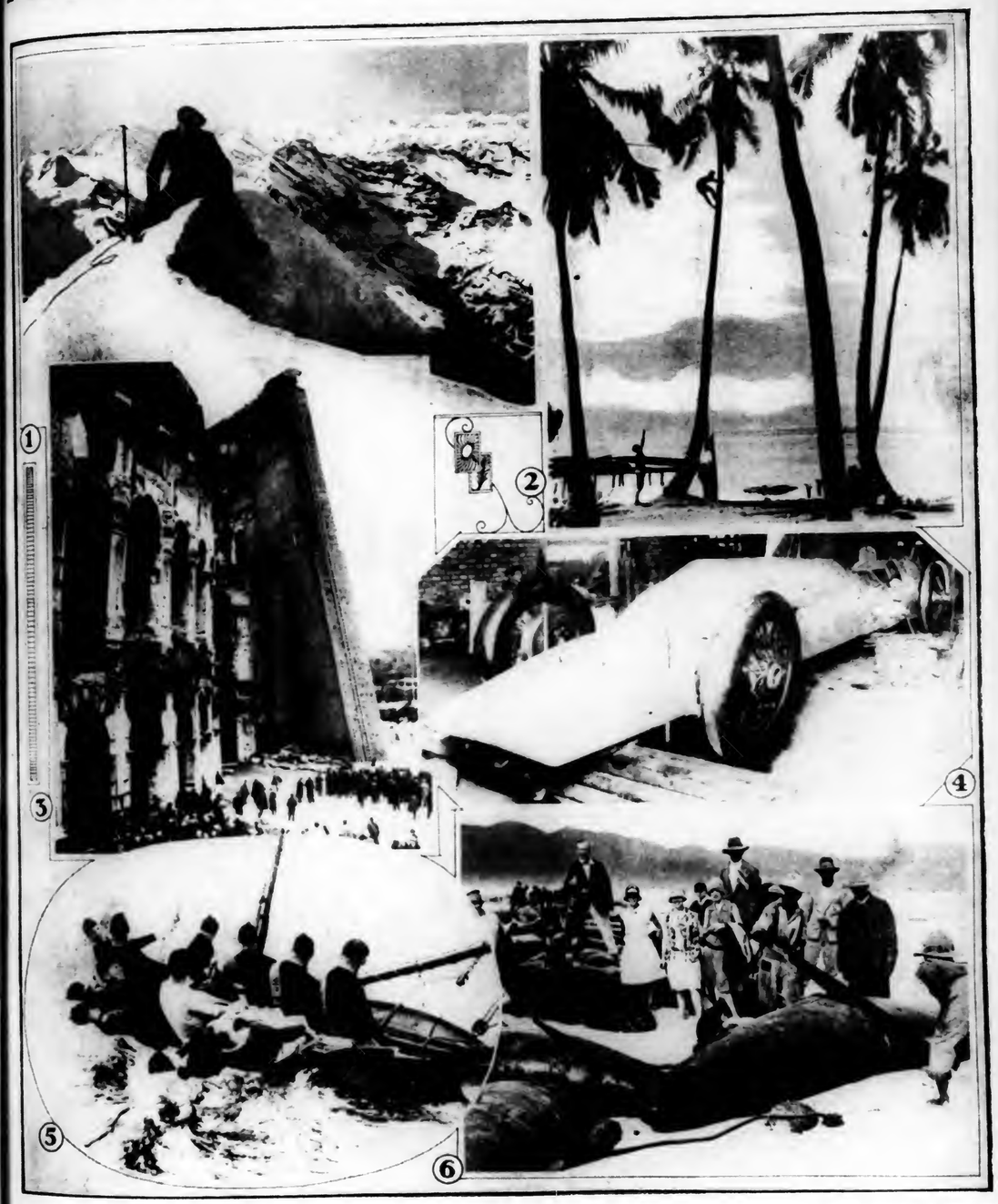
A February Thought

By H. C. LECRON

I like to think that our great, great
men
Were, once on a time, just boys
like me.
Just boys—with a fondness for
games and fun,
And books in the evening when
play was done.
Just boys like the boys we see,
And yet they were boys with their
honor bright
And a love for the thing that was
kind and right.

Perhaps they were different, much,
and yet
I like to think they were sometimes loud
And noisy. No doubt they were
careless, too,
And even forgot, as a boy will do,
Their manners when out in a
crowd.
But truth was a thing that was
prized by them
And never forgotten—a precious
gem.

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1. Pride of Switzerland. [illegible] mountain climber sitting on top of the "world"—the famous Jungfrau in the Bernese Oberland in Switzerland.

2. The sport of the tropics—South sea natives find climbing of lofty cocoanut trees great fun. Photo shows a movie actor, at work in the South Seas on a new picture, watching one of the natives scamper up a tall cocoanut tree to get some of its luscious fruit.

3. Rome firemen celebrated the feast of St. Antonio Abate, their patron saint, on the eve of the anniversary of the burning of Rome by Nero, by placing 14 regulation ladders to the edge of the outer wall of the ancient Roman Colosseum and scaling up the ladders to the top of the structure. Signor Carletti, 65-year-old veteran fire fighter, who holds the title of undefeated ladder climber, was recalled by Roman officials to take part in the celebration. Photo shows Carletti after reaching the top of the wall with the awed crowds below.

4. "Golden Arrow" completed. Photo shows a perspective view of the "Golden Arrow", the car in which Major H. O. D. Segrave will attempt to better the world's speed record at Daytona Beach. He expects to travel 240 miles per hour in the 1,000 h. p. car.

5. Yacht racing has its thrills. Photo shows a thrilling action photo of one of the boats that took part in a yacht race in the [illegible] Yacht Club. The working crew of this 18 footer is the six men standing up in the center of the boat, while the other men are carried along as ballast.

6. Shipwrecked whales! Photo shows one of the strangest sights ever seen in South Africa—hundreds of whales lying dead on the beach at Kommetye, Cape Peninsula. The monsters were washed ashore by the stormy seas. Citizens are shown watching the council workmen sawing a whale in two. The carcasses were later dragged to a place high above the sea level and were buried in trenches. Apparently a whole university of whales had foundered.

TIGHT BINDING TEXT CUT OFF

Pickett's Gap

By HOMER GREENE

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Dannie and his grandfather, Abner, are the only Picketts remaining on the old homestead. Dannie's father has never been heard from since the morning he crept into a little white-curtained room and kissed his sleeping baby, heard Aunt Martha's promise to give his child her tenderest care, and went striding down the road. Dannie's mother lies in the Pickett graveyard at the mouth of the Gap, with all those others dear to old Abner. There are rumors of a railroad to go through the valley and in Abner's absence the engineers of the Delaware Valley and Eastern have surveyed and placed their stakes—laughing at Dannie's protests—through the potato field, out across the corner of the meadow—then through the graveyard. Dannie has just broken the news to Abner.

"DANNIE," he asked, "how near—how near the grave?"

"Half-way between it and the road, grandpap."

They were all three standing now; and Aunt Martha, attracted by the unusual sound of their voices, had come to see if anything was wrong, and stood listening in the doorway. The old man spoke slowly, but with terrible emphasis.

"It is sacrilege! It is not only ignoring the rights of the living, it is violating the rights of the dead. No better deed could be done by any one than to pull their accursed stakes from the ground, and fling 'em, one and all, into the water of the brook!"

He walked slowly across the porch and into the house; but before he had gone half-way through the kitchen, he turned and came back to the door.

"Dannie," he asked, "what kind of a looking man was the engineer?"

"Short, grandpap, with black eyes and hair."

The old man gave a sigh of relief and loosed his grip on the handle of the door. Striding across the kitchen, he disappeared into the shadows of his own bedroom.

After that, for many minutes, there was silence between Dannie and Gabriel. The hired man was the first to break it.

"Well, as old Isra'l Pidgin used to say, 'Betwixt the fool and the philosopher, the fool's the happiest.' I sha'n't lose no sleep tonight; he will. Come, Dannie, it's high time for both of us to foller his example and turn in."

As he finished speaking he passed through the open door, across the kitchen, and up the steep staircase to his own room.

Then Aunt Martha came out to where Dannie still stood on the porch, and laid her hand lovingly on his head.

"It's time you were in bed," she said.

"Yes, I know; but isn't it terrible, Aunt Martha?"

"It's unfortunate, Dannie. But he had to know it, and the sooner the better. You know how he is, and he'll be partly over it by morning. But he's very good to you, Dannie, very good."

"Yes; my father couldn't have been better to me. Where is my father, Aunt Martha?"

She was not his aunt. He had no aunt, or uncle, either, for that matter. But she had taken him in her arms when his mother died, and she had nursed him in sickness and fed him in health and cared for him constantly; and she was just as proud of this rugged and manly boy as ever his own mother could have been.

She could have answered the boy's question. She and she only, could have given him the information he desired. For through all the years she had kept in touch with Charlie Pickett. She had written letters to him at midnight and mailed them secretly, to tell him of his child's health and growth and prosperity. But she did not dare to tell this boy what she knew; she dared only to tell him what she hoped.

"He's somewhere in the wide world, deary. Some time, I hope, he'll come back to us."

AND yet she felt in her heart that her "some time" would not be until Abner Pickett's tongue was forever still.

"Why did he go away? Was grandpap unkind to him? Tell me that, Aunt Martha."

"Oh, no, I can't tell you that. I can't set myself up as a judge between those two. But it'll all come out right in the end, Dannie; I'm sure of that; it always does. It's for you and me to do just the very best we can, and not worry ourselves about things we can't help. You're a brave boy, and I'm proud of you."

"Thank you, Aunt Martha!"

Again the boy's attempt to learn something about his father had been foiled. He sank down into the porch chair despairingly and leaned his head on his hand. The full moon, riding gloriously in the eastern sky, shone upon his face, and revealed the tears upon his cheeks. In spite of the good woman's counsel, he could not yet repress the longing of his heart.

"I want him so, Aunt Martha!" he exclaimed. "I want him so! If he was dead, as my mother is, I'd never think of it. But somewhere he's living, and I can't get to him, and he won't come to me, and no one will tell me why, and there's such a mystery about it all. Oh, I can't understand it!"

Aunt Martha dropped to her knees beside his chair and drew his head down to her shoulder.

"There, there," she said, soothingly, "never mind! It'll all end happily, I know. You're tired tonight, and it's very late. Things will look brighter in the morning."

So, with gentle words, she led him to his room, gave him a tender good night, and then went about her duties. She was one of those sweet souls that love to smooth out the hard places in life's pathway for the feet of others. Thank Heaven that they live!

Dannie went to bed, but not to sleep. He could not forget his grandfather's mighty anger; and the old man's declaration, made with such terrible emphasis, kept ringing in his ears: "No better deed could be done by any one than to pull their accursed stakes from the ground and fling 'em, one and all, into the water of the brook!"

After a while he rose and looked out of his window. The country was flooded with moonlight. The willows that marked the sinuous course of the brook were transformed into shivering masses of silver. The public road, leading to the west, wound, luminously gray, through the meadows and under the trees. Black, in the shadowed face of the ridge, lay the mouth of the gap, and white and clear-cut against it shone the marble column that marked the sacred grave.

Dannie imagined that he could almost see the line of stakes set by the engineer, starting at the big rock in the potato-field, cutting down by the corner of the meadow, across the road, through the graveyard and into the gap.

He wondered how long it would be before the trains would be rolling by, before the greensward of the burial-place would be cut and slashed and torn by the picks and spades of workmen, before the graves themselves would tremble and shrink beneath the strain and stress of ponderous engines and thundering trains.

The thing was too dreadful to contemplate. And again, more impressive than ever, the words of Abner Pickett rang in his memory. "No better deed could be done by any one than to pull their accursed stakes from the ground and fling 'em one and all into the water of the brook!"

Then there came into his mind a thought that all in a moment set his heart throbbing tumultuously and his breast heaving with excitement. If what Abner Pickett had declared were true, was not Abner Pickett's grandson the one to do it? If, when the morning dawned, those hated stakes had disappeared, would not Abner Pickett be again in possession of every right in his own land, with the power to keep it, and would not the insult to the dead be properly avenged?

The more Dannie thought, the more thoroughly he became convinced that it was right and just for him to carry out the desire so forcibly expressed by his grandfather. From the very nature of the enterprise it was apparent to him that he could take no one into his confidence. Whatever was done must be done by him alone, and there was no time to lose.

He began mechanically to put on his clothes, and finished the task in nervous haste. He crept down the stairs in his stocking feet, with his shoes in his hand, found his cap, slid back the bolt on the hall door, and passed out upon the front porch. Max, the dog, came from the wood-house, barking softly, and leaping up on him, tried to lick his face.

"Down, old fellow! Down!" whispered Dannie. "No, you can't go."

Dannie led the way back to the wood-house, ordered the dog to his bed again, found his own hatchet, and then passed hurriedly down the path to the gate. Once in the road, he began to run, and did not stop till he had reached the fence marking the western limit of the potato-field.

He climbed hastily over and began to hunt for the last stake set by the surveyors. When he found it, he loosened it with two blows of his hatchet, pulled it from the ground, and started back to find the next one. This also he removed, and then he kept on down the line, treating all the stakes in the coming in the same way.

When he crossed the road and came to the border of the brook, he threw his pruning of stakes into the water and, standing there triumphantly, saw them float away. Then he climbed the wall and entered the graveyard. Finding the stake set in the corner of the plot he uprooted it and flung it after the others. He felt that he had now given this cherished half-acre again wholly into the possession of his grandfather.

But he did not stop here. He was flushed with his triumph, and the spirit of destruction was aflame in his breast. Following down the line of survey he drew stake after stake from the yielding soil, and consigned them all to the mercy of the stream.

Already he had entered the gap. The full moon that shone down between the precipitous walls of the gorge made the road that wound along the base of the northerly cliff almost as light as day. For half a mile there was scarcely room for the road and brook to pass through. Some of the stakes, indeed, were set in the bed of the stream, while others encroached on the travelled track of the highway. Some of them, in the shadow of rock or tree or bush, Dannie had to search to find.

But not one escaped his vigilance, not one. When at last, he emerged from the gap and came out on the eastern face of the ridge that flanked the Delaware, he had not left a mark or a monument behind him to indicate that a corps of engineers had ever passed that way.

Here the road forked, one branch going to the north and reaching Port Lenox, the upriver town, the other descending rapidly to the village of Fisher's Eddy on the south. But the brook, unchecked, went straight on down the rugged hillside, churning into foam, dashed into spray, leaping from rock to rock, losing itself at last in the slow-moving flood of the Delaware.

Dannie stood for a moment looking out over the broad valley and the shining river, and down at the few twinkling lights of the village to the south. Then he turned again to his yet unaccomplished task. The line of survey followed the public road to the north, keeping somewhat above it in its descent, and for nearly half a mile farther the boy had no trouble in finding the stakes, rearing them from their beds, and flinging them down the steep declivity into the tangle of rocks and brushwood below.

WHEN he had gone to the limit of his grandfather's land, he stopped and turned back. He felt that he must hurry home. So he hastened up the road, and entered the mouth of the gorge. Between the great rock faces, now bright in the moonlight, now dark in the shadow, he trudged wearily.

When he was half-way through the glen he heard the sound of voices ahead of him. He stood still and listened. Men were talking in subdued tones. There was a splash in the water, the crackling of dry brush, the tapping of wood as if some one were driving a stake, the clinking of steel as if a chain were being dragged along the ground. Then, from behind a projecting ledge, a man advanced into the moonlight and before Dannie could either speak or run the light of a lantern was flashed into his face.

"What are you," demanded the man with the lantern, "and what are you doing here at this time of night?"

Dannie, too much frightened to answer at once, began to back away.

"Stand still!" commanded the man. "No one's going to hurt you. I simply want to know who you are and where you are going."

"I—I'm going home," faltered Dannie.

A voice came from out the shadows up the road. "What's the matter down there, John?"

"I don't know," replied John. "Here's a boy with a hatchet—alone. Looks suspicious, very."

"Tell him to stay where he is till I get there. Go ahead now and give me a point to turn on."

"You hear him," said John to Dannie. "You stand right there, by that rock, and don't you move an inch till he comes up."

The man with the lantern had an engineer's signal pole. He was followed by an axeman with stakes. They went ahead some fifty feet and, with pole and lantern, under direction of the transitman back in the darkness, located a point and drove a stake.

It did not take Dannie long to comprehend that this was another surveying party making a new survey through the gap. It was a strange thing to do, very strange. He could not understand the purpose of it at all. Did those people know of the afternoon's survey? Did they know of this night work of theirs? And if they did, would they make him suffer for it? The situation was as uncomfortable for Dannie as it was mysterious. But he had scant time to revolve these questions in his mind before the transitman and his attendant came hurrying down to where the boy was standing.

A tall, fine-looking fellow was this transitman, but the moonlight, or possibly excitement or fatigue, threw a pallor across his face, and in his penetrating eyes there was a look of anxiety or trouble.

"How is this, my boy?" he said. "What are you doing here?"

Dannie had no mind to tell. But although he had grown suddenly fearful of the consequences of his deed of destruction, he was not untruthful.

"I had rather not tell you, sir," he replied, frankly.

"Very well, I shall not compel you," said the man. "But under these circumstances I shall have to detain you. "Morris,"—he addressed the head chainman—"keep this boy with you. Don't let him give any signals, and don't let him escape. We'll dispose of him later. Too much depends on this night's work to take any risks with strangers. Come along, Jones."

He shouldered his transit, and followed by his attendant, started rapidly ahead. Dannie, under the eye of the head chainman, walked down the road. The axman had already gone forward to clear the way, and the rodman and leveler were following close behind.

IT was a singular task, this locating a rail-way route in the night. But aided by the bright moonlight and the glare of lamps for signals, the surveyors found their work perfectly practicable.

Slowly the line of stakes stretched out, following, with the utmost exactness, the route surveyed in the afternoon. Indeed, there was room in the gap for but one railroad, and the second survey had of necessity to take practically the same course as the first.

As Dannie walked along in the company of the head chainman, it became apparent to him that these men did not know of the survey made by the engineers in the afternoon; much less did they know of his work of obliteration. At the same time the serious results of that work began to weigh more deeply on him.

A hundred questions rose in his mind. If the line of stakes set in the afternoon were still standing, could these men be here setting theirs to-night? And when they learned, as some time they must learn, that a prior survey had been made, what would they do? And if any one should ever know that he, Dannie Pickett, had destroyed that line of stakes, what would happen to him?

And of what avail was it anyway to wipe out the marks of one location only to have the stakes of another spring up in their places scarcely an hour later? But with all his questioning he could decide upon only one thing, and that was under any circumstances, to keep his own counsel and reveal nothing.

At last the end of the gap was reached, but the railroad route was located for yet another thousand feet down the north slope of the hill.

"There's plenty of room here," said the transitman, finally; "there's no object in going farther to-night. We're safely through the gap. We're first through the gap, and the gap route is ours by right of prior location."

Dannie recalled the exultant declaration, made under similar circumstances, by the engineer who conducted the afternoon survey.

"You might step down the road a bit, John," said the transitman, "while we are getting the things together here, and see if you can find any trace of the Delaware Valley & Eastern people. Nichols should have ended his survey somewhere near here last evening, if he had good luck."

Ten minutes later John returned and reported that he had found the Delaware Valley & Eastern stakes about three hundred feet farther down the road, where the party had evidently stopped for the night. The transitman laughed softly.

"I should like to be behind a tree or rock," he said, "and see Nicholsen when he comes here after daylight to continue his survey and finds his proposed gap route already taken."

Ever more deeply, as he listened, Dannie appreciated the difficulties in which he had involved the railroad companies, and the dangers into which he himself had plunged.

When everything was ready, they all started back at a good pace, up the hill and into the glen.

"Here, my boy," said the transitman, "come with me. I want to talk with you."

Dannie fell back and walked with him. They were the last two in the party.

"There is no need of being severe with you any more," continued the man. "Our task is accomplished, our route is located, no one can interfere with us now. But, you understand, it was necessary in order to carry out our scheme success-fully that we shouldn't be disturbed until after we were through the gap. We couldn't run the risk of having you go back up or down the road and rouse the country, or the other corps of engineers, or even the owner of the property. So we had to take you along with us. I am sorry to have caused you any inconvenience or anxiety, and I am sure I beg your pardon if I have done so."

He had a very musical voice and a winning manner, this big engineer, and Dannie felt at once a strange attraction in his presence.

"Oh, it doesn't matter very much," he replied, "so long as I get home before daylight. They—they don't know I'm out."

As he spoke, he glanced back over his shoulder toward the eastern sky, already paling perceptibly at the horizon.

"Do you live far from here?" inquired the man.

"Not very far; just up the road a way."

"At what house? I used to be somewhat acquainted about here years ago. Maybe I know your people."

"Why—why—well, if you please, I'd rather not tell."

"You needn't," said the engineer. "It's none of my business, anyway. But let me ask you just one question. Do you know Abner Pickett?"

"Yes, sir, I do."

"Does he still own this gap?"

"Yes, sir, he does."

"Do you know—is he well?"

"Yes, sir, I believe so. I saw him yesterday. He went up to Port Lenox."

"Thank you, my boy, thank you. Do you happen to know if he objects to having a railroad in the gap?"

"I think he does. I heard him say last night that—that—"

"Well?"

"Well, I don't think he wants a railroad across his property. I think he'd like to see all the railroad stakes pulled out."

"I'm sorry!"

After that, for some minutes, there was silence. The man seemed to be in deep thought, and Dannie pondered long over a question he desired to ask. At last he found courage to ask it:

"Is it wrong—is it against the law to pull out railroad stakes?"

"Well, I think the court would deal pretty severely with any person who was convicted of pulling out or destroying stakes set by an engineer."

"Would such a person have to go to jail?"

"I should think it very likely. Why do you ask?"

"Oh, I knew a fellow once who—who—started to pull some out."

"It's a good thing he didn't get any further with it. A county jail is not a pleasant place in which to spend one's time."

There was one point still left to Dannie. "Suppose," he suggested, "suppose the man who pulled out the stakes was sure who owned the land?"

"That wouldn't help him much. A railroad has a right to locate its route through a graveyard, and if it did—well, if it was my graveyard I believe I would pull up the stakes set up in it and throw them into the brook."

"Thank you! Oh, thank you! That's just what—what a fellow did once that I know."

"Yes!"

"Yes, he—he—" But in the midst of his stammering a new thought came to him. "You ran your line through a graveyard, didn't you?"

"Do you mean Abner Pickett's graveyard?"

"Yes."

"No; I went round it. I followed my tangent to the south side of the brook opposite the graveyard,—there's a bit of shelving beach there which gave room for the location,—and then I put in a reverse curve and came down on this side again, just at the entrance to the gap. Here, I'll show you how I did it. Come on!"

The rest of the party, walking more rapidly, were far ahead, out of sight and sound. The engineer quickened his pace, and Dannie hurried along by his side. The subject had become one of absorbing interest to both of them.

"My knowledge of the locality," continued the man, "served me handsomely for a night survey. I used to know every foot of the ground here when I was a boy. Why, I could have walked barefoot from end to end of this gap on the darkest night you ever saw, and never stubbed my foot against a stone, I was so familiar with the road."

By this time they had reached the western opening into the glen. "Here," said the man, pointing to a stake at the roadside, "here is where we come in, and there," indicating the curve with a sweep of his arm, "is where we cross the brook, crowd the foot of the ledge opposite the graveyard, and strike a tangent that carries us in a straight line for more than fifteen hundred feet."

"I'm so glad you didn't touch the graveyard!" said Dannie.

"My boy, if this railroad is not built until I run a line for it through that burial-place, you will never live to see the first tie laid. Abner Pickett himself holds this sacred plot in no greater reverence than do I."

They were moving on up the road now toward the graveyard wall.

"I'm so very glad you didn't touch the graveyard!" repeated Dannie, softly. "I'm so glad for grandpap's sake."

The next moment the man had a strong hand on each of the boy's shoulders, and was looking down into his face with a fierce eagerness that frightened him.

"Who are you?" he demanded. "Tell me your name—quick!"

That imperative request gave room for no evasion. There could be but one reply.

"I am Abner Pickett's grandson," faltered the boy. "My name is Dannie Pickett."

THE man loosed his grip on the lad's shoulders and took his hands instead: Dannie felt those clear blue eyes piercing him through and through. For a full minute they stood thus; then the grasp was relaxed, the man turned his face upward in the moonlight, and it seemed as if he were in prayer. When Dannie saw his eyes again, they were full of tears; but there was a smile on his countenance, and when he spoke his voice was very sweet and gentle.

"I do not mind me," he said. "I have a boy whom I have not seen since he was a little baby. You must be about his age. I think you must look very much like him. Strangest of all, his name, too, is Dannie. Come, let us go. It will soon be daylight. See the red in the east. I must find my men, and you must get to your home."

He took the boy's hand and they started on. But Dannie's heart was beating to the music of this man's voice, and swayed by the spell of his presence, he felt that to him must be told the secret of his midnight errand in the glen.

"I want to tell you," he said, "what I was doing in the gap tonight. I feel as if you ought to know."

"No," was the quick reply, "you need not confide in me! I cannot counsel you now. Others must do that matter a time. I only trust that your errand was one of which you need not be ashamed. Do I speak too fast for you? There is so little time to lose."

When they came opposite the marble column that marked the grave of Dannie's mother they stopped instinctively.

"This is grandpap's graveyard," said the boy, simply, "and that is where my mother is buried."

The man did not answer. He had removed his hat, and stood gazing intently at the white shaft and at the vine-covered mound at its base. For a full minute he stood there, motionless as the monument itself. Then he turned to the boy.

"Let the thought of her be as dear and sweet to you always as your own life," he said. "Come!"

With the boy's hand still in his, he hastened on. The other members of the party had long been lost to both sight and sound. The morning glow was spreading in the East. The autumn mist came in cool compressed films about, and now and then some sound betokening daybreak came muffled to their ears.

When they reached the gate that led to the Pickett farmhouse they both stopped. Again the man bared his head as he gazed through the morning mist at the dim outlines of the old homestead. Then he bent down and, taking Dannie's face between his hands, touched the tangled hair on the boy's forehead with his lips.

"Good-by!" he said. "Good-by, my boy, and God bless you and keep you!"

(To be continued.)



The Cheerful Plowman

PARKING ENTERS INTO IT

I LIKE to trade at Kittensville, it's easy there to park while it is hard to find a space down in the town of Stark. At Stark a purple-eyed cop, with star all gleaming bright, will say:

"That curb is painted red you blinded son of night!" "Clear out or this ton rambler rolls." A hotel entrance here? Never heard been in town before, you poor old hoss I can't." "Here, move on! that space is kept as Murphy's loading zone! Who do you venture into town, you greenhorn off the farm?" "Wig waggle out, you bug-eyed pet! You muskrat gent from Blink! This city stuff is new to you and very new, I think! An entrance to a theater is sacred ground, you dub, so find another parking space for that old crippled tub!" "Come make it snappy, corkscrew out there, is a hydrant there! There are no hydrants where you live in water anywhere; but here in town are water mains, fire engines operate and when they need that hydrant there they won't propose to wait! So scuttle out and shake your nose, be quick or see the judge! What's wrong with that decrepit boat? Step on it! Won't it budge?"

That's how they treat me down at Stark when I go down to buy! They treat me like a blooming rube without a heart or eye! I never can get parked in Stark without a storm of words while copers flock around me ear to berate flocks and herds. That's why I buy my needed wares at Kittensville, it gets to parking there's an easy stunt and folks are nice to me! —H. E. T.



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Farmers' Week at Morgantown

By W. D. ZINN

THE best attended and most successful Farmers' Week ever held on the state closed on February 8th at Morgantown. The attendance surpassed anything ever seen before and the interest was keen from the first. No ladies' auxiliary to the first Farmers' Week held in the state, but at this meeting about half of those in attendance were women and they had their separate sessions and seemed to get as much out of the meetings as did the men.

Last year the first Master Home Makers' contest was held. Votes from those thus honored this year were published in last week's issue. This event has created a great deal of interest throughout the state and calculated to do a great deal of good.

The enrollment at Farmers' Week was 750 and every one seemed intensely interested in the meetings. I often heard complaints made that they could not hear all the talks.

Dr. Firman E. Bear of the Ohio State University gave a very interesting talk on "Air Nitrogen in Agriculture." He pointed out the importance of farmers using more nitrogen on their farms. He said that even farmers blamed the dry weather for the failure to grow a good crop of corn when if they would apply a liberal amount of sulphate of ammonia or some other carrier of nitrogen they would find that it was more a shortage of nitrogen that was reducing their yields than the lack of moisture.

Dr. R. B. Dustman gave a talk on "Chemical Studies of Some West Virginia Weeds". He had analyzed broom sedge, poverty grass and horse weed and compared them with bluegrass, redtop and other grasses. Our readers will be interested in seeing how these weeds that they have fought for so many years compare with some domestic plants that they have been cultivating for many years.

I give below the tables presented by Mr. Dustman.

It will be noticed that broom sedge cut June 7th contained 12.60 per cent crude protein while timothy cut early to full bloom contained but 7.2 per cent protein and the weeds cut when nearly ripe contained but 5.0 per cent protein.

One trade will do well to study these tables and tell the writer never should a hay crop be cut if the real object is to get the most protein which is the basis of values. Farmers who in the past secured very little "Farmers' Week" may now plan to attend next year's "Farmers' Week."

One thousand farmers have met at the state capitol to get knowledge for years was absent. During one of his visits I heard that was V. T. Bonar of Wood county. He will be greatly missed not only in his family, his community and his county, but also by the agricultural leaders of the state. Truly a good man has fallen.

During the first time many farmers had met Dean Trimble and John Rasor Turner, president of the University, and they were greatly pleased with them.

Wirt County in the Lead

Two years ago George Paul Roberts of Wood county offered a prize of one thousand dollars to a few of the best farmers of the county and these prizes to be continued indefinitely if the farmers took interest in the matter. This county had more farmers present at Farmers' Week than any other county in the state and this large attendance was due to this move. We give below the names of the winners. There is one beauty about this contest that is not always seen in a contest and that is the losers were winners also. Because of the effort they did better farming and thus were benefited.

Winners of the George Paul Roberts Farm and Home Improvement Contest: A. F. Bobb, Palestine, 71 points; Frank Wells, Lenore, 63; John Staley, Elizabeth, 56; Collin Campbell, Sandyville, 48; Bruce Williams, Elizabeth, 42; I. A. Daniels,

TABLE I: Composition of broom sedge (Andropogon virginicus L.) at various stages. From open hillside, season of 1928. Moisture-free basis.

Date collected	Crude protein	Crude fiber	Ether extract	Ash	Stage
	%	%	%	%	
May 7	3.96	35.7	1.19	3.19	Old growth, 1927
May 7	8.31	27.6	1.41	5.71	New growth, 1928
June 7	12.60	28.8	2.53	5.21	New growth, 1928
July 7	9.55	31.8	2.21	4.78	New growth, 1928
August 7	7.43	33.9	1.97	4.52	New growth, showing seed stalks
September 7	6.15	32.5	2.54	2.98	Seed stalks formed
October 8	4.32	33.0	2.12	3.16	Mature
October 8	4.71	30.6	2.46	3.62	2nd growth, rye

TABLE II: Composition of poverty grass (Danthonia spicata L.) at various stages. From open sandy ridge, season of 1928. Moisture free basis.

Date collected	Crude protein	Crude fiber	Ether extract	Ash	Stage
	%	%	%	%	
May 7	16.80	23.6	2.80	4.54	Early growth
June 7	11.49	30.2	2.97	4.80	Before heading
July 7	7.35	33.4	3.02	2.82	In head
August 7	6.55	34.3	3.58	3.26	Seeds matured
September 7	7.78	32.8	6.08	3.25	Mixed 1st & 2nd growth
October 8	6.61	31.5	5.22	4.08	Mixed 1st & 2nd growth

TABLE III: Analysis of grasses at various stages and of other plant products. Moisture-free basis.

Grass	Crude protein	Crude fiber	Ether extract	Ash	Stage
	%	%	%	%	
Kentucky bluegrass	22.2	21.8	5.5	11.3	Before heading
Kentucky bluegrass	13.5	30.0	3.6	10.2	In head
Kentucky bluegrass	7.8	30.2	3.0	9.4	After bloom
Kentucky bluegrass	7.9	33.3	4.0	8.5	Ripe
Timothy	10.5	30.3	3.5	7.1	Before bloom
Timothy	7.2	33.8	3.0	5.3	Early to full bloom
Timothy	6.5	33.3	3.3	5.3	Late bloom to ripe seed
Timothy	5.9	35.1	2.5	4.9	Nearly ripe
Redtop	7.8	32.5	2.3	8.8	In bloom
Oat straw	4.1	41.0	2.7	6.1	From threshed grain
Wheat straw	3.4	40.9	1.6	5.7	From threshed grain
Corn husks	7.9	32.1	1.1	2.2	From cured stalks

TABLE IV: Composition of horse weed (Ambrosia trifida) at various stages. Season of 1928. Moisture-free basis.

Date collected	Crude protein	Crude fiber	Ether extract	Ash	Stage
	%	%	%	%	
June 7	19.65	16.6	2.88	13.33	Plants 12-18 in. high
July 7	14.57	22.6	2.42	15.80	Plants 2 to 4 ft. high
August 7	11.40	37.9	1.55	10.70	5 to 7 ft. before bloom
September 7	10.60	40.2	2.26	7.91	5-8 ft., past full bloom
October 8	8.43	41.2	5.04	7.51	5-8 ft. high seeds ripe
July 6, 1927	25.52	11.5	3.67	15.13	Leaves dry
July 7, 1928	23.57	11.4	3.42	14.88	Leaves dry
August 7, 1928	12.12	33.8	2.04	10.26	Single large plant



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Fertilizers

A WEST VIRGINIA reader asks how much nitrogen, etc., he should mix with 125 pounds of 20 per cent superphosphate. [illegible] To begin with the 125 pounds of superphosphate will furnish only 20 pounds of phosphoric acid, and that is too little to put on an acre of grass land. It will pay to double that amount. If nitrogen and potash are at all needed I would certainly not bother with less than a two per cent goods of both. That would require about 240 pounds of nitrate of soda or 1[illegible] sulphate of ammonia to the [illegible] pounds of muriate of potash, and one sixteenth of that amount for the 125 pounds of superphosphate. Our correspondent writes that he mixes 20 pounds of each with 125 pounds superphosphate. The only mistake he is making, I think, is in not putting more on of that proportion. It does not pay as well to fertilize oats as corn, for the latter yields a greater profit in West Virginia.

Fertilizer for Potatoes

I am preparing two acres for potatoes. It is a clover sod and rather heavy clay soil. I am planning with a good stable manure at the rate of 5 to 8 tons per acre. I plowed it during December. Part of it was manured before plowing and the balance of it will receive manure on top. What should I use on the [illegible] of commercial fertilizer [illegible] amount per acre.

WITH as much manure our correspondent is applying it is doubtful if more nitrogen is needed but to make sure I would suggest that he apply about 1 000 pounds per acre broadcast on the rows and cultivate it over the ground—or a 4-12-4 or 5-10-5 goods or some formula as near that as he can find. He should test his soil to see whether nitrogen is really needed. Later he applies 20 tons of manure, which is easily done by leaving off the nitrogen on a few rows.

Turning Down Soy Beans and Rye

A WEST VIRGINIA reader asks whether he can improve a [illegible] by sowing soy beans turning [illegible] down and sowing rye and then turning the rye down. Yet this will improve the land, but our correspondent could make some more economical on this scheme. The soy beans could be chopped up with a [illegible] that would be about as good for the land. Then if he will seed the ground to wheat and hairy vetch it will be much better than the rye, for the vetch is a legume and will add nitrogen to the land and the wheat will [illegible] easily than the rye. [illegible] can be made [illegible] the fall before [illegible] loose surface soil [illegible]

Years ago I had a great deal to say about rye, but I never think [illegible] readers will now [illegible] recommending it very strongly in recent years. I have learned [illegible] and the land in the spring as clean [illegible] as any [illegible] good season [illegible] can be [illegible] of weed [illegible] We must secure [illegible] action to it is at recent [illegible] as a nitrogen [illegible] the land [illegible] ratio. This explains [illegible] that the bacteria necessary [illegible] down the nitrogen and [illegible] nitrogen from the air. [illegible] discussion and [illegible] take some of the nitrogen from the soil. [illegible] against the [illegible] land [illegible] and this is [illegible] the same [illegible] it [illegible] [illegible] [illegible]



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Farm and Dairy



By L. W. LIGHTY

LATE in the winter there are always many questions relative to the cows giving bitter or other abnormal milk. The manner wants me to give him a remedy. Nearly always the cow that gives bad milk is advanced in the period of lactation. In no more information is given almost invariably the cow was fed on rather poor hay like ripe timothy, mixed hay and straw and for grain a bran mixture low in protein or so-called chop and buckwheat. The chop is often the "run of the mill" and the buckwheat is often that which is too poor for flour. The result is the grain feed is not much better than the roughage. The cow does not have the right ingredients to live and produce a calf and also yield a lot of good milk.

When a cow goes this way when advanced six or seven months in lactation it often is hard to get her back even with the best feed. My advice is as a rule to put her dry and feed her well the next period—she will pay you if she is a good cow. Otherwise, if there are cows which show bad habits even with good feed, but very few will disappoint one if they have good care and a good balanced ration.

The owner should keep [illegible] the cow and do his best to meet her needs. If the cow fails to give enough milk or abnormal milk the simple thing to do is to dispose of the [illegible]. Discarding a cow that gives bad milk is like a bitter and strings milk, [illegible] wasting time and money.

But before you blame the cow for cream being sour, or butter not coming, and the cream will not rise, or the butter will not churn, all these points were reported to me lately, know your methods of handling [illegible] milk is. I met a woman who said she gave the cow a dash of soda to help along the flow from there on. The whole trouble was that the soda and often of does more harm than good. Sherlock Holmes to detect it out.

Many are inclined to blame the cow for bad milk, cream and butter when it is never produced and having no counsel in court, was found guilty. I want to be that cow's attorney and see that she gets justice.

Forethought the Basis of Success

It is pleasant to report that more letters came to me this winter from farmers who desired assistance in planning for next season and for several seasons to come than ever before. Success on the farm is not a matter of a year but of a series of years. The reason so much of our tenant farming is unsatisfactory to every one concerned is because it is almost invariably planned for one year only. We will get out of it all we can in the years in there is another we will do the same and so there is not we have so much. The procedure at best is not satisfactory and at worst words fail to tell. When will we here in the East outgrow the one-year farm lease?

The Hay Crop

One man writes: "My land was not favorable to growing the hay crops I needed. Wild rough grasses and ferns did grow and choke out the seed I sowed. I mixed small areas and applied fertilizer to the crops and after seeding down I top-dressed with manure. That helped my clovers and timothy to choke out the undesirable grasses. I have been working on this line for two years and now I have an abundance of hay from 50 to 75 per cent clover, with the result that I am producing milk at a profit where formerly I had nothing for my work. Besides this the other crops I grow on the land are nearly twice what they were before. Less work and money to do this, for now I am making enough to feed, except the purchased dairy feed, also a cold debt that was [illegible] Have you one?"

I wrote an answer congratulations [illegible] and his letter and his [illegible] work will get good [illegible] battle, [illegible] and the [illegible] and [illegible] Soil building [illegible] a needed [illegible] will make [illegible] the original [illegible]

Important Matters at the Farmyard Gate

[illegible] of stock, [illegible] home [illegible] and a [illegible] and then [illegible] taxes [illegible] per [illegible] and [illegible] taxes [illegible] and [illegible] and towns [illegible] and states [illegible] but it was [illegible] debts, and debts have to be paid. There is only one way to pay town, county or state debts and that is by taxation. Pay-day is here.

The result is the tax collector is at the farmyard gate with his bill and while we all along knew there is nothing surer than death and taxes we never gave it a thought but kept on growing. Apparently at last the many of us are giving it a thought, but still the responsible powers are doing their utmost to control the [illegible] increasing and spending.

Let us not forget that because that same farmyard gate where [illegible] heavy taxes are handed out we [illegible] are possibly handed out our acquiescence to create this debt that has become a menace. For quite awhile economy was a symbol to be admired, but the time is here for us to make economy a practical working proposition.



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Bradford County Annual Reports

LeRaysville Association

The LeRaysville Cow Testing Association, Bradford county, Pa., completed its first year August 1, 1928, with 22 whole year members and six part year members. The total number of cows for the year was 394. The average number of cows on test was 19.7. The herds follow:

Owner	Breed	Milk	Fat
Albert Tarbox	[illegible]	[illegible]	[illegible]
C. L. Leet	R A C H	10699	352.1
Claude S. Godley	[illegible]	[illegible]	[illegible]
Rutland Jones	R A C H	9073	327.4
	R H	9687	310.9
L. D. Whitesell	[illegible]	[illegible]	[illegible]
	J. Berry, Tester		

Troy Association

The Troy Cow Testing Association of Bradford county completed its thirteenth year November 1, 1928, with 19 whole year members. The results of your members follow:

Owner	Breed	Milk	Fat
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

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PENNSYLVANIA FARMER
Insurance Department, Pittsburgh, Pa.

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Postoffice .....State..... Relationship of Beneficiary

Full name of beneficiary .....

If renewal give policy number .....

Angles of the Tax Question

(Continued from page 8)

...public money. Where debt...from ... the state gather to pay from ... to our great and glorious school system and lay their offerings upon the altars of its high priests. Several days of pomp and dress parade with [illegible] showing great skill and delegates great aptitude. Delegates cordially endorse all new legislation proposed by their leaders, pass with enthusiasm such resolutions as are submitted to them, are in all things good and therefore happy and go home filled with ideas and high resolves, forgetting utterly that the cost of education has doubled and trebled and is still rising and that school taxes tend upward at an alarming rate. It costs fifty dollars to send a delegate from our county and we send two. To what end and of what value to those who pay the bills. Yet the law provides and school authorities advise and insist that every school board send a delegate to these conventions at the cost of the district. "What price glory!"

Superintendence

Then there is the rising cost of school superintendence. In our county, in doing this [illegible] ... [illegible] ... [illegible] ...

Produce Market Review

THE potato market was dull and several markets reported somewhat lower prices. The market in Philadelphia was steady during most of the week but toward the close prices dropped about 5c on 120-pound sacks. Dealers attributed this weakening of the market to more liberal receipts of potatoes by auto truck from nearby sections of Pennsylvania. The dealers state that the large quantity of trucked-in potatoes has affected the market at the rail terminal and but few sales were reported.

Pennsylvania round whites were quoted at $1.35@1.50 per 120-pound sack with a few exceptionally well-graded lots a little higher. In Pittsburgh Pennsylvania round whites brought $1.85@1.90 per 150-pound sack, in Baltimore $1.85@2 and in Washington $2.25.

Quotations are often misleading unless conditions are fully understood. The fact that prices are higher in one market than another does not always mean that market conditions are better. It may mean that stock of better quality is going to that market. New York State shipping points reported a slow demand and a slightly weaker market. Round whites were quoted at $1.35@1.40 per 15-pound sack f. o. b. Prices held steady at Maine shipping points but the demand was slow and growers were unable to haul many potatoes to the warehouses on account of the extreme cold weather. On February 15 a temperature of 20 degrees below zero was reported.

Shipments of seed potatoes from Maine are 645 cars behind last season at this time. So far 2,176 cars have been shipped. Most all of the early producing states are taking fewer seed potatoes than last year, but so far New Jersey and Pennsylvania have bought more than they had up to this time last year.

Apples and Sweet Potatoes

The February report of cold storage apple holdings in the United States shows that there are considerably more apples available than at this time last year. Holdings of apples in barrels were estimated at 1,681,000 barrels, as compared with 1,266,000 Feb. 1, 1928, and a five-year average of 2,747,000 barrels. There were 3,186,000 bushel baskets as against 2,315,000 bushel baskets February 1, 1928, and a five-year average of 1,608,000 bushel baskets. Holdings were estimated at 12,347,000 boxes compared with 9,809,000 boxes the same month last year and a five-year average of 9,813,000 boxes.

The Philadelphia apple market was steady for good stock but average offerings were dull. The demand was generally slow. Truck receipts of New Jersey apples were moderate. Delicious, Stayman, Rome and Paragon sold at $1@1.75 per bushel with exceptionally fancy lots as high as $2.

As a part of a campaign to stimulate the production of sweet potatoes of high quality the Peoples National Bank of Hammonton, New Jersey, has offered a number of prizes to growers in Atlantic county. The sweet potato market was generally dull during the week and poorer stock sold at somewhat lower prices than last week. Prices of fancy stock were generally unchanged. In Philadelphia most of the supply consisted of ordinary stock which sold around 50c@$1 per ⅝ basket. Fancy yellow varieties brought $1.10@1.35 and reds $1.10@1.50. New Jersey yellows were quoted at $2@2.50 per bushel in New York and at $3@3.25 in Chicago.

The Campbell Soup Company has announced their contract prices for tomatoes for the coming season. The prices generally average $2 a ton above those of last year. For the first two weeks of the season from August 6 to August 20 they are offering $24 a ton, from August 21 to September 6 they offer $22 a ton and for the balance of the season $20 per ton.

Poultry and Dairy Products

The eastern butter markets showed a firmer tendency during the past week. Early in the week the market was barely steady and trading was lighter but later receipts were rather small and the markets strengthened. Dealers in practically all markets except Philadelphia were able to prevent any accumulations, but in Philadelphia trading was quiet toward the end of the week and some dealers forwarded their accumulated stocks to New York in order to relieve the situation.

The storage report issued by the Federal Department Feb. 13th shows storage holdings of creamery butter on Feb. 1st of 24,750,000, as compared with 28,273,000 a year ago. This shows a shortage of 3,523,000 as compared with 2,500,000 on January 1st, indicating a fairly satisfactory movement from storage during January. Reports of production indicate a small increase over a week ago, instead of a decrease as was anticipated by some operators. Weather conditions throughout most of the producing sections have been satisfactory.

The New York City egg market was steady toward the later part of the week. Fancy nearby fresh eggs were in fair demand although average offerings were tardier show. Nearby hennery whites ranged from 37@46 per dozen, depending on quality and grade while brown eggs brought 39@45c. Eggs of mixed colors ruled considerably in price due to the wide range in quality. The best extras and closely selected extras were quoted at 42@44c while other grades sold at 34@42. The best Pacific Coast white eggs sold at 42@43c per dozen with poorer grades as low as 38c.

The egg market in Philadelphia was firm on account of the irregularly light supplies. Storms in the West and South have held back shipments from those sections and the supplies of strictly fresh eggs from nearby sections were barely equal to meet the demand. The market is in a satisfactory position as most receipts do over-balance price declines in the near future. Prices however is mostly dependent on the size of receipts. W. E. W.

Philadelphia, February 20, 1929.

COMING EVENTS

March 4. County wide bull association, Bedford county.

March 7. Potato growers' meeting, Salona, Clinton county.

March 7-8. Tri-State Sheep & Wool Growers, Washington, Pa.

March 13. Dairy husbandry meeting, Nittany Valley, Clinton county.

March 14. Dairy husbandry meeting, Lock Haven, Clinton county.

March 15. Sheep meeting, Morrison's Cove, Bedford county.

Farm Conditions

Cumberland Co., S. W. N. J.

Feb. 7. Potatoes sold at 1 a pound at the farm. Hens per crate mark brings $2.85 a hundred. Have had several days of cold weather at one time. Reading, Dayton or Bridgeton, R. 4, who is 76, has been skating on skates he has had since he was 14 years old. Conrad Sheppard

Somerset Co., S. W. Pa.

Jan. 30. Real old-fashioned winter. Good sledding on all roads except state roads, which snow has been taken off. Many people still use the slow old horse. Mrs. H. W. B.

Clearfield Co., Central Pa.

Feb. 4. Very [illegible] with snow. Lots of [illegible] to stay to date. Markets dull. Apples $1.25 per box; 75@$1; cabbage 4c; eggs 40c; butter 50@60c; live hens 25c; dressed pork 13@14c; hay $15@18, straw $12@ D. H. Walls.

Butler Co., S. W. Pa.

Feb. 5. Fine winter weather the past several weeks with thermometer ranging between 12 and 20 degrees above zero. Snow on the ground. Farmers [illegible] working in the woods and encouraging cows and chickens to make bigger profits. Poultrymen preparing for increased volume of business. Seeds, fertilizers and trees being ordered. Howard F. Fox.

Lancaster Co., S. E. Pa.

Feb. 5. Cold, no snow but wonderful for ice. Had short storm a week ago which is covering for wheat fields. Hatcheries doing fine. Tobacco stripping is on. Difficult to get it delivered, as the roads are made a quick hay or oat, beginning at 6 to 25c for best we paying. 50@7c for [illegible] It is estimated that the 1928 tobacco crop being the two million dollars mark in weight. Potatoes 55c for shipping [illegible] eggs 37@38c for best [illegible] C. E. F.

Mercer Co., Western Pa.

Feb. 2. We have had a very [illegible] weather, only [illegible] and only for a short [illegible] Horse market [illegible] will be very [illegible] Sheep [illegible] Some [illegible] Hogs [illegible] Prices [illegible] banquet on Wednesday, February 6th at noon. W. J. R.

Frederick Co., Northern Ind.

Feb. 4. The past two weeks has been the coldest of the season with snow covering the ground, but weather for past week has been clear and [illegible] Not much being done on farms but feeding and breaking stock cutting wood [illegible] and cutting meat. Pork and hogs remain comparatively low. Heavy pound. Good fat steers $11. Corn [illegible] at $1.25 per bu., potatoes about 75c retail. Roy J. Wirt.

Chautauqua Co., Southern N. Y.

Jan. 29. Eggs dropped to 35c after holidays but are now back to 37c. Butter is 55c. A great deal of baled hay is now at low prices. In many cases the net [illegible] is around $3 per ton after paying for [illegible] and hauling. Every one but the [illegible] pressed and crackers and a very small spent hog hasn't is hugging the [illegible] With one exception we have had no [illegible] snow that has prevented automobile traffic, but most of the time it is very cold and the wind blows a gale. Mrs. E. M. L.

Ontario Co., Western N. Y.

Jan. 31. We have had a lot of [illegible] cold weather this month with but little snow although the ground is covered. [illegible] present and snow plows are at work. No ice harvested yet. Wheat has suffered. The price is going down here to $1.31 per bu. Those who were lucky to have [illegible] cabbage are getting $40 per ton. Potatoes are a drug on the market. E. T. Brinton.

Highland Co., Southern Ohio

Feb. 4. The weather has been very mild but has moderated and is thawing now. The ground has been covered with snow for a week, a great part of the time. Wheat. Tobacco is about all sold at fair prices. Butchering is all done.

M. B. Williams.

CASH GRAIN

Chicago, Feb. 18. The following [illegible] prices ruled here today: No. 2 hard wheat $1.25@1.30½; No. 4 yellow corn, 90@91c; No. 4 mixed corn, 90@91c; No. 3 white oats, 50@50½; No. 2 rye, $1.[illegible]

CORRECTION

Editor, Pennsylvania Farmer: I am writing to call your attention to an error in an editorial of this week's issue which reads as follows:

"At its annual meeting last week the West Virginia Sheep and Wool Growers' Association decided to discontinue the state wool pool and adopt the county unit in marketing this year's clip."

The facts are that the county or community unit was adopted, but all units will be sold through the state organization at the same time. In some communities one or more counties may assemble their wool together and wool grading demonstrations will be held where [illegible] ures will permit.

J. H. McReynolds,
Chairman of State Organization.

Miscellaneous Produce

Pittsburgh

Butter.—Creamery prints, 92 score, 56@57½c; tubs, 50@55½c; local tubs, 52@52c.

Eggs.—Fresh, select white, 42@44c; brown, 41@43c; current receipts, 38@40c; pullet eggs, 30@34c.

Poultry. Heavy hens, 30@32c; Leghorns, 27@28c; springers, 30@32c; roosters, 18@20c; ducks, 26@30c; geese, 22@25c; pigeons, 40@50c per pair.

Potatoes. Per 150-lb. sack Mich. Russets, $1.65@1.75; Maine Green Mts., $2@2.15; N. Y. & Pa. Whites, $1.85@1.90.

Apples.—Bbl. Rome Beauty, $4.50@4.75; bu. basket, Baldwin & King, $1.75@2, Rome Beauty, $1.75@1.85.

Cabbage.—N. Y. & Pa. Danish seed, $3.25.

Lettuce.—Ohio hothouse, 10-lb. basket, $1.

Mushrooms.—Pa., 3-lb. basket, 90c@$1.25.

Onions.—100-lb. sacks, Mich. & Ohio yellows, $5@5.50.

Lancaster

Butter.—Country butter, 54@60c; creamery, 52@60c.

Poultry.—Chickens, dressed, $1.25@2.50 each; springers, 75c@$1.25 each; ducks, $1.50@2.75 each; squabs, 25@50c each.

Eggs.—Fresh eggs, 40@43c.

Vegetables.—Beets, 8@15c per bunch; egg plants, 20@30 each; string beans, 40@45c per ¾ pk.; beans, lima, 45@50c per pt. box; cabbage 10@20c per head; carrots, 8@15c per bunch; cauliflower, 25@50c per head; celery, 10@25c per bunch; cucumbers, 8@15c each; spinach, 15c per ¾ pk.; peppers, 5@8c each; endive, 5@10c per head; lettuce 10@25c per head; mushrooms, 25@30c per pt. box; onions, 20@25c per ¾ pk.; green onions, 10c per bunch.

Potatoes. Per bu., 65@75c.

Sweet potatoes. 20@25c per ¾ pk.

Philadelphia

Eggs.—Extra firsts, 45c; firsts, 39@41c; seconds, 33@41c; storage, 35@39c, selected and candled fresh eggs, 51@53c, select in cartons, 53@55c.

Butter. Creamery, tubs, 92 score 50½c; 88-89 score, 47@47½c.

Poultry.—Fowls, 32@33c; Leghorns, 31@33c; young chickens, 34@37c; broilers, 37@40c; old roosters, 23@25c; ducks, 24@33c; turkeys, 30@40c; rabbits, pr., 18@20c; Guineas, per pair, 81@1.85.

Strawberries. Florida, express sales, 22@24c crate, mostly 42@43c per qt.; part refrigerator express, best, 30@40c.

Apples.—F. S. No. 1 per bu. Virginia and Pennsylvania Staymans, $1.75@1.90; Md. Black Twigs, $1.40@1.50; nearby ¾ baskets, Delicious, 81@1.25; Romes, 65@90c; Stayman, 65@85.

Cranberries. Per ½ bbl. crates, N. J., $4.50@5.

Celery. California crates, washed, 82@2.50; nearby bunches, wired, 12@20c.

Potatoes. Pa. round whites, per 120 lbs., $1.40@1.50.

Sweet potatoes.—Md. and Del. bu. hampers, No. 1 yellows, $1.50@1.65; N. J. ¾ baskets, $1@1.25.

Beets. Nearby ¾ crates, 60c@75c.

Leeks. Nearby, per bunch, 3c@5c.

Carrots. Nearby ¾ baskets, $1@1.50.

Cabbage. N. Y., 100-lb. sack, Danish, $2@2.25.

Lettuce. Calif. iceberg, crates, 4 to 5 doz., $3.50@4.

Onions. Ind. 100-lb sacks, U. S. No. 1, yellow, $5.25@5.50, New York, 50-lb sack, $2.75.

Mushrooms. Nearby, 3-lb. bskt., 50c@$1.15.

Parsnips.—Nearby, ¾ bskt., 50c@$1.

Rutabagas.—Nearby, 100-lb. sacks, $2.25@2.50.

Turnips.—Nearby, ¾ bskts., purple tops, 30@50c.

Peppers. Fla., crates, $3.50@3.75.

Watercress. Va., bunches, 2@3c.

Baltimore

Butter.—Creamery, fancy, 51@52c; rolls and dairy prints 25@26c; packing stock, 24@25c; butterfat, lb., 49@50c.

Eggs.—Md. Pa. nearby firsts (loss off), 37@39c; western firsts, 33@38c; southern, 36@37c.

Live poultry. Hens, old, 4½ lbs. and over, 31@32c; small to medium, 25@30c; Leghorns, 25@30c; young chickens, 34@36c; broilers, small, 40@42c; Guineas, young, 1¼ lbs. or over, each, 75@85c; roosters, 17@20c; ducks, 25@32c; pigeons, pair, 30@35c; squabs, 30@50c; turkeys, 37@43c.

Apples. Fancy pack, bu., $1@2, per bbl., $3@6.

Potatoes. Per 150-lb. sack, $1.75@2.25.

Sweet potatoes. No. 1 hamper, $1@1.75; Yams, per bbl., $2@3.50.

New York

Butter.—Creamery, higher than extras, 50½@51¼c; extras, 50¼c; seconds, 46½c.

Eggs. White eggs, current receipts average extras, 41c; extra firsts, 40@41½c; firsts, 39c; mediums, 38c.

Poultry. Live, by express, fowls, 33@35c; chickens, 28@30c; broilers, 30@40c; ducks, 17@30c.

Apples. Eastern and Southern, bu. bskts., Romes, $1@2; Wealthy, $1@1.75; Delicious, $1@2.25, McIntosh, $1.50@3.50; barreled stock, No. 8ps, $3@7, York Imperial, $3.25@5.25; mixed varieties, $2.75@3.50.

Potatoes. L. I., 150-lb. sack, $1@2.50; Maine, $2@2.25.

Sweet potatoes. Jersey, best bskt., $2@3@2.85.

York

Butter. Country, 55@60c; separator, 60@65c.

Poultry. Hens, dressed, 24@30c; Leghorns, $1@1.50 each.

Eggs.—Fresh, 40@42c; storage, 38c.

Vegetables. Potatoes, 60@75c per bu.; cabbage, 4@5c lb.; lettuce, 10@20c bd.; spinach, 15@25c ¾ pk.; turnips, 15c ¾ pk.; parsley, 20@3c per bunch; celery, 8@15c stalk.

Farmer's Business Letter

THE cattle market [illegible] condition this week with [illegible] in prices. Top this week [illegible] $15 last week, and [illegible] at $10.50@12.60 this [illegible] $13.25 last week and $11.75@[illegible] ago. Average [illegible] $11.45, comparing [illegible] at $11.80 the same week [illegible] $12.80 the same week [illegible] 10 years ago, and [illegible] at $10.30 for the same week [illegible] not heavy, 41,500 [illegible] than last week, 3,000 [illegible] same week last year, and [illegible] the same week two years ago. Eastern dressed beef markets here [illegible] steady, and at mid-week Chicago commission men appealed to the country to hold back, the following [illegible] being given.

A stagnation in the demand for beef [illegible] of the eastern beef markets [illegible] sales at the lowest prices in the last few years.

The Lenten season which generally has a bearish effect.

A Kosher beef strike boycott in N. [illegible] York City which decreases [illegible]

Some recovery was shown in the market late in the week on light runs, the better [illegible] of light steers benefiting in the main. It is felt that the present condition of the market is more [illegible] to be temporarily to lacking up of consumer demand. When people again start buying beef it is thought that there will not be enough of it to go around, and the advance in pork favors a better demand for beef.

Hogs Gain

Hog prices this week [illegible] largest advances of the season, the [illegible] sense shooting up from $10 [illegible] close of last week to $10.25@10.[illegible] on Tuesday and to $10.50@10.[illegible] and Thursday. Later [illegible] plus there was some [illegible] once for the week was [illegible] with the average at $10.[illegible] [illegible] for the week was [illegible] is smaller than last [illegible] [illegible] under the same week [illegible] ing orders were not [illegible]

During the past three weeks [illegible] have advanced $1.50 to $1[illegible] [illegible] to $1[illegible] when the low [illegible] when the top was down [illegible] average $8.40). Prices [illegible]

[illegible] the two weeks from Jan. [illegible] ing receipts at eleven markets [illegible] increase of 43,000 over a week [illegible] two weeks from January 21 to [illegible] there was a decrease of 243,000 [illegible] the two weeks from February 4 to [illegible] decrease of 243,000, compared to the same periods last year. These figures indicate dwindling hog supply, but it is [illegible] Keit to judge their significance on account of the weather during the past six weeks which has hampered the movement of hogs, fat cattle and corn [illegible] snow blocked and ice-covered roads. What this may have amounted to in the aggregate can only be guessed at. Farmers generally report fewer hogs on hand and fewer sows to farrow in the spring.

Lambs Lower

Sheep and lambs were [illegible] lower this week, with the exception [illegible] $17.75 last week. [illegible] showed some increase, 64,000 [illegible] of this week against 50,[illegible] Chicago had 31,500. Colorado [illegible] week, the biggest run of the season. From now on, shipments from northern Colorado feed lots should gradually increase and the peak will likely be reached about the 20th of March. With exceedingly cold weather the past 60 days lambs [illegible] done quite so well as usual, which has delayed shipments to some extent. Feeders in territory farther East had it as well to dodge this western season in their lamb marketing.

Wheat in Spurt

Wheat sentiment shows a [illegible] becomes bullish, this being indicated [illegible] advance scored this week, part of which was lost later. An estimate of world demand greater than had been [illegible] was the reason for stronger prices, another was fear of ice damage to the winter crop in this country, and possible [illegible] countries. Some reports are being made that so far wheat has not been hurt by the ice. In proof, sections of soil containing wheat plants have been [illegible] with the plants growing [illegible] well and strong. It is necessary [illegible] that should there be ice [illegible] it will probably cover a wide [illegible]

horses sell as cheap in February and [illegible] of the future market said it [illegible] "couldn't get any worse." Top sale of the week was $200, with $100 for a nice [illegible] Bulk of sales $100 to $150. A very [illegible] worker of some weight [illegible] [illegible] at the lower figure.

Farm Sales

Some farm sales [illegible] Indiana a good demand for horses. In an Illinois sale a team of 9-year-old Belgian mares brought $450, and a 12-year-old team of grade draft mares $295. In Iowa farm sales teams brought $335, $295, $305, these prices for horses of a pretty good kind with ordinary workers at $75 and up. Broad sows in farm sales bring $25 to $30, good cows $100 to $140, corn mostly 80 to 90 cents depending on the quality and location. In one sale a cutter brought $10.50 and a buggy $2.50.

Reports of farm sales in general indicate a good demand for both stock and equipment and may be taken as a reflection of some improvement in the farming business with confidence in the future.

Chicago, Feb. 16, 1929. WATSON.

Livestock Markets

PITTSBURGH

Cattle

MONDAY'S supply was light only 50 carloads but the coolers are full of beef and demand is limited. With liberal beef supplies [illegible] and a lower [illegible] market to contend with the cattle trade is a big disappointment to those who [illegible] high-priced feeders last year. Most cattle are selling for less per pound than they cost on the feed lot and many of them for [illegible] was [illegible] Bulk of steers here sold a little lower than last week, the exception being [illegible] light heifer steers [illegible] Average good [illegible] steers [illegible] $12.25, but the best [illegible] sold [illegible] Very few [illegible] steers [illegible] [illegible] at $11.75 and [illegible] at $11 [illegible] Bulk of [illegible] $10.50@11.50, with [illegible] $10 and [illegible] Bulk of [illegible] $9@10. Bulk of [illegible] $8@9, with [illegible] $7.50@8. Bulk of [illegible] $6@7, with [illegible] $5@6. Bulk of [illegible] $4@5. Bulk of [illegible] $3@4. Bulk of [illegible] $2@3. Bulk of [illegible] $1@2. Bulk of [illegible] $1@1.50. Bulk of [illegible] $1@1.50. Bulk of [illegible] $1@1.50

Ninety Parts Eliminated in New Kind of Pump

Surprising Invention Developed by Noted Engineers Provides Fresh Running Water at Amazing Low Cost!

NOW, at last, every rural and suburban dweller who has no water supply system may have fresh running water at less than city cost, as a result of a wonderful new pump developed by engineers of the Auto-Prime Pump Company, Cleveland, Ohio. Between 90 and 95% of the moving, wearing parts hitherto considered essential in pump design have been eliminated in this latest invention, cutting down operating costs and doing away with expensive repairs and replacements, and saving hundreds of users thousands of dollars.



Entirely Different

The new pump is built on an entirely new principle discovered after several years' research and experimentation. Its amazing simplicity of construction has made possible new standards of economy as it has no belts, pulleys, pistons, valves or leather suction washers. Nothing to wear out, nothing to get out of order, nothing to replace or repair! The first low cost is the last.

Surprising Performance

While it has only one moving part, the pump is so efficient that it has a rated capacity of 650 gallons per hour under a maximum pressure of 75 pounds per square inch. The volume increases as the pressure is decreased and a large number of faucets can be opened at the same time without any appreciable drop in volume. It may be connected to any shallow well, lake, spring, stream or cistern. And because of its greater suction lift (draws from a depth of 28 feet!) may be used in places where deep well equipment is normally required.

Many Exclusive Features

The Auto-Prime Pump has 25% greater capacity in addition to its greater suction lift. What is more, it is entirely automatic and self-priming, pumping steadily without pulsation or "water-hammer." A special automatic switch insures continuous operation, requiring no starting, stopping or priming. In addition, every precaution has been taken to make it absolutely safe and foolproof. Will not deteriorate through use or lack of use. Even after long periods of idleness, it can be depended upon to furnish instant fresh running water without sticking or blowing of fuses. A knife switch and safety switch guard against any emergency.

Quickly and Easily Installed

Here is an advantage that cannot be overlooked, for anyone can in a short time install this modern water system which is furnished all ready to set up.-No special wiring, lugs, bolts, etc., are necessary, and once the pump is installed it will last a lifetime, so sturdily is it constructed. All in all, it affords the shrewd buyer the greatest pump value on the market today—a modern unit guaranteed to furnish maximum satisfaction at the lowest possible cost.

Free Book Gives Full Details

Readers of this publication interested in learning the complete facts about this remarkable engineering development may secure a copy of an interesting new booklet offered by the manufacturers. This valuable treatise presents a wealth of valuable information about economical water supply and is furnished free, without obligation. For your convenience a space for your name and address is provided. Simply fill in and mail to The Auto-Prime Pump Company, Dept. B-140, 850 E. 72nd St., Cleveland, O.

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Decide now to banish the drudgery of hand and water pail in this modern, practical and economical way.



This Simple Kind of Feed Rack Has Many Advantages

Feed Racks for Sheep

WIDE usage by practical farmers is a safe guide in most farm matters. In this section the type of feed rack for sheep shown in the picture is most used. In many cases the racks may be slatted, to afford a separate headhole for each sheep—however, large handlers usually omit these slats.

Where large numbers of lambs are fed racks must be kept to minimum numbers to make feed distribution easy, to economize space and avoid useless outlay of equipment. Under such conditions the animals soon learn to stay in one place and keep their heads in the rack instead of tossing from one place to another and wasting the hay.

Sheep feeding arrangements along the walls of the barn require twice the walking of the attendant whereas the type shown in the picture permits the feeder to provide for the maximum number of sheep with the minimum traveling. Silage and grain may be fed straight down into such racks as this and can be portioned from large baskets or tubs, whereas the racks with hay apartments overhanging the troughs require a cramped stooping position of the attendant to deliver grain into the troughs and make the use of large baskets very cumbersome and unhandy.

I have found many expensive and impractical built-in "flunks" out on farms. This type of trough cannot be raised as the manure accumulates in the barn—by all means have the troughs movable so they can be kept tidily above the manure and so the animals feed straight ahead and do not get down on their knees because the troughs are away down in the litter.

G. P. Williams.

Hog Pasture

We have six acres of land which we should like to use for hogs permanently, but should like to divide it into two parts, or three if three would be better. I should like to have pasture in one part each summer for hogs and one part in corn to hog down in fall. Please tell us how to rotate this and what to sow and plant in the rotation to give best results for hogs and to keep fertility enough to continue this indefinitely. I don't mean to put corn or pasture in the same division every year but will alternate.

This six acres was in corn this year, is fair soil and part was husked off the stalk and part was cut. This soil has not been limed in the last ten year. What are the best crops if I lime, and what are best if I don't lime? The plot mentioned is sand and limestone soil and well drained.

E. M. Gardner.

OUR correspondent springs a question in which I imagine scores of our readers will be interested. Hogs are as much grazing animals as cattle if we will only give them a chance. In the East farmers can make no money if they feed hogs in a dry lot all the year around.

If our correspondent does not care to keep more than 25 hogs I would suggest that he divide that six acres into four equal lots and sow, early in the spring, one lot to one bushel of oats and five pounds of dwarf Essex rape per acre. Six weeks of growing weather will make this rape large enough to turn the hogs on. It should be six to eight inches high when turned on.

On the second lot I would sow four pounds each of red and mammoth clover and two pounds of alsike. This should be sown as early on April as possible. The third lot should be planted in hills. The fourth lot should be sowed to rape about the first of July. This will make the pasture late in the fall, as frosts do not hurt rape.

If our correspondent does not care to reduce the four lots he may divide the field into three lots and grow the rape, corn and the red mammoth and red clover.

It will pay to be liberal with the use of fertilizer on these plots. For the corn I would apply 400 pounds of superphosphate per acre broadcast and 100 pounds per acre in the row of a 4-16-4 goods. For the clover 400 pounds superphosphate per acre should be applied.

As soon as the rape piece is eaten the ground should be sown to wheat and vetch which will make early pasture in the spring and can be turned down for the same crops next year. The hogs will leave most of the crops on the land and it will become more productive each year. If the price of lime is not prohibitive all these plots should be limed.

D. W. Z.

Pigs Have the Best Land

MY pigs have ten acres of my best land. These ten acres are divided into six fields. In three of these fields I follow a three-year rotation of corn and soy beans followed second year with oats, rape and sweet clover and third year sweet clover.

One field is an old apple orchard with bluegrass sod, one is an alfalfa field and the other a long narrow one which serves as a lane to the other



The Grand Champion Carload of Hogs at the Last International Livestock Exposition Illustrates the Type Which Packers Like.

The Farmer's Advantage

THERE is one security at ... in which the farmer can ... his surplus funds or ... and not have to devote time ... studying the business. That ... is a

Federal Land Bank Bond

The farmer is already familiar with ... twelve cooperative Federal Land ... and more than 400,000 farmers are ... bers of local National Farm Loan ... tions and own stock in them. ... by the farmers and the general public ... these bonds has made it possible for ... twelve Banks to make long-term ... amounting to more than a billion and ... half dollars in the last twelve years. ... the savings of thousands of investors, ... and small, are put to work in this ... mental industry.

The capital, legal reserve and ... profits of these Banks are in excess ... $80,000,000. Each bond is exempt ... Federal, State, municipal and local ... tion. Interest received from it is free ... all income and other taxes. Interest ... Federal Land Bank Bonds is paid ... yearly.

These bonds can be turned into cash ... short notice. Or they may be used as ... curity for a loan at a Bank.

Your choice of coupon or registered ... Convenient denominations: $50, ... $500, $1,000, $5,000 and $10,000. ... by registered mail; all correspondence confidential. Price and current rate will be gladly quoted on request.

Write to nearest Federal Land Bank for Circular No. 16

Federal Land Banks are located at

Springfield, Mass. Baltimore, Md. Columbia, S.C. Louisville, Ky. New Orleans, La. St. Louis, Mo. St. Paul, Minn. Omaha, Nebr. Wichita, Kan. Houston, Tex. Berkeley, Calif. Spokane, Wash.





GLECKNER TRADE MARK REG. U.S. PAT. OFF. 50th ANNIVERSARY Sale
HARNESS
12 WEAR RESISTING IMPROVEMENTS
Dealers everywhere.
W. W. GLECKNER & SONS CO., ... ASK about FOR Anniversary Free Gift.

Keep up with the advertisements to keep apace with progress. When answering them say you saw the ad in Pennsylvania Farmer.

Ton Litter Entries Being Received

ENROLLMENTS are being received for the sixth annual ... litter contest in Pennsylvania. County agents will furnish blanks to all who wish to enter the contest this year; entries will be received up to and including June 20.

The feeders of litters which ... a weight of 2,000 pounds or more at the age of 180 days and comply with the rules of the contest will become members of the Keystone Ton Litter Club. Last year 61 Pennsylvania farmers produced 61 ton litters. Mercer and Perry county are leading with five each. This year for the past five years as ten ton litters, more than any other state has produced in six years.

I. C. Madison, swine extension specialist of the Pennsylvania State College, asserts that every Keystone ton litter has been produced at a profit over feed cost. He says: "This project has emphasized the necessity of large litters and rapid gains to produce pork at a profit. In 1928 the average number of pigs was 10.5, the average weight per pig 220 pounds, and the average weight per litter 2,300 pounds.

fields. This lone cow and ... side orchard are always open for them. The first of the others are the sweet clover and alfalfa fields. Then comes the corn and rape when the ears are in the dough stage. The corn field is opened till the corn is ripe. Like ... much soy beans mixed with the corn as this takes the place of ... So we can raise our pigs for ... It is wise to do so. I ... buy some concentrates ... such crops as ... go a great way in saving feed bills ...

With this method the pigs do not require so very much attention, and they thrive well. For a number of years the pigs were my best money crop. Of course I cut out the middleman and I butcher them and retail the meat weekly. My hobby is to cut out labor for the stock do a lot of the harvesting and feed themselves, as I am a little lazy.

Berks county, Pa. I. R. Bashore.

Lawrence County Wool Growers Meet

KEEN interest was shown by the members of the Lawrence County Cooperative Wool Growers ... their tenth annual meeting ... February 2, 1929.

The morning session was ... to business, which included ... tion of seven directors. ... ladies of Lawrence ... meeting was held ... banquet to seventy-eight ...

Following are the ... rectors of the Association ... suing year: President S. P. ... Enon Valley, vice president ... P. Peebles, Slippery Rock; ... treasurer, Neva B. Moore, ... W. M. C. Drake, Volant; R. ... ter, Lowellville, Ohio; Guy ... Enon Valley; W. Francis ... New Castle; J. A. Beck, ...

It has been the policy of the Association for the past several years to hold a wool show in connection with the meeting. Some fifty fleeces were on this year. The money for ... miums was presented by the ... tional Bank of ...

Merino ram—1 and 2 W. E. ... W. E. Wilmo ...
Merino ewe—1 and 2 W. E. ... R. S. Wilmo ... 1 W. E. ...
Medium wool ram—1 W. E. ... 2, Guy Fullerton.
Half-blood ewe—1 and 2 E. P. ...
Three-eighths blood ewe—1 ... berton; 2, W. M. ... Dale.
Quarter-blood ewe—1 W. E. ... 2, Guy Fullerton.
Champion fine wool fleece, E. S. W.
Champion medium wool fleece, ... berton.

Each step of the Goodrich Giant measures months of steady wear



POUNDING, twisting, scraping, machines in our factory make strenuous tests of the rubber used in the manufacture of Goodrich rubber boots and overshoes. In a few minutes they give a rubber boot or overshoe harder treatment than you would give in many months of wear.

The first machine rubs a section of sole rubber violently back and forth one hundred times a minute.

Another machine stretches the rubber used in the uppers. Makes sure it is really "rubbery"—elastic yet strong.

Still another machine takes a piece of the special rubber used in toe and instep and twists and bends it over and over again, as you might do in walking—but a thousand times as hard!

These tests are amazing! It's as if a "giant farmer"—working for your protection—were to pull on a pair of Goodrich boots and stride through a whole year's wear in a single afternoon.

These tests assure you of good value when you buy Goodrich footwear. Look for the name Goodrich. It is plainly stamped on all our boots, overshoes and rubbers—the honor mark of a great company.

From sturdy boots, overshoes and work-rubbers for men and boys to dainty stylish Zippers and rubbers for women and girls, the Goodrich line of tested rubber footwear meets the needs of every member of your family. *The B. F. Goodrich Rubber Company, Akron, Ohio.*

Goodrich
RUBBER FOOTWEAR FOR EVERY MEMBER OF THE FAMILY



A favorite with farmers—this brown Goodrich boot with white sole. Sizes, boys' to men's. All lengths, knee to hip.

This sturdy Norka comes in black with white or brown sole. Unrivaled for heavy wear.

These strong, comfortable all-rubber overshoes come in all sizes with 4, 5, or 6 buckles.

SWINE

Chester White Pigs, ... weeks old ... weeks old ... C. LEWIS TAYLOR. ... Williamsport, Pa.

CHESTER WHITES Registered Big ... Most all ages. Have ... and low ... prices. C. E. Cassel, Hershey, Pa.

CHESTER WHITES ... Just ... fall pigs ... Registered. ... J. C. & C. H. Brassington, R. 5, Sidney, Ohio.

Hampshire Hogs ... Fall pigs ... J. J. BAILING, R. 5, Shippensburg, Pa.

For Sale Two ... yearling Hampshire ... W. F. RISHEL, Centre Hall, Pa.

Spotted Poland Chinas ... A. M. KENNEL, Hanes Brook, Pa.

REGISTERED SPOTTED POLAND CHINA hogs for sale of all ages. Write ... BROOKSIDE FARM, Middletown, Va.

BIG TYPE POLAND-CHINA Fall boars and gilts. Prolific, big ... Prices right. ... O. C. FOWELL, Ada, Ohio.

REGISTERED BERKSHIRE BOAR PIGS ... W. F. McSPARRAN, ... Furnace, Pa.

DUROCS Big Type Reg. Durocs. Pigs ... Shipped ... write your wants. G. C. Saufley, Hommelstown, Pa.

DUROC bred Sow ... and Gilts. Boars ... Herd Reg. Type. ... Charles J. Stuckey, Mechanicstown, Ohio.

Reg. Berkshires ... WOLF CREEK FARM, R. 5, Slippery Rock, Pa.

REGISTERED BERKSHIRE ... Fall gilts ... bred sows. Prices ... INEZ HILLER, R. 1, Millville, Pa.

POULTRY

Exhibition Barred Rocks, ... ART MASON, Ashland, Ohio

AYLESBURY and ROUEN DUCKS. ... from ... heavy laying ... SHALLENBERGER FARMS, Amanda, Ohio

Reid's Turkey Farm ... Young ... Toulouse ... Pure ... TURKEYS, DUCKS, GEESE. Leading breeds. ... breeders now at special fall prices. ... Highland Farm, Ira F. Sellersville, Pa.

Special Fall Prices on high class breeding Turkeys, ... ducks and trimmers; write your wants and ... get list. Pioneer Stock Farm, Telford, Pa.

DAIRY CATTLE

THREE REGISTERED JERSEY BULLS, from ... months old ... Write ... J. M. Main & Sons, Shippensburg, Pa.

REG. JERSEY BULLS ready for ... Also ... Accredited herd. ... C. P. & M. W. BIOHAM, ... Gettysburg, Pa.

REGISTERED GUERNSEY BULL CALF, $40. ... Sire ... Dam ... C. E. Roarer & Bro., Greenville, Pa.

EIGHT REGISTERED BROWN SWISS BULLS ... ready for ... Also ... CLOUD ROBINSON, ... Conneaut Lake, Pa.

Holstein Bulls ... serviceable age, ... butter and ... Crystal Spring Stock Farm, Littlestown, Pa.

HORSES

BELGIAN DRAFT HORSES are unexcelled for ... Right ... Right now is the time for some one in your community ... Right ... and ... Also ... Right ... Right ... Right

MALE HELP

PERMANENT YEAR-ROUND POSITION for married man to superintend and work on property of small Club in mountains sixty miles from Pittsburgh. Experience in farming, dairying, plumbing, carpentry and handling of men essential. When writing state qualifications, age, references, etc. Good position for right person. Box 106, Pennsylvania Farmer, Pittsburgh.

WANTED.—Married or single man to work on poultry and general farm. Must be capable and industrious. No bad habits. Send references and wages expected. Adress J. Pennsylvania Farmer, Pittsburgh, Pa.

WANTED.—Experienced farmer, preferably one with grown sons, to develop 650-acre farm. Wonderful proposition. Zeltwoch, 604 W. Jefferson, Louisville, Kentucky.

WANTED.—Farmers to farm on share basis in Somerset and Cambria Counties. Write Wilmore Real Estate Company, Windber, Pa

AGENTS

THIS WILL PAY A MAN WELL.—Farmer preferred to sell Wymix (formerly "Worm-i-fy"), my concentrated medicated salt on money-back guarantee. Fifteen pounds sells for $3.50; added to 85 pounds of salt it makes a better conditioner than can be bought ready-mixed and saves feeders half the cost of latter. Thousands of livestock owners testify Wymix is best remedy they ever fed. Many say that since feeding it they haven't lost a sheep or hog although before they lost many. I offer you an agency with liberal profits and will advertise Wymix for you direct to livestock owners in your territory. Write for particulars; begin immediately. Increase of your income. Address Sidney Pell, Proprietor, Iron-Sun Laboratory, 4612 St. Clair Ave., Dept. 35, Cleveland, Ohio.

FARMERS' "EVERY-DAY-PAY-DAY PLAN." You can make $30 to $150 weekly distributing Whitmer Products to your friends. Experience unnecessary. We teach you how free. Earn while learning. Team or car needed. Write today for Farmers' "Every-Day-Pay-Day Plan." The H. C. Whitmer Company, Farm Dept. 10, Columbus, Indiana.

AGENTS.—Make $25.00-$100.00 weekly, selling Comet sprayers and Automachem to farmers and autoists. All brass, throws continuous stream. Established 35 years. Particulars free. Hasler Bro. Box C13, Johnstown, Pa.

SELL STORES, OFFICES, GARAGES our flashy line floor brushes. All sizes, kinds. Big sales easy. Big profits. The Brush Works, 842 4th St., Fairfield, Iowa.

A FEW "SUCCESSFUL" DEMONSTRATOR incubators for quick sale at great reduction. 60 to 300 eggs capacity. Good as new. Des Moines Incubator Co., Box 734, Des Moines, Iowa.

WANTED.—Farmer or farmer's son or man to travel in country. Steady work. Good profits. McConnon & Company, Dept. FB2702, Winona, Minn.

SALESMEN

EXPERIENCED FARM MAN wanted to sell Fisco All Metal Corn Cribs in home territory. We furnish list of prospects. Here is an opportunity to make good money—right now! Write today. F. O. Schoenlinger, 326-336 Mt. Vernon Ave., Dept. 12, Columbus, Ohio.

EVERY HOME A PROSPECT.—Make big money. Employ crew. Take orders trees, shrubbery. Work entire year. All or part time. Complete cooperation. Landscape service. Commission paid weekly. We deliver, collect. Apply Willems Sons' Nurseries, Desk F, Rochester, N. Y.

SALESMAN.—Agent, knowledge of home water pumps, to represent Philadelphia Distributor exclusively. Must have car and about $100.00 for demonstrating equipment. Live leads furnished immediately. Apply: Fred W. Seeber, Bourse Bldg., Philadelphia, Pa.

SALESMEN.—Sell our KILO (orchard and truck spray), garden fertilizer and Organic for dressing for lawns and golf courses. Miles one pound up. Also horse, cattle, poultry nanseve. Write, W. A. Allen Co., Pittstown, N. J.

NEW HOUSEHOLD DEVICE.—Washes, dries windows, sweeps floors, cleans walls, scrubs, mops. Cheaper than broom, over half profit. Harpers, 176 Third Street, Fairfield, Iowa.

TOBACCO

NATURAL LEAF TOBACCO.—Best grade, guaranteed. Chewing, 5 pounds, $1.00; 12, $2.00. Smoking, 10, $1.50, pipe free. Cigars, 50, $1.50. Pay when received. Valley Farmers, Murray, Kentucky.

GUARANTEED HOMESPUN TOBACCO.—Chewing 5 pounds, $1.50; 10-$2.50. Smoking, 10-$1.75. Pipe free. Pay Postman. United Farmers, Bardwell, Kentucky.

BIG SAMPLE TOBACCO for 10c and 5 names of users. Kentucky Tobacco Company, West Paducah, Kentucky.

FOR THE HOME

100 ASSORTED dishes packed as first quality consisting of cups, saucers, plates, bowls, oatmeals, platters, etc. All useful. Slightly imperfect. $6.50, prepaid. Send money to us for immediate shipment. Home China Co., Millis, Mass.

LONG'S PURE HONEY.—Direct from producer, 5-lb. pail clover or buckwheat, $1.15 postpaid. Wholesale prices on request. Satisfaction guaranteed. W. C. Long, Millville, Pa.

SITUATION

POSITIONS WANTED by Farm School Graduates, 20 years of age, having had three years practical and theoretical training on the large School farms. Some of these graduates are trained as dairymen; herdsmen; tractor operators; vegetable gardeners; orchardists; poultrymen; greenhousemen; landscape men; and general farm management. Only interested in good farms. Ready for employment April 1st. Communicate with C. L. Goodling, Dean, Farm School, Penna.

SITUATION WANTED by strictly reliable and thoroughly experienced married farmer and poultryman. Small family. Chester H. McConahy, 307 Pitcairn Ave., Jeannette, Pa.

DOGS

PEDIGREED COLLIES.—Males, $10.00 each. Walter A. Brobst, R. 4, Danville, Pa.

RAT TERRIERS. Fox terriers, Ibiza 10c. Pete Slater, Box P.F., Peru, Ill.

RABBITS

MAKE BIG PROFITS with Chinchilla Rabbits. Real money makers. Write for facts. 808 Conrad's Ranch, Denver, Colo.

CHINCHILLA and Flemish Giant Rabbits. Wm. P. McCue, R. 7, West Chester, Pa.

CATTLE WANTED

WANTED.—To buy Registered Guernsey heifer calves, heifers and cows, priced reasonably. Hugh Sanford, Mocksville, North Carolina.

News Notes and Happenings

¶ Fewer babies were born in Pennsylvania in 1928 than in any year since 1910. Although the total population of the state was 2,167,000 greater but even than in 1910, about 50,000 fewer babies were born.

• • •

¶ Most Western Grange is the name of a subordinate Grange recently organized in Oregon. It is located on a point of land projecting out into the Pacific Ocean farther west than any other spot on the mainland of the United States.

• • •

¶ Commercial production of apples in the United States will increase during the next five or ten years, in the opinion of the U. S. D. A. frowers, the rate of increase will not be so great as during the last ten years.

• • •

¶ The Inter-State Milk Producers' Association announces the following Philadelphia price in select Fedwarts lots. For three per cent milk, basic quantity, $3.29 per 100 pounds, 7.1 cents per quart. Class I surplus, $2.44 per 100 pounds, 5.25 cents per quart; Class 2 surplus, $2.00 per 100 pounds, 4.4 cents per quart. The differential is four cents for each tenth point and two cents for each half tenth point up or down in butterfat test.

• • •

¶ The Bureau of Animal Industry, U. S. D. A., reports that 46,270 cattle were tested for tuberculosis in Pennsylvania during December. Of this number 2,406 reacted. Illinois, Iowa, New York and Wisconsin all tested more cattle for tuberculosis during December than Pennsylvania. Of 5,008 tested in New Jersey, 278 reacted. In Maryland 15,201 were tested, 626 reacted; in West Virginia 3,298 were tested, 23 reacted; in Delaware 1,583 were tested, 34 reacted.

• • •

¶ Sections of Maryland, Virginia and the District of Columbia are brought under Japanese beetle quarantine regulations for the first time, according to revised rules effective February 15th, recently announced by Secretary Jardine. New territory in the regulated area includes Cecil county, Maryland (except the cotting district of Cecilton); the entire District of Columbia; the city of Alexandria and Arlington county, Virginia; all of Delaware north of Sussex county and the town of Milford in that county; Rye township in Perry county, Pennsylvania; eleven townships in Connecticut. Copies of the quarantine and regulations may be secured from the Plant Quarantine and Control Administration, U. S. Department of Agriculture, Washington, D. C.

¶ According to the U. S. D. A. there are isolated points of Japanese beetle infestation at Sayre and Lancastown, Pennsylvania; at Hagerstown, Frederick, Cambridge and Delmar, Maryland; at Delmar, Delaware; and at certain places in Connecticut and Massachusetts not in the regular quarantine area.

• • •

¶ The Twentieth Annual Dairy Cattle Congress, the Eleventh National Belgian Horse Show and the Ninth American Poultry Congress will be held jointly at Waterloo, Iowa, September 30th to October 6th, inclusive, 1929.

This is the same relative week that these combined specialized livestock shows were held last year. To provide further accommodations for both exhibitors and the rapidly increasing attendance, the management is planning several additions to buildings and improvements to the grounds.

• • •

¶ During the last week in January 4,500 barrels and 60,200 boxes of American apples were offered for sale on the Hamburg, Germany, auction market.

• • •

¶ Registration papers of more than 100 purebred cows have been cancelled as a result of the first year's trial of the Herd Improvement Registry, popularly known as the "herd test," by the Holstein-Friesian Association. The test showed these cows to be unprofitable. The "purebred scrubs" removed from the herd books represented about seven per cent of the cows tested.

• • •

¶ Hatchability of eggs is an inherited characteristic, according to results of experiments on the U. S. D. A experimental farm at Beltsville, Maryland. This means that production records, to be of real value to poultry breeders, must show the percentage of hatchable eggs a hen lays as well as her total production.

• • •

¶ In which months are the most calves born? Here is the answer for New York state for 1928. The figures represent the percentage born each month; the total equals 100 per cent: January 8, February 10, March 18, April 10, May 8, June 4, July 3, Aug. 4, Sept. 8, Oct. 8, Nov. 7, Dec. 9.

• • •

¶ Scattered all over the [illegible] Dairy Herd Improvement Association. These [illegible] gate and test your cattle [illegible] the State Experiment Station. According to the [illegible] the Station has noticed [illegible] including 32 copies. [illegible] chemical analysis [illegible] of these [illegible]

¶ [illegible] acres [illegible] Pennsylvania [illegible] Pennsylvania [illegible] Pennsylvania

A Chick Starter
Is Unneccessary—



CHICKS START GROWING BEFORE THEY HATCH!

AMCO STARTING AND GROWING MASH is one mash which should be fed to your chicks from the time they first need food until they mature. For it contains the very choicest of ingredients in the proportions which college poultry specialists recommend. Because it is less of a seasonal commodity than the high-priced and unnecessary chick starters, AMCO STARTING AND GROWING MASH sells for a price which is surprisingly low.

College poultry feed experts agree that in the first few weeks of a chick's life, the ration should provide a higher per cent of growth-producing material than is needed later. This requirement should be met by feeding AMCO STARTING AND GROWING MASH without Scratch Grains from the first feeding, at 48 hours, till six or eight weeks have passed. Not only is the right amount of protein provided that way, but the two generous sources of animal protein (200 lbs. each of 55% MEAT SCRAP and DRIED BUTTERMILK), combined with the vegetable proteins from the WHEAT feeds, OATS, and CORN, furnish the variety of protein which gives best growth.



From 291 chicks hatched April 13, 1928, Wm. F. Connor & Son of Jeannette, Pa., had this flock of 131 pullets on July 20th



Part of the laying flock of Wm. F. Connor & Son, Jeannette, Pa., who have fed Amco mashes for the past six years "with the greatest of satisfaction."

Wm. F. Connor & Son, of Jeannette, Pa., find that "Amco poultry rations give the largest margin between cost of production and the sale price of stock, of any feed sold in this locality. We have fed Amco Starting and Growing Mash for two seasons."

The Connors started 1287 chicks with Amco Starting and Growing Mash on April 3, 1928, and until July 21st, mortality had been only 9.4%.

The minerals in these ingredients are augmented by 40 lbs. of STEAM BONE MEAL, and 20 lbs. of SALT, so that requirement is well taken care of in AMCO STARTING AND GROWING MASH.

The formula also includes 100 lbs. HEAVY OATS, 300 lbs. FLOUR MIDDLINGS, 300 lbs. WHEAT BRAN, and 840 lbs. CORN MEAL—growth-promoting and energy-providing materials in forms which the growing birds use to best advantage.

After six or eight weeks, when the cockerels and pullets need more of the energy producing foods, AMCO INTERMEDIATE SCRATCH GRAINS should be fed in addition to the mash. The Scratch Grains should be gradually increased till at ten or twelve weeks the proportions by weight are about equal.

You Will Get
The Best Results With
AMCO
STARTING AND GROWING
MASH

DIVISION OFFICE: MUNCY, PA

AMCO
FEED MIXING SERVICE

AMERICAN MILLING COMPANY—EXECUTIVE OFFICES: PEORIA, ILL.

Plants at: Peoria, Ill.; Omaha, Neb.; Owensboro, Ky.
Alfalfa Plants at: Powell, Garland, and Worland, Wyo.

PENNSYLVANIA FARMER

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March 2, 1929

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DIBBLE'S *tested Farm Seeds*

EVERY BAG has a TAG showing PURITY and GERMINATION TEST

The Highest Grade Obtainable

NORTHERN Grown, especially adapted to the climatic conditions of the Middle and New England States, produce maximum crops at a minimum of expense.

Every lot tested in our own Laboratory for purity and germination and sold direct to you under Dibble's famous 10-day-money-back-if-you-want-it guarantee subject to any test you wish to make at the lowest possible cost for the best possible quality.

Do not gamble with cheap seeds. They will beat you every time.

Dibble's D. B. Brand Alfalfa, Northwestern dry land grown and genuine Grimm, Medium and Mammoth Clovers and Timothy 99.50 pure or better, average analysis for years 99.70.

Fancy Alsike, "The cream of the crop."

Dibble's Recleaned Timothy and Alsike, and Alsike and White Clover Natural Mixtures the Seeding bargains of the year.

Dibble's Seed Oats, Heavyweight and Twentieth Century, heavy grain, enormous yielders, thoroughly recleaned and graded.

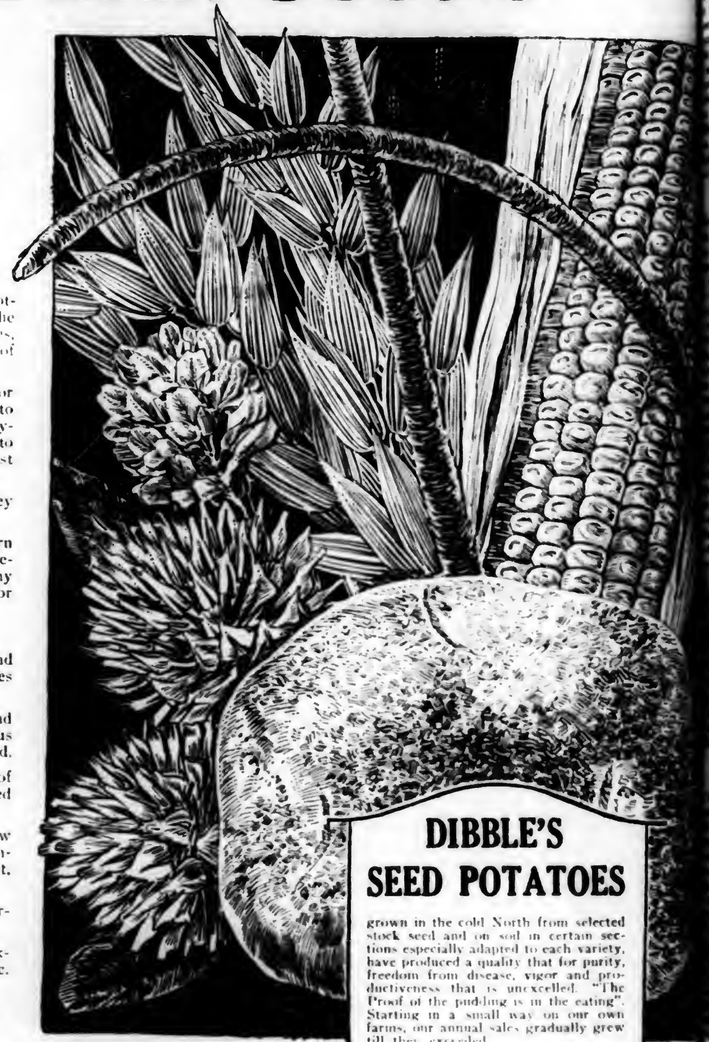
Dibble's Seed Corn, all Northern grown of course. Average germination all lots tested to date above 95 per cent.

Cornell 11, Sweepstakes, Mammoth Yellow Flint, Early Yellow Dent, Improved Leaming, Mammoth White Dent, Big Red Dent, White Cap Yellow Dent.

Dibble's Seed Barley, Alpha and Oderbrucker.

Spring Wheat, Seed Peas, Soy Beans, Buckwheat and a full line of Millets, Grasses, etc.

Everything for the Farm



DIBBLE'S SEED POTATOES

grown in the cold North from selected stock seed and on soil in certain sections especially adapted to each variety, have produced a quality that for purity, freedom from disease, vigor and productiveness that is unexcelled. "The Proof of the pudding is in the eating". Starting in a small way on our own farms, our annual sales gradually grew till they exceeded

100,000 Bushels

Dibble's Russets, Green Mountains, Carmans, Raleighs, Rurals, Gold Coins, Uncle Sams, Moneymakers, Early Ohios, Irish Cobblers, Early Rose and Early Manistee in any quantity from barrels to car loads, and at prices you can afford to pay.

Owing to abundant crops, Seed Potatoes of the best quality can be bought for very little money this year.

Get our prices before placing your order.

Send for Catalog

The Dibble Catalog is the most beautiful, strictly Farm Seed Book issued in America, illustrated throughout in colors, printed in large type on heavy paper and the descriptive matter written by farmers (over a thousand acres in our own seed farms) for farmers, tells the plain truth about the Farm Seed Situation and is an invaluable guide to every farmer.

The Catalog and complete Price List FREE.

Address

Edward F. Dibble Seedgrower, Box F, Honeoye Falls, N.

Farm Facts and Fancies

By ALVA AGEE

TRANSPORTATION lines, hotels, automobile people and many others get hundreds of dollars annually from that part of our population that is craving before the weather. It is good business for the former and rather poor news for the dodgers. The man or woman in the colder northern states and the warmer southern ones who takes neither of the region as a matter of course, and builds up physical and mental resistance to some hardships, is about as well as those who are always fussing about the weather all the time. Nature has provided always the power of adjustment is available, but that process is a serious matter with some.

A Bit of Geography

The Pacific ocean, near one section at least, specializes in fog and some rolling over sections of the entire coast line during a period of winter and spring, cold and raw. Wherever that we were in their path, our life was delightful the rest of the year, and it seemed time to dodge. The north the mountains turn the west at Los Angeles, and the part of that city—a tract four long and a mile wide, known as around the world over—has a combination of sea air from the west and hot air from the east that is de-

The movie section takes up possibly one of the four, and outside of that there is a residential one that is as much as a country town, except along the boulevards. Rich people have built on the mountain, people of more modest means are on the little used land sloping at the mountain bluffs, while the rush of the business district several miles to the southeast and the settlement in the film district seem content.

People are trying this dry air, fifteen miles from the ocean, and are told that it will be friendly not only in the spring but throughout the year. People who are considering coming to the western coast on account of health must bear in mind that climatic conditions vary greatly within small areas.

Smudging the Orchards

During the first half of February the weather was cold and the orchardists began to resort to smudging to prevent frost injury. There are tens of thousands of acres of citrus fruits in the valleys east and south of the city, and while smudging is general the people in the towns near the groves have a plague of oil smoke and soot. Motorists have to turn on their lights to see the highway. One day the haze settled down on Los Angeles, and as we looked down on it from our elevation I thought one of her famous "high fogs" had dropped low. People living in the smudge districts have a sooty time while the smudging continues, but one hears no word of complaint. An industry that brings a vast sum of money to southern California is being saved, and everything is all right.

Some years no smudging is necessary, but most enterprising growers in all regions subject to frost are fully equipped, and when a cold wave is predicted they have the orchard thermometers watched and a force of helpers ready any time of night to begin their work. February's cold was "unusual."

Irrigation in the East

Overhead irrigation systems always interest me, and I have seen many in the eastern states. They insure the right amount of water during periods of drouth, and one would think that they should be profitable investments. Doubtless we have readers who know that in their experience irrigation does pay, but the fact remains that the area to get under irrigation does not increase at a rapid rate, and that is a practical test of worth. The most extensive plant I know is on a corporation farm that did not pay its way, but the cause may not have lain at all in the item of expense.

Irrigation does pay on limited areas devoted to some products that make a big return per acre, and has a rightful place on some truck farms, but as a means of combating drouth for most crops and on most farms it is too expensive. In a wet summer the investment is worth little or nothing, and in a year of ill seasonable staple crops cannot pay overhead charges. It is in arid and semi-arid regions that irrigation comes its best returns, and there the water is allowed on

That Farm Relief

All [illegible] wondering what form the Administration's farm relief measure will take when the special session of the Congress is held. Some of us are wondering all the more because we do not see the practicable way for holding surpluses down in the future is made brighter, and the net result disposition of growing surpluses can be made as the years go along. The copper industry has been in the doldrums ever since the war until recently, when means of holding products off the were devised.

The success of the efforts to put the oil industry back on a better basis is problematic, although powerful financial interests are trying to bring supply under control. Here the trouble is that the producers are too great in number. In agriculture the number runs into the millions. But all that is neither here nor there, provided the Administration sees a way of bettering things, and my personal faith is that it will go as far as a great business engineer regards as sane, and I want to see it going. Certainly some things can be done, and easily much more can be done than I am able to see. It is all mighty interesting.

Liking Criticism

The most popular writer and lecturer on philosophy today—or rather the most discussed—and a popular preacher of our city differed regarding the merits of a lecture delivered by the former before a great audience, and the outcome was that the lecturer returned to the city for a joint debate on the worth of our present brand of democracy in the United States. They drew a big audience, of course, and I am referring to it only to say that the man who criticizes usually gets the sympathy of the crowd, and the man who defends our civilization and institutions and methods of government loses.

We must know, but do not readily admit, that the great mass of our public officials are honest and efficient. There are enough of the other sort to make the headlines for the papers, and they are far too many, but the great majority of men we make our leaders are plugging along at the job of doing their duty. Democratic government has not proved to be a failure, but the voters could make our government a good deal better than it is. We are on the right track but need to have more switches locked.

Markets Wool for 270 Growers

Oldest organization of its kind in Pennsylvania, the Lawrence County Wool Growers' Association has marketed more than a half million pounds of wool in the nine years it has operated, W. B. Connell, sheep and wool extension specialist of the Pennsylvania State College, declares. The Association serves 270 members in Butler, Beaver and Lawrence counties.

Still Huskier Manures

IN CONFORMITY with the world trend toward still greater concentration of plant food in finished fertilizers, the *Armour Fertilizer Works* is producing a new line of super grades and is prepared to ship a limited tonnage this spring to farmers desiring to carry on a *practical research* on the farm *with* these *husky manures*. They carry heavy percentages of plant food (45 per cent) and in addition an appreciable quantity of calcium as lime phosphate together with some magnesium, iron and manganese—all desirable crop-producing soil constituents. This we consider sound agricultural practice.

Two grades will be offered for spring shipment:—

I—**9** per cent nitrogen, equivalent to 10.92 per cent ammonia; **27** per cent available phosphoric acid; **9** per cent potash. Three tons of 3-9-3, nitrogen basis, in one ton of **9-27-9.**

II—**9** per cent nitrogen; **18** per cent available phosphoric acid; and **18** per cent potash. Three tons of 3-6-6, nitrogen basis, in one ton of **9-18-18.**

NPK
GROWTH-MATURITY-HEALTH
A HIGHLY CONCENTRATED PLANT-FOOD
9-27-9
ARMOUR FERTILIZER WORKS
CHICAGO · U.S.A.

These complete super grades contain the best plant food carriers—enough nitrogen as nitrate and ammoniacal nitrogen to grow a large crop quickly, sufficient phosphoric acid to mature it early, and ample potash to insure a healthy plant growth and development. The goods are in splendid mechanical condition—fine, dry and drillable, an unusual quality in concentrated fertilizers. They will be sold under the mark shown above. (In states where phosphoric acid is stated first, the bag branding will read **27-9-9** or **18-9-18.**)

N, P and K are the chemical symbols for nitrogen, phosphorus and potassium. "TIED TOGETHER—THEY WORK TOGETHER."

We also make a triple superphosphate analyzing 45 per cent available phosphoric acid, sold under this mark → P MULTIPHOS AFW

If you will fill out the coupon below, we will be pleased to name you a price, in 100-pound bags, up to 400 pounds, and will deliver through our nearest merchant dealer, or to your station if we have no representative in your locality.

President

Armour Fertilizer Works Chicago, U. S. A.

CHARLES H. MacDOWELL, President
ARMOUR FERTILIZER WORKS
Dept. Q; 111 W. Jackson Blvd., Chicago, Ill.

Please name price of (____ bags NPK 9-27-9 / ____ bags NPK 9-18-18 / ____ bags 45% Multiphos) delivered at my R. R. Station

Name_____
Street No._____ R.F.D._____
Town_____ State_____
Dealer's Name_____

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The Common Sense Way to Buy Farm Equipment

How you are saved one-third to one-half the ordinary price of merchandise by the famous Ward plan of distributing from manufacturer direct to you. One-third of all the families in America now take advantage of it.



The Newport home—one of our modern and charming Ward all Readycut Homes on the easy monthly payment plan. Savings are $500 to $2,000 under ordinary costs. Write for special catalogue and ask about Ward's new 15-year loan.

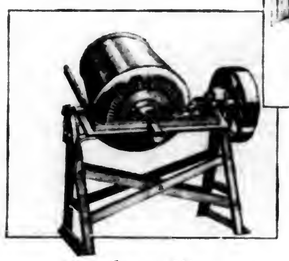
ON this page are pictured a few of over 35,000 items of merchandise stocked by Montgomery Ward & Co. They are shown here for the sole purpose of proving by definite examples how large a part of ordinary prices may be saved by this direct way of buying.

A charming, modern bungalow

Take the home illustrated here for instance. It is one of the smartest and most charming of thousands of designs submitted by talented architects this season. Its construction embodies the latest engineering principles to keep it warm in winter and cool in summer. The lumber is ready cut to fit, thus eliminating waste and reducing your lumber bill by several hundred dollars. Our own architects and engineers give you free counsel and advice as work progresses. *And while receiving these advantages you are able to cut building costs $1500 to $2500 under ordinary ways of building.*



The paint in this pail is identical in spreading, covering, and wearing qualities to the highest-priced house paint made by any manufacturer. It costs $1 to $1.25 less per gallon.



Concrete Mixer

New improvements in design. Pays for itself on first job. See catalogue. Easy payments. Ordinary prices reduced $10 to $20.

Perhaps you are painting your present house. Montgomery Ward & Co. calls your attention to its Master Painter formula that matches by actual laboratory test a nationally known manufacturer's first quality paint—yet its price is *25% a gallon lower.* Money cannot buy better paint, so when you pay more than Ward's low price the difference represents a loss to you.

THINK FIRST of Ward's

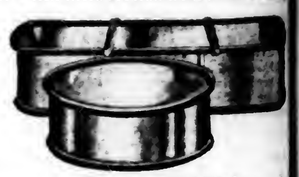
Mechanical excellence

Take the Royal Blue Separator and the Sattley Gas Engine. Both represent two of the finest, mechanically excellent pieces of machinery that you can find in either line. We ask men who pride themselves on judging farm equipment values to compare them with the highest priced products on the market . . . *these cost one-third to one-half less.*

Families by the thousands today buy important items only from Ward's and no other . . .

Why Ward prices are lower

As you look through Ward's catalogue or you walk through the aisles of a Ward store of which there are hundreds located throughout the United States, you are astonished at the low prices on the fine merchandise of every description. The reasons for these low prices are easy to understand.



Galvanized Steel Tanks

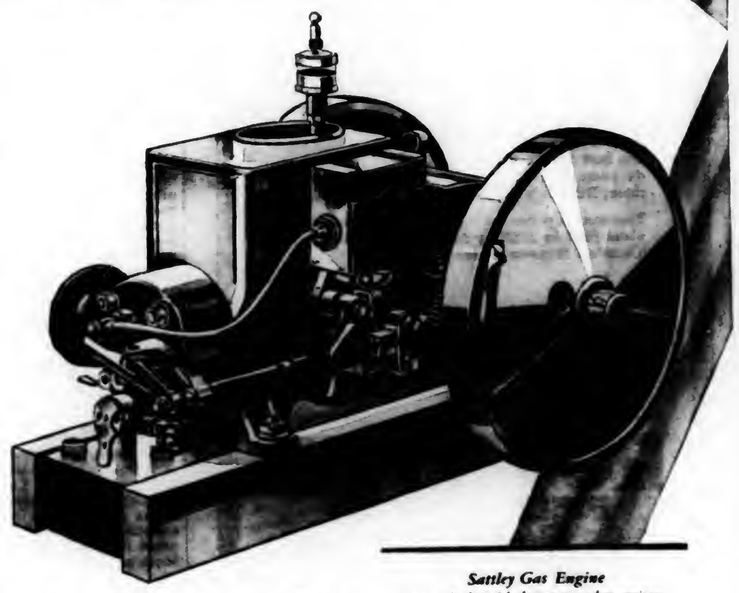
Sturdiest type of construction known. 20-gauge rust resisting galvanized steel. Will not warp or crack from frost. Priced one-half ordinary cost.



Test Proves Excellence

Running for 5500 continuous hours, a Royal Blue Separator proved conclusively its unparalleled durability. After this test, equal to 15 years of daily use, not a single part was worn enough to require replacement or repair and the bowl was still in perfect balance!

In the first place, there is but one step between you and the factory that makes the merchandise—that is Ward's only method of selling. In the second place, the huge volume of 250,000,000 dollars annually enables Ward's to get the world's lowest prices on any kind of merchandise.



Sattley Gas Engine

One of the finest jobs known to modern engineering science and embodying the newest principles of construction. 3½ horsepower and actually develops 2¾ horsepower. Has 40 less parts than any other engine. Ten parts interchangeable with Ford Model T. Try for 60 days.

When you buy from Montgomery Ward & Co. you receive only laboratory tested merchandise, and purchase is guaranteed to satisfy you in every way or your money will be returned. Even with our enormous volume of business, Ward's offers you mail order's swiftest service—In Today—Out Today. That means your order will be on its way to you the same day it is received

Look it up in Ward's catalogue

There is a free copy for you of Ward's new 1929 Spring and Summer Catalogue if you have none. Look up in this great book whatever you want to buy—it will give you a complete description of first quality and it will show you the prices that you should pay.



MONTGOMERY WARD & CO.
Established 1872

World-Wide Distributors of Quality Merchandise, Operating Hundreds of Retail Stores and Eight Great Mail Order Houses, at Chicago, Kansas City, St. Paul, Baltimore, Denver, Fort Worth, Portland, Ore., and Oakland.

MONTGOMERY WARD & CO

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TIGHT BINDING TEXT CUT OFF

AND



Once upon a time a man tried to fool his horse. He put green goggles on him and fed him shavings for grass. The horse died. : : : : :

YOU CAN'T FOOL CROPS

The right fertilizer for your crops is just as important as the right food for your horse.

From the time you put seed in the ground 'til you take off your crop, the hungry roots are searching for food to sustain the crop, keep it growing, and make it mature a profitable harvest.

With plenty of Royster's quality fertilizer to feed on, those crops of yours will not be fooled, but will be well fed with the proper plant food from seed time to harvest. Because Royster's fertilizer is made from the finest materials, mixed in right proportions, aged and cured to perfect mechanical condition, ready to give you the best chance for a profitable yield. After 44 years of making profits for those who use them, Royster's are time-tested and field-tested.

You can reap the benefits of using high-quality plant food in 1929 by insisting upon Royster's. There's a Royster dealer near you.

ROYSTER'S FERTILIZERS F.S.R. FOR SALE HERE — **LOOK FOR THIS SIGN**

USE ROYSTER FIELD TESTED *Fertilizers*

SUPERPHOSPHATE

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Learn how the BOLENS saves time and energy in Garden Plowing, Seeding, Cultivating, Spraying, Lawn Mowing and Hay Mowing. Important New Tools, Attachments instantly interchangeable. Many vital patented features. Anchor Axle. Tool Control. One Hand Power Turn. Pulley for Belt Work. Easy payment plan. Write today.

GILSON MANUFACTURING CO.
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ROHRER'S SURE PAY SEEDS

Inquire About Them!

Ask anyone who has used Rohrer's Seeds what their experience has been with them. Then you'll KNOW they bring results! Year after year experienced farmers turn to Rohrer's for their seed supply. Profitable crops of other years have taught them that there are no other seeds that will bring better yields. Send for samples!

Alfalfa — Seed Oats
Clovers — Seed Corn
Grasses — Field Peas
Timothy — Garden Seeds
Seed Potatoes



We make no charge for bags and pay all freight expenses.

To the left is pictured our Spring 1929 catalog. From cover to cover it is full of facts that will interest you. Write for it today!

P.L. ROHRER & BRO. Box 2, Smoketown, Lancaster Co., Pa.

Cooperation or Competition

By EATON G. OSMAN

THE theory of the McNary bill is delusive. It is that the producer of farm products should act as their distributor also. Delusive, because that is impracticable. The food products of the farms are things marketed now have, but as the majority of the population of the United States and of Europe live in the towns, the distributing machinery that brings the products of the farms to the cities for ultimate consumption and that means all food products has grown into its present status in order to serve the consumer rather than the producer.

It is possible that some part of the service the consumer demands may be rendered by the producers themselves, but in the nature of things that part is a small one which can be rendered only by displacing some one whom the consumer pays for rendering that service by one whom the producers would have to pay to render the same services to the consumer. The service called the "middleman" cannot be eliminated. No producing agency has been able to do it, because the consuming public does not want it done.

Distribution Is Competitive

The reason is that the consumer's system of distribution is based on the principle of competition and on the material benefits which competition implicates. The consumer, too, makes the price. This, broadly speaking, is true as to all products. It is specifically true of food products in our country, where of foodstuffs there is always an abundance, or a surplus.

Farmers, food producers, do not compete among themselves as sellers. It is the distributors who compete as buyers from producers to meet the consumer's demand and price, and it is their competition which is reflected back to the farm producers. The distributors compete among themselves to get possession of the supplies the consumer demands, but they are limited as to their competitive bids by what the consumer will pay. The only actual competition among farmers is as producers of rival food products; pork competing with beef, oranges with grape fruit and apples, cereals with bacon and eggs, etc.

When Producers Distribute

When producers themselves enter into the distributing service they then begin to compete among themselves as to selling prices in order to meet the demands of the consumer, and they then become subject also to all the duties and restrictions imposed upon distributors by the consumer's market organization.

For there is no such thing as unrestricted or controlled competition. There is regulation that which is created by the common law of marketing and by the statutory legislation which restrains where the common law failed to do so. "The thing which distinguishes economic competition is regulation, standardization, or the determination of what may be done and what may not be done in the pursuit of self-interest."

The consumer initiated regulation to protect himself; but as a consumer he is dependent for comfortable existence upon perpetuity of supply, and therefore he adjudicates or legislates to protect the producers in a way to guarantee perpetuity of supply—does this by regulation to prevent undue exploitation of producers by methods that would discourage production unduly, while he will not encourage unnecessary production by eliminating competition among distributors as to prices to be paid to producers.

Supply Makes Prices

It is not to be overlooked that prices of farm products are made absolutely on the conditions of supply. A famil[iar] problem in the economic text-books [is] "How far is the market price of [a] determined by the cost of its [pro]duction?" Another problem in [the] same books is the relation of prices [to] their utilities to their utility. In a country, where the supply of foodstuffs is practically always in surplus, no problems are of no consequence, the prices of foodstuffs among us are [not] controlled by mother consideration. They depend wholly on the relation of supply to demand.

The rule is an old one. Its formulation is attributed to Sir Wm. Dugdale, and English dramatist [of] 1660, restated in this form below by a member of the British Parliament in 1816, when discussing just such a condition of agriculture in England as prevailed in the United States in midsummer 1929, to-wit: "It is perfectly well known that if there is a small deficiency of supply, the price will rise in a ratio far beyond proportion to such deficiency; the effect of a glut is almost incalculable. So likewise, in a surplus of supply beyond a limited the price will fall in a ratio exceeding almost tenfold the amount of the surplus."

Price Control

Producers, therefore, under any system of marketing, other than absolute fixing of prices and enforcement thereof by the government, can exercise no control over prices whatever, other than as they can maintain absolute monopoly over production of supply; and this as to foodstuffs, the production of which is contingent upon growing conditions quite beyond human control, would be a matter of the greatest difficulty, indeed it be humanly possible of achievement under any circumstances. The intensive and national individualism of the farmer-producer contributes enormously to the difficulty of establishing a control over production so essential to price maintenance when the tendency is always toward over-production and relatively low prices. For the farm is at once a home and a business, and demand and consumption of foodstuffs cannot be increased automatically to absorb any over-production except as population itself increases in numbers. There is therefore the unconscious competition of producers among themselves as producers in quantity which results in the "surplus" which inevitably depress the price so long as any overplus [exists].

The endeavor, then, to correct the depressing effect of over-production by resort to producer marketing or consumer would be futile. No doubt some measure of saving the cost has been effected through local efforts of producers, in making the initial movement of their products toward the ultimate consumer; but the entire distributing process is so complex and so intricate that none but specialized organizations for that particular service can be expected to survive under the stress of the competition involved in rendering the service. As Prof. T. N. Carver has said ("The Economic World," p. 1[xx]): "Voluntary cooperation is quite consistent with the present economic system. There is nothing to prevent its spreading or ever becoming universal except the preference for competition on the part of considerable numbers of people."

Compulsory Cooperation

The socialist is not content with voluntary spread of voluntary cooperative organizations. He knows that there is a limit to that, and he has misgivings as to whether voluntary cooperative organizations can exist alongside of individualistic organizations. He wants compulsory cooperation.

(continued on page 28)



New—this buying guide *to* QUALITY *in fertilizer*

YOU know that "guaranteed analysis" as you see it on the fertilizer bag guarantees the amount of plant food. It does not guarantee the *quality* of the fertilizer.

Here is a new buying guide to *quality* in fertilizer—a new standard for judging fertilizer value, as important as guaranteed analysis.

Now on every bag of Swift's Red Steer Fertilizer you will find a Certificate of Quality. It tells you Red Steer is made of BEST MATERIALS, DOUBLE MIXED, TRIPLE TESTED. Best materials, rigidly tested for quality; uniform mixing; excellent mechanical condition!

A New Measure of Value

This new Certificate of Quality means as much as guaranteed analysis in judging fertilizer.

For Swift & Company not only co-operates with your State Experiment Station to give you the analysis best suited for your soil and crop, but goes a step *further* in making Red Steer Fertilizers right. That is part of the well-known Swift policy—every Swift product the best it is possible to make.

To maintain that standard, to give you plant foods from the most productive sources and mix them right, requires great care, extensive equipment, a staff of experts.

Assures Each Plant Its Share of Plant Food

The new Swift Certificate of Quality certifies that Red Steer Fertilizers are made from BEST MATERIALS—plant food from the most productive sources. That they have gone through *two* complete mixings—DOUBLE MIXED—to make sure that each plant gets its share of plant food.

It also certifies that Swift's Red Steer Fertilizers have passed at least three rigid tests in fully equipped laboratories. TRIPLE TESTED! To assure the right *kind* of plant food, in the right *form* and correct amount.

"Best Materials, Double Mixed, Triple Tested" Look for this Tag

A plus value in fertilizers! The certification tag illustrated above is attached to every bag of Red Steer Fertilizer. It says BEST MATERIALS, DOUBLE MIXED, TRIPLE TESTED.

Your A. S. A. (Authorized Swift Agent) will tell you more about Red Steer. Look for the certification tag on every bag. It's your assurance of *quality* in fertilizers.

Swift & Company
Fertilizer Works

Hammond, Ind. Cleveland, O.
Baltimore, Md.

Help control crop prices

Have you ever stopped to think that you can help control the price you get for all the crops you grow?

Higher grades, of course, command the premium prices. These grades are based on quality. And by using fertilizer of the right kind you get increased yields of better quality crops.

You can save money, too, by buying Swift's Red Steer high analysis fertilizers. Ask your A. S. A. about Swift's Red Steer 7-11-7, 3-13-15 and 4-16-10.

See your A. S. A. soon. He can help you make more profit with Red Steer.

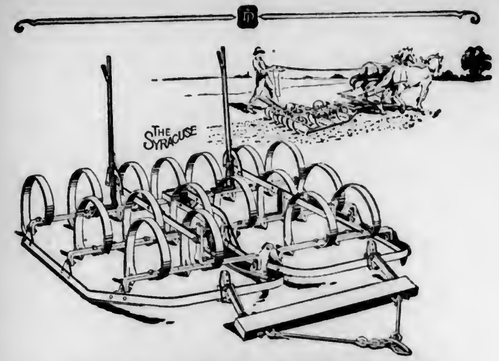
Look for his sign.



Swift's Red Steer Fertilizers

"IT PAYS TO USE THEM"

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Does Good Work In Any Kind of Soil

FOR weed killing and seed-bed making in any type of soil—weedy, hard or stony—you will like the good work of the

John Deere-Syracuse Spring-Tooth Harrow

Tooth bars are bent at the ends and attached to brackets above the frame. This provides unusual clearance—gives the best position for penetration.

High-carbon steel teeth are extra strong and long wearing. They are clamped to the brackets—no bolt holes to weaken teeth. Frame is designed so that trash works out through openings—harrow will not clog.

These features make the John Deere-Syracuse ideal for any type of field condition you have on your farm. You can use as many sections as you wish. Horse or tractor hitch.

Ask your John Deere dealer to show you this all-purpose harrow. Write John Deere, Moline, Illinois and ask for Booklet DF-73

JOHN DEERE

THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

MAPLE BEND NURSERY

Selected Trees, Plants and Shrubs

A complete assortment—hardy and northern-grown

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PERRY LAKE COUNTY OHIO

Hydrated Lime

BLAIR LIMESTONE CO.

MARTINSBURG, W. VA.

"ALL STEEL" GRAIN



THRESHER

22' x 36'

Here is the 1929 Speedy Tractor Thresher. Bridge Truss Steel Frame and all galvanized sheets of "Armco" rust resisting Ingot Iron. HYATT Roller Bearings, Alemite Lubrication, and ROCKWOOD Pulleys. Wind Stacker hinged for easy access to inside of machine and very convenient for baling the straw direct from thresher.

12-Bar Cylinder with 80 teeth!

This Farquhar "All-Steel" is light in weight, exceedingly light running; strong, durable, easy to operate and does fast, clean threshing. Noted for its simple design. This New Farquhar "All-Steel" Thresher contains every advancement suggested by the experience of thousands of successful threshermen.

Write today for Bulletin 529 and learn how you can earn good interest on your investment plus a nice profit.

Threshers, Hay Balers, Engines, Boilers, Cider Presses, Dairy Boilers, Sawmills, Traction Engines, Manure Spreaders

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Box 546 • YORK, PA.

Grain Drills, Corn Planters, Harrows, Harrow-Rollers, Shovel Plows, Cultivators, Weeders, Corn Shellers, Potato Diggers

NESHAMINY GARDENS

By R. P. KESTER

IT SEEMS strange that, no matter how plainly a statement is made, there are some people who cannot grasp the simplest fact without having it repeated. This is no doubt due to inattention when reading or listening. For instance, I have heard information like the following given to a body of several hundred delegates attending a convention:

"The railroad tickets you hold will be good on train going west from this station at 3.25 this afternoon and tomorrow afternoon; those going east must leave on train due at 4.30 p. m. today or tomorrow. The tickets are not good at any other time."

That is as short and clear a statement as could be made, yet such an announcement always arouses a ballyhoo's explanation before all understand it. In the same way I have always tried to write so that it would not be misunderstood. But I have never fully succeeded. The human mind is less reliable than a good machine.

• • •

The question raised here some time ago as to whether rural neighborhoods are retrograding, and if so why, has aroused considerable discussion. The comments and criticisms are about equally divided, pro and con. They bear out the original statement that present rural conditions depend largely on roads, schools, markets and soil fertility. In these days of abundant production, it is natural that only the farming communities which are most favorably located and provided can keep up in the keen competition prevailing. Just how those who are handicapped by unfavorable conditions can be legislated into prosperity remains to be seen.

• • •

But in spite of abundant production, not to say over-production, there are some politicians in Congress who are keen on voting millions of the taxpayer's money for reclamation schemes which will further glut the farmer's markets. Just so long as people elect the log-rolling, pork-barrel type of lawmakers, they may expect to have their rights bartered away. After all, isn't it what the people deserve if they will not use their heads at election time?

• • •

No subject discussed in this department has brought forth more correspondence during the last five years than the question of garden tractors. Within the last year I have answered over 150 letters, besides talking with many personal visitors. There is evidently a large number of people having a few acres of ground farmed in the summer, but on which there is no need of motive power during a great part of the year. In this age of machinery and automotive power it would seem that the question could be solved easily. But such is not the case.

• • •

I find that most people wanting a small tractor for small farming are looking for a machine that will do the plowing, disking, etc., and at the same time be adapted to planting and cultivating small patches from one-fourth acre up, and thus take care of ten to twenty acres. In all honesty and after a rather wide observance of a great many makes of tractors I must say I know of no such machine made now. There are medium-sized tractors which will plow, disk and harrow as well as a team of horses, and do it faster. These tractors can also be used for cultivating corn, potatoes and other crops planted in considerable acreages. But they are not adapted to small patches like narrow-row garden truck.

• • •

Then there are the tractors capable of doing the same work usually done by one horse. They are reliable and efficient, and can be used for cultivating corn, potatoes, berries and garden truck. They have disks and will also plow a small furrow. But under most conditions, they would not be satisfactory for plowing plots of three to ten acres or more. Thus it will be seen that the plowing and preparation of soils on farms of five to thirty acres will require more power than that found in a garden tractor, and on the other hand the cultivation of small stuff on small plots will require a tractor smaller than the one used for plowing, etc. I have come to the conclusion that people with small farms must either have two tractors, or hire the plowing and other heavy work done if they do not wish to keep horses. At Neshaminy Gardens we have two tractors.

• • •

A subscriber in Westmoreland county, Pa., writes that he is unable to understand the usual directions for pruning grape vines as he sees them in print, and wants to know if I can write a rule he can understand and follow. Well I don't know, but here is the plainest statement I can make: Cut off all new branches except four of the strongest ones, two on each side of the old cane. Now cut back these four branches to ten or twelve buds each, making forty or fifty buds in all on the new growth. There are two ways of tying these four branches. Either tie them to the trellis or wires in the shape of the four fingers of your hand spread out, or tie them horizontally to the wires, two running each way. Use strands of tarred rope or some other heavy material, and do not tie them so tight that the rope will cut the branch as it grows.

Penn State Program at KDKA

SPECIALISTS of the Pennsylvania State College Agricultural Extension Service are giving a series of farm talks being broadcast from station KDKA. The specialists, speaking by request of program directors of the Pittsburgh station, are on the air from 5:40 to 5:55 p. m. every other Wednesday.

March 6—"Preparing the Spring Lamb for the Fall Market," by W. I. Connell, sheep and wool specialist.

March 20—"How Potato Farmers Grow 400 Bushels per Acre," by E. J. Walter, farm crops specialist.

April 3—"Baby Beef Production," by C. A. Burge, beef specialist.

April 17—"Odd Hills and New Forests," by E. T. Murphey, extension forester.

Specialists from the college of agriculture at the West Virginia University talk on the alternate weeks.

"How to Tell Good Seed" was the subject of the first talk by H. K. Rowley, seed analyst for the College of Agriculture and the State Department of Agriculture on January 30th.

The program for the remainder of the series follows:

March 13—"Producing Good Farm Poultry," by R. L. Mason, extension poultry specialist, who is manager of the State Poultry Plant at Parkersburg.

March 27—"Good Cream—A Valuable Product," by James V. Hopkins, extension dairy specialist.

April 10—"Farm Fertilizers," by Dr. D. R. Dodd, agronomy department.

April 24—"Garden Enemies and How to Fight Them," by Dr. L. M. Peairs, entomology department.

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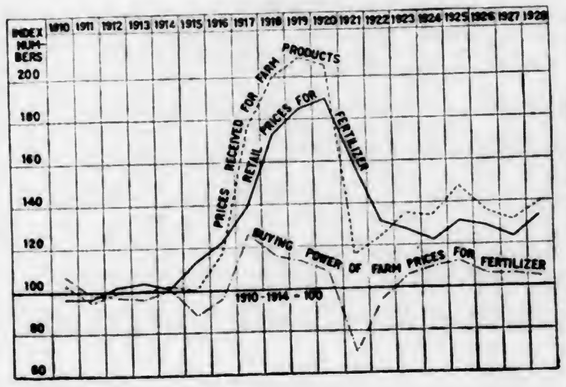
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Fertilizer Market Situation

By GILBERT GUSLER

THE fertilizer market is one realm where the farmer's dollar is above par. The accompanying chart pictures the changes in prices received by farmers for their products since 1910 and retail prices paid by farmers for fertilizer. The third line shows the changes in the value of farm products when exchanged for fertilizer. These are expressed in index numbers, taking the period from 1910 to 1914 as 100.



Fertilizer prices have been lower than prices of farm products in each of the last six years. The index of prices received by farmers in 1928 was 139; that is, a combination of units of various farm products that would have brought $1 before the war sold for $1.39 in 1928. The index of retail prices for fertilizer for the first half of 1928, which is as far as it is available, was 111. The exchange value of farm products for fertilizer in 1928 was 104.5, or, the quantity of farm products that would have paid for 100 pounds of fertilizer in pre-war days would have bought 104.5 pounds in 1928. It would have paid for 112 pounds in 1925.

Fertilizer prices have held on a low basis for the last six or seven years because of the low incomes received by farmers, the previous over-expansion of the fertilizer industry, and changes in technical processes and trade conditions which have cheapened fertilizer raw materials.

The most important change in the technical processes tending to cheapen fertilizer has been the great increase in production of air nitrates. According to H. R. Smalley of the National Fertilizer Association, synthetic ammonia comprised 37 per cent of the world consumption of nitrogen compounds in 1927; by-product sulphate of ammonia from coke and coal gas plants, 24 per cent; Chilean nitrate, 23 per cent; cyanamid, 14 per cent; and nitrate of lime, 2 per cent. In 1913, Chile deposits furnished 54 per cent; sulphate of ammonia, 36 per cent; cyanamid, 4 per cent; nitrate of lime, 3 per cent, and synthetic ammonia, 3 per cent.

Most of the synthetic ammonia is made in Germany, and the manufacturers are pushing the product in various countries where it competes with sulphate exported from the United States. The increasing domestic output of by-product sulphate of ammonia and the progress being made in production of air nitrates in this country as well as abroad have kept down the cost of nitrate fertilizers and probably will cheapen them further in the next five or ten years.

The United States is dependent on European producers for about 80 per cent of its potash, as many of the domestic sources developed during the war were unable to compete when imports were resumed. The bulk of the domestic supply comes from the beet sugar, industrial alcohol and cement plants and some from Searles Lake, California.

Cotton Uses Most Fertilizer

The United States formerly exported large amounts of Florida phosphate rock to Europe, but extensive deposits have been developed in Tunis and Algiers. The fall in exports from this country has made the supply for domestic use more ample and kept down the price. With liberal supplies in Florida for several years, and large phosphate deposits in Tennessee, Kentucky, Idaho and Wyoming, phosphate fertilizer is likely to remain moderate-priced.

These influences working on each of the fertilizer ingredients resulted in a wholesale price level for inorganic ammoniates from 1922 to 1926 averaging 100 per cent of prewar; organic ammoniates, 133 per cent; phosphate rock, 106 per cent; and potash, 83 per cent of prewar. Today, wholesale prices for fertilizer materials, except organic ammoniates, range from about equal to 1913 to as much as 22 per cent lower. Inorganic ammoniates show the greatest declines. Potash prices advanced from 1924 to late in 1926 and have since been very stable at about five per cent below the 1913 level.

Changes in fertilizer prices and volume of sales from year to year probably are influenced more by the size of the cotton crop than by any other factor. About two-thirds of the fertilizer is used in the cotton states and over half of this amount is used to grow cotton. Probably the tobacco crop is next. Corn, potatoes, truck crops, wheat and hay also are of some importance as fertilizer consumers.

Extremely low prices for the 1926 cotton crop caused sales of fertilizer in the southern states to fall sharply and fertilizer prices declined, especially in the early part of 1927. With the bulk of the 1927 cotton crop sold at high prices, fertilizer sales to the South jumped sharply in the 1927-28 season to the largest on record. Retail prices early in 1928 were about 10 per cent higher than in the corresponding period of 1927.

The index number of wholesale prices of mixed fertilizers in December, 1928, as reported by the United States Department of Labor, was two per cent higher than a year previous. The index for fertilizer raw materials was one per cent lower.

While these symptoms give no promise of lower-priced fertilizers this year, it is possible for many individual farmers to cheapen their fertilizer costs. This can be done in two ways:

First, by buying higher-analysis fertilizers. So much of the retail cost represents labor of handling, freight, hauling costs, commissions and fixed charges that the cost per unit of plant food runs less in the high analysis goods. The tendency in the industry is to put up much more concentrated mixtures than before, leaving any filler needed for easy handling in the field to be added locally.

Second, if unable to pay cash, use bank credit wherever possible rather than mercantile credit to purchase fertilizer. Owing to the percentage of uncollectible accounts, time prices are bound to be higher than cash prices.

Alfalfa Seed for Pennsylvania

By M. H. HESS

ACCORDING to tests made by state experiment stations and the U. S. Department of Agriculture the origin of alfalfa seed is of great importance. The U. S. Department of Agriculture inaugurated, in 1927, the Seed Verification Service, through which assistance as to the origin of alfalfa seed may be given to you. Forty-six seed dealers have been authorized by the Department to issue verified-origin seed certificates and attach them to all alfalfa seed which has been verified as to origin by a federal seed inspector through an inspection certificate.

These seed dealers are required to have, so far as possible, all of their alfalfa seed, except state certified and sealed and imported and stained, verified as to origin. Eighty-five per cent of the alfalfa seed grown last year in the central and northern states will be sold through these verified-origin dealers.

Through a system of records and documents which these verified-origin seed dealers are required to keep it is possible to trace back to the original growers or shippers the seed of any lot covered by a verified-origin seed certificate. These dealers are under strict government supervision and their records and stocks are frequently examined and checked by federal seed inspectors. All alfalfa seed handled by them, whether verified or non-verified, is subject to the same critical checking.

Ordinarily you cannot tell where a certain lot of seed was grown by an examination of the seed or by having a sample given a critical test in a seed laboratory, but you can know where it was grown from the assurance given you on the tag certificate, copy of which is shown herewith, that is attached to the bag of seed you buy.

Verified-origin alfalfa seed should have a tag certificate attached to each bag and the bag and tag should show no evidence of tampering. You should read the information given on the certificate to see whether lot number and origin are the same as ordered. If the seed is purchased from other than a verified-origin seed dealer, you should see that it is from a reliable dealer, that it is in original bags and that there is little or no probability of other alfalfa seed having been substituted for it.

It may be possible to substitute seed of one origin for that of another and (Continued on page 38.)

VERIFIED-ORIGIN SEED CERTIFICATE
Issued by Authority of the
United States Department of Agriculture

This is to certify that the lot of seed of which this is a part has been verified as to origin and identity by a Federal Seed Inspector and that the facts stated below are in conformity with those given on the certificate or certificates issued by him, as shown by our records.

Kind of seed..... Lot No.....

Where grown.....

(NAME OF VERIFIED-ORIGIN SEED DEALER)
(Address)

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RADIO MASS MEETING

A RADIO mass meeting is planned by the National Broadcasting Company and associated stations for the evening of March 14th, when they will broadcast a program presented by the American Farm Bureau Federation, the National Grange and kindred farm organizations. The program, which will run from 10:30 to 11:30 p. m., Eastern Standard time, will include talks by prominent farm leaders, vocal and instrumental music. Local farm organizations are arranging to meet and listen-in to this event, which because of the prominence and variety of talent should be one of the outstanding farm radio hours of the season.

CANINE PROTECTION

WHILE feeding his stock George Batchelder of Hiawatha, Kansas, was attacked by his bull, which knocked him down and broke two of his ribs. Mr. Batchelder's sister released his dog, which promptly attacked the bull and drove it away. A faithful dog has saved its master's life in several of these cases. Is there any better protection? Last week Charles T. Rieder of Madison, Wis., died in the hospital from the effects of injuries inflicted by his bull February 10. Mr. Rieder was handling his bull properly, with a staff, but the animal pulled the ring out of its nose and attacked him. He was rescued by his assistant Elmer Markhardt, but suffered injuries from which fatal infection developed. This bull was known to be vicious and its owner's death was not due to carelessness.

EASTERN EFFICIENCY

SAYS Professor M. L. Wilson of the University of Montana: ".... The man-labor requirements under conditions prevailing in Montana have been reduced from 10 or 14 hours to an average figure fluctuating between two and three man-hours per acre." He is referring to the remarkable efficiency large wheat growers have developed through the use of multiple plow tractors and the harvester-thresher combine.

The efficiency of the western wheat grower has received plenty of advertising. Why not give some of our eastern farmers a little? For instance our long list of milk producers who, with less labor and relatively lower feed costs, have developed herds producing over 300 pounds of butterfat and 10,000 pounds of milk per cow per year. Then there are the ton-litter swine feeders and the 400-bushel potato growers. The 400-Bushel Club member with his two-row cultivator, power digger and high pressure sprayer easily recalls the time when 100-bushel yields were considered high. In those days the hoe and the paddle for knocking Colorado beetles into a pan of kerosene were important parts of his equipment. And it is those who still use the hoe-and-paddle methods who are forcing eastern farmers to greater and greater efficiency, just as it was the marginal grain growers who forced the northwestern wheat men to take drastic means to save their economic lives. Most of us don't get very far unless we are pushed.

GOOD AND BAD MILK

THERE are only two grades of milk—good and bad," says the head of the New Jersey Bureau of Annual Industry. True,—and good and bad are terms readily transferable from one thing to another. Just now raw milk produced by tuberculin tested cows under sanitary conditions is called good by the general public. However, there is a small and growing section of the public which will not pronounce such milk good unless the cows have been tested also for contagious abortion. To milk producers just recovering from the losses incurred in the tuberculin test we offer this consolation: Numerous dairymen who have made the abortion test and have suffered heavy losses tell us that they would go through the financial ordeal again if necessary, because it has paid in dollars and cents.

A WAITING POLICY

WE commend the action of the New Jersey poultrymen who decided at a recent conference to take time for further investigation before attempting to secure a compulsory egg-grading law for their state. New York has such a law and now is struggling with the problems it has raised. Other states contemplating similar action can well afford to wait to study the lessons New York learns by its experiment. The chain stores and other large buyers of eggs want to deal where there is a large supply of reliably graded eggs. This is why Pacific Coast eggs often bring higher prices in eastern cities than better nearby eggs. It explains also why a compulsory egg-grading law, with lax enforcement, may do the eastern poultryman more harm than good.

LIBELED LAND

THE owner of a five-acre tract of land with buildings rented his property to a man who engaged in illicit distilling. The tenant was apprehended and convicted but the landlord was acquitted of the charge of complicity. Nevertheless the federal authorities have brought suit for the confiscation of the property. The case has not been determined, but the fact that the government's lawyers believe that confiscation of such property is legal should cause all owners of real estate to be sure that their tenants are not violating the liquor laws. Moon-shiners are renting farms wherever they can. Stills operated by tenants or employes have been found on the farms of some ardent prohibitionists, even on the farms of an Experiment Station. Every lease should contain a clause forbidding the tenant to make illegal use of the property, not that it will have any effect on the tenant but because it may be helpful to the owner in case his property is the subject of a suit for confiscation.

IN BOTH DIRECTIONS

AN investigation made by the Ohio Experiment Station throws a bit of light on the much discussed tendency toward larger farm units for the sake of more economical operation. It finds, by studying 123 holdings of over 500 acres, that "the trend where buildings are available is to divide ... large holdings into smaller units and to operate them with tenants rather than with hired labor. The greatest interest among large land owners at the present time is in tenancy, in methods of securing favorable contact and cooperation with tenant operators". It is safe to say that the tendency is in both directions in different parts of the country and in different lines of production. For it cannot be denied that larger units are being created for economical operation in some regions and in some lines of production; but the opposite tendency is also apparent where the farm family is a more competent operating force than any other.

MEAT CONSUMPTION

THE official figures on meat consumption in 1928 reveal a further decline. The total per capita consumption of all meats was 138 pounds last year, 139.7 pounds in 1927 and 145 pounds in 1926. The figures indicate not merely a tendency toward less per capita consumption but the effect of prices on it. Beef consumption declined from 63 pounds in 1929 to 51.7 pounds in 1928, a great change as so short a time cannot be attributed to anything else than the cost. Pork stands as equally striking illustration of the effect of price on consumption. Per capita consumption of hog meats (not lard) advanced from 65.7 pounds in 1926 to 72 pounds in 1928. It is clear enough that there has been no essential change in the habits of our people during this brief period in relation to either beef or pork. The difference must be ascribed to the difference in cost of meats, which follows not merely the supply of animals but all things in connection with them, such as the price of hides, the price of lard and the price of wool (pelts) in case of lambs. We may look for net increases in the per capita consumption of meats only when prices are favorable to consumers, which means when they are unfavorable to producers. But we may expect, on the other hand, a yearly increase in the total consumption because of our growing population. The natural increase is estimated now at around 200,000,000 pounds of meat a year, the equivalent of well over a million hog carcasses, six million lamb carcasses or 400,000 cattle carcasses. Therein, and not in greater per capita consumption, lies the hope of the future meat producer.

A BASIS FOR CONTRACTS

YEARS ago the Elgin butter market was used as a basis for contracts between producers and creameries, between manufacturers and distributors and in other cases. Even after the Elgin district ceased to produce butter its exchange continued to supply a quotation which was useful as a basis for contracts though it had no other significance. With the passing of the Elgin quotation all interests resorted to some other quotation which was readily available, such as the price of 92 score butter in Philadelphia, New York or Chicago. Lately certain communities have based their contracts on the private concerns pay for butterfat, and now we are asked to publish the quotations of these concerns so that producers who do not ship to them may know what they are to receive from other parties. We are always disposed to publish information wanted by farmers, but we suggest consideration of the advantages of a public market quotation over any private price as the basis for contracts. This is not to condemn private quotations, which are all right for the patrons of those concerns, but it is to suggest that a public market quotation is likely to reflect conditions more promptly if not more accurately.

Eastern Farm Comment

By MILES HORST

THE Pomona Grange of Cumberland county, Pa., held its quarterly session at Mechanicsburg, Saturday of last week. It was an all-day affair. Business was transacted in the forenoon. At this time the officers for the year were also installed. Then followed a lunch served by the Grange ladies. The afternoon was given over to a literary program.

The attendance was exceptionally good, especially as since country roads were covered with snow and ice. But one must expect such an attendance at a series of meetings such as this Pomona conducts, for they were snappy and full of interesting features from beginning to end.

• • •

AT the close of last week's session of the legislature at Harrisburg, a total of 1,275 bills had been introduced into the lower House alone. Truly these legislators have a fine job selecting the grain from the chaff.

• • •

WE have just read the reports of 117 Pennsylvania poultrymen, who last year brooded 79,000 chicks under the guidance of extension poultry specialists. These reports show that the losses of chicks throughout the growing period averaged slightly under 15 per cent. The keynote to this remarkable success was cleanliness. These men started with healthy chicks, placed them in clean brooder houses, used clean litter and clean feed and saw that their chick runs were on clean ground.

• • •

KEEPERS of golf courses have their problems, too. This was evident at the greenkeepers' short course offered at State College, Pa., last week, when eighty of these men gathered there to get the latest information on grass varieties adapted to such courses as well as their fertility, the control of weeds, insects and diseases, and drainage and landscaping problems.

• • •

CREAMED honey is a new product several of our Pennsylvania beekeepers are placing on the market. It is made by running cold extracted honey through a small power flour mill operated at a high rate of speed. The honey is then put in a cold place for chilling, which aids in holding the creamed condition. This process improves the flavor of the honey and makes it more desirable for table use than it in the regular extracted form.

• • •

AT a special meeting of the Pennsylvania Farm Products Show Commission held at Harrisburg, February 19th, a general plan for the proposed building to house future shows was approved. This plan calls for a building 700 feet square with approximately 430,000 square feet of space available for commercial and agricultural exhibits. It will include a coliseum to seat 5,000 people, and sufficient meeting rooms to accommodate the annual conventions of farmers' organizations.

The location of the building on a 45-acre tract of land at Cameron and Maclay streets, Harrisburg, a point easily accessible to the business and hotel district of the city, was also approved by the Commission.

In formulating the plans of the building, allowance is made for the expansion of various departments. Ample space will be provided for livestock, a branch of our agriculture which thus far has not had fair recognition in these winter shows.

The 1929 Farm Products Show held at Harrisburg in January is past history. But not until last week could a complete balance sheet showing all expenditures and all receipts relative to the Show be shown, due to the large amount of detail necessary in so large an enterprise.

With but few exceptions during the twelve years that this show has been conducted, it has broken even with a small balance on the credit side of the ledger. It has done so again this year. Considering that the rentals of buildings to house it amounted to $8,000, that the aid received from the state amounted to but $6,000, and that no entrance fees to the public were charged, the financial statement shows remarkable skill on the part of those responsible for its management. Many share in this credit, but one man above all others deserves special commendation. That man is Henry Klugh, the manager.

• • •

ON the evening of Washington's birthday the Buffalo Valley Cow Testing Association of Union county, held its second annual banquet at Lewisburg. All of the twenty-six members except one were present. Each man's wife was there too and so were many of their children.

At each plate was a report of the records made by the various members. At the top of the list appeared the name of A. L. Shier, whose herd of six cows last year averaged 12,646 lbs. of milk and 459 lbs. of butterfat. Second on the list was the name of A. D. Beaver who with seven cows had an average production of 12,520 lbs. of milk and 458.1 lbs. of butterfat. Going down the list I found that 24 of the 26 men in this association had an average butterfat production of better than 300 lbs. last year. And to top it all the report stated that this association had the highest average butterfat record made by any cow-testing association in the state.

On further inquiry I found that this association in 1919, the year it was organized, had an average butterfat production of less than 250 pounds. At that time a program of weeding out poor cows was started. Bull associations were organized, drinking cups were installed and better feeding practices were put into effect and that average yearly butterfat record began to climb. The fourth year it passed the 300-lb. mark. This last year it stood at 367 lbs.

The reports further showed that as the butterfat records increased, the profits realized by these association members increased. That is usually the case.

• • •

A NUMBER of Pennsylvania manufacturers of ground limestone for agricultural purposes have brought a formal complaint before the Public Service Commission at Harrisburg, in which they seek a reduction of freight rates on their product shipped within the state. Two hearings have already been held.

The evidence put in by the complainants consisted of showing the Commission that the rates on ground limestone for farm use are higher in this state than in practically every other state east of the Mississippi river. The testimony brought out that whereas for a haul of 20 miles in this state the rate is around $1.50 per ton, in other states the shipper and farmer can have his ground limestone transported for as much as 300 miles at the same rate. The complainants produced evidence indicating clearly that commissions in other states had prescribed much lower rates on ground limestone for the benefit of farming communities than is the case in this state.

The manufacturers have declared before the Commission that any benefits derived from reductions in freight rates would be passed on to the farmer. It is also evident that if rates on ground limestone are lowered, rates on other forms of agricultural lime will sooner or later be brought in line with ground limestone.

This matter of freight rates on agricultural lime is of vital importance to the Pennsylvania farmer. There are no reasons why rates on ground limestone, in this state should be so much higher than they are in most other states as the testimony in the case indicates.

It is true that the railroads did set up an excuse for the rates now in force in Pennsylvania on ground limestone. They contended that rates on ground limestone should be as high as rates on building lime. But this has been decided against the railroads in practically all other eastern states.

• • •

A SHEEP and Wool Growers' Day has been planned for March 5th at Indiana, Pa., at the Lutheran Church, one square south of the Court House. There will be a forenoon session and an afternoon session with a roast lamb dinner at noon. This will also be the annual meeting of the Sheep and Wool Growers' Association, and directors for the present year will be elected.

• • •

THE citizens of Pennsylvania and particularly farmers are today reaping the results of an unwise policy followed by our state in its relation to the Pennsylvania State College during the past fifteen years.

During that period, it is true, appropriations were made by the state to the College which simply as a sum of money looked large, but the truth of the matter is that these appropriations were barely sufficient to carry on the actual work within the institution. No provision was made to keep up the plant itself in line with the expansion of services demanded by the public. The result is that now when money for buildings is in sight it must be used for a reason the old adage a thing that should have been done as time went on.

In 1924 the trustees of the College made an appeal to the citizens of the state for support in the erection of welfare buildings. One million five hundred thousand dollars was raised. This went to construct dorms and women's dormitories, a hospital and a gymnasium so badly needed. In 1927 the legislature and Governor Fisher appropriated $1,000,000 for buildings. A good portion of this went to build an engineering building where the previous one burned down in 1918. Part of it was used to construct a new sheep barn, a section of the new poultry plant, and sections for the care of general livestock.

Governor Fisher has, in his budget for the coming biennium, set aside $2,250,000 for buildings at the College. But he has designated that part of this shall be used to reconstruct "Old Main", that another large part of the appropriation shall be used to construct a new heating and power plant for the College to replace the one now inadequate to take care of the growing institution. This plant and "Old Main" will cost at least $1,400,000. It can readily be seen that the building money according to budget figures will leave a comparatively small amount for building expansion, where a large amount is needed.

There is justification in the allotments made for forthcoming appropriations if they do come. But all this does not minimize the needs in the field of agriculture. The Pennsylvania State College is the one institution of higher learning in this state equipped to train boys for leadership in our industry. Here is located the only experiment station within the state to which we can go for investigations and research into the many problems staring us in the face. And from this institution must come our extension teaching. Our demands on the College are constantly increasing. It cannot function without proper facilities.

Last week a group of farmers representing the Agricultural Council spent two days at the College. They were impressed with the building needs of the College as a whole, but particularly within the School of Agriculture. They concluded that right now new greenhouse facilities are urgently needed. These for the reason that so much of our present-day research work in plant diseases and insects demand summer conditions the year around. There are no adequate facilities for this now.

They further concluded that more room for the farm machinery department is needed. At present the laboratory work of this department is cramped into several rooms rigged up in the old horse barn. The poultry plant started two years ago should be completed at the earliest possible moment. Until this is done a rounded out program in poultry husbandry cannot be carried on. The dairy building constructed in 1908 and adapted to the needs of the industry then is out of step with the present strides of this most important farm industry in the state. All of these needs are pressing.

• • •

NEXT week will see one of the outstanding events of the year for sheep growers in this territory, when the Tri-State Sheep and Wool Growers' Association holds its annual meeting at Washington, Pa. The date of the meeting, which will be at the George Washington Hotel, is March 7 and 8, with the sheepmen's banquet the evening of March 7. In addition to discussions of questions relating to the sheep industry there will be the annual wool show. The date of the meeting has been set a month later than was the case up to a few years ago, in order to allow growers to exhibit clips from the current year. Any sheep owner will find much of value to him at this meeting.

• • •

SEVENTY years ago on February 16 the first student class entered the Pennsylvania State College and was enrolled in what is said to be the first scientific agricultural courses offered in the United States. There were sixty-nine students from 38 counties in the class which drove 25 miles to the College on the opening day from Spruce Creek. Old Main, the first college building to be erected on the two-hundred-acre plot which was then the campus, was only partially finished when the first class entered.

A rough board shanty served as the dining-room and kitchen while the dormitories, laboratories, class rooms and executive offices were all housed in the main building. Some of the first class-room work was farming. Each student was required to do three hours of work on the farm and nine hours of class-room work. The produce which the students raised was sold and the money received helped to defray the expenses of the institution.

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EVIDENCE of at least six volcanic eruptions which covered central Pennsylvania with fine dust deposits has recently been discovered in the limestone formations of the Nittany Valley by Professor C. A. Bonine, head of the department of geology and mineralogy of the Pennsylvania State College.

The material is a very fine grained clay formed by the alteration of the dust-like particles of volcanic ash as they fell into the inland sea which covered the region millions of years ago during the geological period when the limestones were being formed. The volcanic vents from which the ash was blown have not been discovered but Professor Bonine believes that they are probably located farther south in Kentucky or Virginia where beds of similar material of the same geologic age several feet thick have been found.

TIGHT BINDING TEXT CUT OFF

March in the Flower Garden

By L. L. RUMMEL

MARCH to the flower lover is the month of anxiety, watchful waiting, hoping, dreaming, planning. It is too cold and too wet outside to do much in the garden proper. Better not be hasty and impatient at the first sunshiny days though or we may regret later.

Gardening in March is mostly done inside the home with the family about the cheery fireplace. It is mental gardening. The whole family is buried in treasured catalogs from far and near. The colored plates are fascinating. This new kind of flower is enticing. It must get a place this year. Then here's a new creation in asters. Forget that unpleasant experience with beetles last year and try this last word in the breeder's art. Yes, that's half the fun of a flower garden, to study and plan and dream, and live the whole summer out while you peruse a seed catalog some evening before the blazing fire.

Lay out the plan of your shrubbery and flower borders on paper just as you want them planted. Lay out the flower garden too. Then buy the best plants obtainable. Get flower seeds by name, varieties that are specialties and novelties.

The flower borders of last year are still under their winter cover of leaves, straw or manure. We are always anxious to peep under and see how our treasures came through. In this section March is too early to remove the perennial covering, unless the last days become quite warm. Then we remove it gradually. It can be taken off the tulips; and if you put it on hyacinths, daffodils, peonies or iris, it can be removed this month. Let me sound a word of caution though in taking it entirely off the perennial beds early in March, for much freezing and thawing will alternate this month. By all means leave the protection about the roses during March. We have lost some good hybrid teas by a little undue haste in uncovering.

Then clean up the trash of the garden, as any refuse, weed stalks, old fence rows, etc., which likely harbor disease and insects in over-wintering stage. Iris borer is a good example. It lives over winter in the egg stage. Burn all the old leaves as soon as you can now.

Fertilizers must be laid in now. We use a complete fertilizer for all lawns and gardens, a high-grade goods, the most expensive per ton on our market. In the long run it is the cheapest. Put it on the lawn at the rate of half a ton or more per acre, if you have such goods as 2-12-2 or 3-12-4. Sprinkle it on liberally before grass starts, and it is washed down by spring rains and does not cause burning as it would do later on fresh young grass.

Along with a complete fertilizer we get a sack of nitrate of soda or sulphate of ammonia. This is what the lawn needs above all else. Manure on a lawn is a mess, unsightly, full of weed seeds and laborious. The same money spent on fertilizer is a wiser investment. Lime has no place on our lawns either. It encourages dandelions, plantain and similar weeds. Sulphate of ammonia tends to kill them out.

The shrubs may need some fertilizing in their early years. Today ours are plenty high enough and we don't feed them extra now. In their first years we put on a handful of a high-analysis fertilizer for each shrub, in a ring about it. Hydrangeas always seem more susceptible to injury from an over-dose than other types of shrubs, particularly to liberal use of nitrate of soda or sulphate of ammonia.

Shrubs should be set as soon as the ground is fit to work. They are in dormant condition at the nursery. If you are going to plant shrubbery this spring, order at once, heel them in if necessary and then set out as soon as the ground is fit to spade properly. My troubles in shrubbery plantings have been with a cold stiff clay, very hard to work. To overcome this we have dug the holes large, put in the roots, and then filled with a rich imported loam, or loam with old rotted manure mixed in. If shrubs like hydrangeas, barberry, spirea, weigelia, roses, etc., are set out early in March, they get no noticeable setback, but start about the normal time, and go ahead in growth the best year.



In the Rummells' Garden. This Trellis Covered with Climbing Roses Arches the Path to the Summer House Which May Be Seen at the Back End of the Garden

March is the time to start the hot bed. Here is a neglected opportunity on most farms. Merely dig out a hole 18 inches deep, put in 12 to 14 inches of fresh strawy horse manure for heat, add four inches of soil and start seed as annuals, like petunia, snapdragon, zinnia, asters, etc., along with tomatoes, peppers, cabbage, etc., if you have a vegetable garden. Then make a tight box about a foot high and cover with window sash sloping to the south. You can beat old Mother Nature six weeks or more in getting out your annual plants.

If you like cannas and want them early, start them in March inside in pots, water occasionally and set out when frost danger is past.

Some flower seeds can be put outside this month. If the ground is ready or can be worked so that it crumbles nicely, not too wet, the bed can be made for sweet peas, annual poppies, sweet alyssum, petunia, portulaca, calendula, cosmos, calliopsis and similar hardy annuals that seed themselves from year to year. These flowers drop their seeds in the fall and if undisturbed will grow early the next spring. Most of them are not satisfactory to transplant and should be seeded just where they are to grow.



What a Difference a Few Months Make! This Is the Same Trellis Pictured Above. The Hybrid Tea Roses Are Shown with Their Winter Protection.

Some shrubs may be pruned in March. Do not trim back the ends of those that flower in early spring. Spirea, weigelia, deutzia, forsythia, lilacs, etc., should have winter-killed branches and surplus shoots removed. It is always a mistake simply to shear over shrubs, leaving the ends of the branches all alike.

Roses may be pruned somewhat in March, but with caution. Forget the hybrid teas this month. Among the hybrid perpetuals cut June roses and the climbers remove any old dead canes. These bloom on last year's growth while hybrid teas bloom on growth yet to be made in the spring.

Hydrangeas need severe pruning in spring for best bloom. Flowers on new growth made the current season.

Again, don't get impatient in March. There is danger in digging in the garden too early before it is. I know it is hard to resist when the spring fever hits you after a long winter, but if you must do it garden on paper by the fireside or garden in a little spot under glass. Next month we will give you work to do with a vengeance.

A Service for Readers

FLOWER gardening is always an attractive subject about the farm home. It strikes a responsive chord in the heart of the farmer's wife and usually of the farmer too. To render a service in accordance with the demand, we are publishing during the spring months a series of articles dealing with shrubbery and flowers and gardening, coming from the pen of L. L. Rummell. He draws on his experience in flower growing in his own gardens in preparation of these timely stories.

As a further service, we are suggesting to our readers that they submit to Mr. Rummell their problems on flower gardening. Any service we can give on publications, sources of seed and plant varieties to choose, difficulties encountered, fertilizers and the like will be free and always dependable. Submit your garden problems to the Pennsylvania Farmer.

A Bug This Week

The Iris Borer

IRIS has one serious insect enemy, a borer that starts feeding on the leaves in early spring, soon crawls itself inside the leaf sheath and as it feeds tunnels down into the rhizome (often called the root), and generally mines it out. The insect is rather widely distributed.

It is easy to detect presence of the insect. The tips of the leaves turn brown, and this brown appearance continues downward. Shot holes appear in the leaves. There is a pronounced "bleeding" or oozing out of a thick whitish substance secreted by the leaf being eaten. Late in the summer the leaves are dying and the rizomes are being tunnelled out by these long white and pinkish borers.

The adult is a moth that lays her eggs on the leaves in the fall. In early spring they hatch and the tiny larvae dig inside the leaf sheath. They soon riddle a clump of iris. Rot sets in too as the borer feeds, hastening loss of the plant.

Constant Attention

Eternal vigilance is the watchword once the borer is found to exist in your iris planting. Every week we go through each clump to detect if a borer has started. Sometimes he can be squeezed with the fingers as you take hold at the bottom of the leaf and pull upward, pressing the leaf firm and killing the borer inside. It is safer though to take a small paring knife, open the sheath of the leaf, draw it open with the point of the knife and kill the borer. In a small family planting one can do this every week of the summer and clean out all the insects. Two years ago I nearly lost several of my choice varieties before I detected this trouble. Last year I was on the job every week or two, and I do not believe I let a borer get below the ground, although I killed dozens hidden in the leaves. Neighbors' plantings continue to reinfest mine, and hence we must ever be on guard even though a borer does not complete his life cycle on our own place.

Winter clean-up is a good method to control the pest. We cut off all old leaves in winter or by March and burn them. This destroys the eggs. Clean up weeds and all trash, and it is good insurance against this and other bugs as well.

Spraying or dusting with arsenate of lead may kill a few, but it must lie there on the leaf when the tiny borer hatches so that he poisons himself at the first bite. Inside of 24 to 48 hours he will be safely secreted inside the leaf.

Old iris plantings should be divided every two or three years and infested or diseased parts cut out.

L. L. R.



A German (Munich) countryman and his wife out for a drive. He stepped out of his carriage so that we could better see his green Alpine hat with its long feather. Note the one-horse hitch used so often on a two-horse wagon.

The Human Side of Europe

Some European Farm Practices

By ELLEN S. BRINTON

"WHY are all the work horses docked?" I demanded of a practical English farmer.

"To keep their tails from getting caught in the carts. They are always in the way so we take them off." He answered indifferently, so apparently the question was not worth discussing.

Later in Holland I was admiring a bunch of Belgian colts, and commented on their beautiful long tails.

"We always cut them off after the first summer," was the reply of the farm manager.

So apparently the explanation of the Englishman was correct not only for the universally docked horses in England but also in Holland and other European countries. Only farmers driving and riding horses and the common animals of the ordinary street vender had long tails.

Then I realized that the real motive for tails was to brush flies, but of course colder countries don't have the pestiferous insects [illegible] America where they [illegible] warmer. Englan[illegible] have screens—a [illegible] they would be awkward [illegible] the universal cas[illegible] had has some [illegible] houses have cotton netting [illegible] There the bob-tailed [illegible] mental colored [illegible] in Czechoslovakia where [illegible] were made of linen net.

To see great broad-backed cobby Suffolk, Belgian, or Percheron horses with a stump of a six inch tail was a sight I could never get accustomed to. I thought of one of our great dairy farms here in America using 700 dapple-grey horses for delivery purposes.

They boast that every horse's tail is washed daily in soap and water. I tried to tell this to some of my European farm friends but they just laughed at such a fairy tale.

The European method of hitching one horse to an outfit intended apparently for two puzzled me and I could not get a satisfactory explanation. My guess is that two animals were used for heavy loads and one for a light load, and for economy the same harness and equipment was used. I saw cows and oxen hitched the same way in various countries so it is more than a local custom. But surely there must be a lot of wasted energy in such an awkward arrangement.

I had especially wanted photos of the thatched-roofed houses one reads about in foreign countries. On the train from Southampton to London I could see them everywhere on picturesque old houses and barns and also on some new buildings with new thatches being laid. I was sorely tempted to pull the signal bell to the engine and get my pictures, and when I found that thatched roofs were not used on the continent I almost wished that I had.

"Thatched roofs are dirty, collect insects, and leak," I was told when I asked for them. Germany has even gone so far as to forbid their use. Red tile is the universal roofing material of various shades and patterns, except in the Alpine sections where broad slabs of wood are often used. When I told of our shingle roofs I was questioned about the fire risk, and truly we do have more fires in both country and city than they have in Europe. In all my rides in railroad and drives in autos I did not once see the remnants of a fire—no blackened woodlands as in South Jersey or our Pennsylvania hills, no burned barns—the horror of our country districts.

It is a blessed thing that the European farm buildings are constructed so substantially of tile and stone with little fire hazard. The continental custom is to live in small villages and have the fields way off somewhere in the background. This means that all the barns, barns, stables, village church, and stores are in a jam together and a fire on one farm would likely destroy the whole town.

This is not the English custom. Englishmen are noted for their exclusiveness. Their farm homes are separated from the neighbors as with us, and then so as to be strictly private they build a hedge along every roadside, between every field, and around the farm buildings. I say build, for these hedges of hawthorne, or evergreen are hundreds of years old and have been trimmed forever, so that they are like solid walls of green. It is very quaint motoring along English highways but not very informing. I found I was mostly looking at miles of hedges. I could see the roofs of the houses, but not enough of the fields to even know what grew inside the hedge.



An old English house. As usual the house is almost obscured by a high hedge. Roof of red tile, old black timbers, and small diamond-shaped panes in the casement windows.



A delivery wagon, Vienna. Women do much of the heavy work including carrying heavy bags of coal. Note the head handkerchief, worn by all working women, the willow baskets on the wagon, as well as the one-horse hitch.

England and the west coast of Europe (Holland, Belgium and France) has a very temperate climate—thanks to the effect of the Gulf Stream. Summers are cool and winters are mild. There is an abundant rainfall. The country is green, vegetation grows luxuriantly. Trees are large and beautiful. Fuel is comparatively cheap and the little heating that is necessary is provided by open grates burning gas or soft coal.

But as one travels into the continent the benefit of the Gulf stream seems to disappear. Hot dry spells often occur in summer and the winters are colder (though not the extreme temperatures we know in America.) I missed particularly the great spreading trees that we have in our meadows, around our farm homes and in our city parks. There were pine and spruce trees in orderly blocks, showing that they had been planted, both in the low lands and along the mountain sides. They would grow tall and slender, and looked so neat that one could imagine they had been brushed and groomed at regular intervals. Up to a certain height the side branches were cut off, giving an appearance of a forest of paint brushes.

Horse chestnuts grew along the village streets and some other trees I could not identify, but none of them were much larger than an ordinary pear tree. They all looked stunted and my suspicion is that they were all treated like other growing crops and harvested yearly. Small branches would be used for fuel and the twigs were manufactured into brooms. I saw no corn brooms in Europe. The summer nights are too cold to grow corn and other warm weather crops. Faggot brooms are universally used for street sweeping in Dresden, Prague, Vienna, Munich and Paris, as well as in village homes.

No thinking American could travel in Central Europe without being sobered by the efforts of the people to economize on food and fuel. At first the great open farm land without a tree, or fence or hedge, or stone stirred my admiration. But closer inspection showed that all those things were considered wasteful of land that could be better used to grow a crop of grass or potatoes.

The people lived in the villages along the main roads. The farm land might be anywhere from half to two miles away. Those great spaces were divided by marker stones into small plots perhaps 150 feet wide by a square long, and then further divided into strips of alfalfa, oats, or clover as the owner desired. Every inch of land was used. A slope of land that we would cultivate as usual would be terraced—the flat part planted to perhaps potatoes, the slope would grow grass. Railroad embankments were harvested with the same care as we would take with a ten-acre field.

A swampy place would grow cattails. The leaves are cut and dried and finally made into rush-bottomed chairs and hassocks for home use. Willow trees along the small streams yield an annual crop of materials for weaving into baskets. Wood is too scarce to be used for boxes and hampers such as we use for marketing all kinds of products. Europeans use willow for small suitcases, for trunks, for fruit and flower and vegetable containers, for carrying hay and coal. The use of these willow baskets for carrying coal is [illegible] one of the pictures on this page.

Fruit trees usually were found along the roadsides, apples, pears or plums. Farm land is too valuable to be spared for any tree. In the small yards around the houses dwarf trees would be found laden with fruit, and many places the fruit trees were trained on fences, or up the side of the house like vines.

TIGHT BINDING TEXT CUT OFF

The Farm Home

Is Your Pre-School Child Comfortable?

By ALICE MARGARET ASHTON

"JANET has been such a trial since the older children go to school," observed Mrs. Hall to Janet's grandmother who had come for a visit. "She actually has fretted herself half sick."

"I think a great part of Janet's fretting is due to her being cold," answered grandmother. "You make the same mistake so many mothers do you keep little Janet in the kitchen where you can look after her while you are flying about your work or cooking over the hot stove and you do not realize how drafty the room often is these chilly days. Janet is sitting on the cold floor or playing quietly and she feels, as you do not, the cold blasts when the outside door is opened and when windows are opened to let out steam and smoke."

"But what am I to do?" defended Mrs. Hall. "Janet is too small to be left to her own devices in the other room."

"One thing which you can do is to arrange a cozy play-corner for her in the kitchen. Place a low table and her little chair near the south window. Spread a small warm rug on the floor. Protect her from drafts by means of a screen or by spreading a blanket over the clothes-horse or a high-back chair. She will be near where you can talk together and yet comfortable and warm.

Playthings Warmed

"When Lucy's baby gets tired of sitting in his carriage or his high chair while his mother is working in the kitchen these cold days, Lucy sets a metal washtub on the floor, spreads a warm blanket over it and puts baby in it to play and crawl about; he is warm and happy and hasn't had a cold this winter."

"Janet isn't too big to play in a tub," Mrs. Hall said thoughtfully. "In fact, I think she'd enjoy playing it was a boat or an automobile and how cozy it would keep her on a cold morning."

"It is a good idea to place some of Janet's playthings such as blocks or clothes-pins in a pan and set them in the oven until they are well warmed before giving them to her on a cold morning."

Mrs. Hall picked up her whimpering baby and felt her cold little hands. "You are right, grandma," she admitted. "Janet shall no longer suffer discomfort because of her mother's thoughtlessness!"

February's List of Great Names

By HEPSY NEFF

WHEN the Israelites were trying to grow from an army of slaves toward a great nation their leader, Moses, gave them careful instructions as to the means they must use to gain that end. And this is a part of what he said. "Hear O Israel....These words which I command thee shall be upon thy heart....and thou shalt teach them diligently to thy children and shalt talk of them when thou sittest in thy house and when thou walkest by the way....and thou shalt write them upon the door posts of thy houses and upon thy gates." No other means by which any people can become great have yet been found save by persistently teaching truth to their children; constantly talking of right principles and righteousness and living it.

There is no doubt of the fact that pioneer times produced more great characters than prosperous times because necessity compelled hard work and frugal living for all. Because amusements were few and far between, besides being of their own making, it was easy for people to conserve both time and energy. A glance at the great names of the month of February in the early nineteenth century should set us asking if such characters are being repeated in the first quarter of the twentieth century. Whether any country or any century can produce another George Washington without help of the stirring conditions of his time may well be doubted. Men and women are not bound together in a common aim except by a common need.

We try to make Washington's birthday a national rallying day, reminding ourselves of our debt to him, and then we go out and forget our duty to our own children. The same may be said of that other great man, our immortal Lincoln. If the need produces the man we shudder as we think of the days that brought Abraham Lincoln to the front as a champion of the rights of all men. Horace Greeley, born two years later than Lincoln, in February 1811, pushed like a crusader of old into the temper of the time by founding the New York Tribune before his thirty-first birthday.

But want of space must close the list almost before it has been begun. One other name of today must be added. Perhaps many of us have read of the eighty-second birthday of Thomas A. Edison, on which he invited a few friends to eat a birthday dinner with him. "Arising soon after daybreak, as is his custom" is an introduction to the man whose joy has been, and still is, to work from twelve to fourteen hours a day. If eighty-two vigorous years and still going is any proof of the value of right habits and hard work here is the proof for all young folks to remember. Cultivating various plants from which he hopes to get a substitute for rubber, or real rubber, has filled his recent past and stretches out into the near future. Best of all, he is happy in his work.

A few February poets must still be remembered. Longfellow was born February 27, 1807. The Acadians from his "Evangeline" not only gained a place in history but live today along the lower Mississippi where they suffered from the floods of last year. "Hiawatha" is an epic of Indian life which no one can miss reading without loss. James Russell Lowell, another great American poet, shared the hard growing years of our country and left priceless treasures from his pen. Note the lines from "The Present Crisis" on opposite page.

My Experience with Chickens

WORKING with chickens for thirty-one years has taught me never to feel that all has been learned. Each season brings its problems to perplex and often to exasperate. My first venture was with thirty eggs given me by my brother. He was I and I had been asked to change my name to Shadrach.

From those thirty eggs I raised twenty-two chickens, eighteen of which were pullets. Therefore thinking I knew just how to raise any number of chicks I started the first year of my married life with high hopes of making "heaps" of money from chickens.

I have always had the crudest kind of equipment. I have done most of the work. Building and cleaning coops, carrying steam and water, etc. Without all the inconvenience I have never yet failed altogether in one lot of chicks. I did not come up to expectations I tried again—as long as the season lasted.

I now buy day old chicks and also set hens. We could never have gone along without our chickens even though we carried them along on a small scale. I begin in January with a few incubator hatched chicks, which usually do best as hens are not so troublesome in cold weather. I add to the flock each month until July. Thus I have cockerels to sell from May 30 until Christmas. The early ones I sell as soon as I can make them weigh two pounds, which is at about twelve weeks. I feed grains, dry feed and mash.

The secret of success is eternal vigilance. They must be cared for often every day. One cannot do enough in the morning to last all day. A hundred things can happen to chicks, but my experience is that lice, dampness and mouldy feed are the causes of most failures.

I keep about one hundred and fifty hens over winter (Single Comb Reds and White Leghorns) and sell from four to six hundred dollars worth of eggs a year, according to prices. Here again experience has taught me that hens housed in the winter months lay more eggs. To let them out on the ground, for one day even though it is a nice warm day, shows in the diminished egg yield.

I dress and sell all kinds of poultry except turkeys. Some of my customers I have served for years. Our own whole wheat, corn and oats are fed to the hens and whole wheat and cracked corn to the chicks.

They run at large through the summer months. While the income is not as big as from better methods of feeding neither is the cost of production so high. We use eggs and fowls frequently with no account of the cost. I have a few eggs set at this time February 19, anticipating the thrill the first little fluffy balls with their "peep peep" affords.

S. A. M.



How Much More Inviting This Room Is to the Dusty Hay-Maker than an Old Battered Tub, Where Water Must Be Lugged

Running Water Means a Bathroom

ENCOURAGED and advised by county home demonstration agents many women achieved a number of changes last year in their homes making them much more comfortable and livable. The illustration shows one of the most important of these—a new bathroom, made possible by the installation of a complete water system.

A small, convenient, well-lighted room on the second floor was made over into a bathroom with modern fittings. Water was also supplied to the kitchen, which was greatly improved in arrangement and equipment. Other remodeling done included living rooms, sun parlors, enclosed porches and nurseries.



This Water System Conserves Neither Time nor Energy

Efficiency in Sewing

By NELLIE R. NESSELROADE

MY SYSTEM of sewing is modeled on the old-time recipe for cooking a hare. "First, catch your hare," etc. firstly is to plan my [illegible] I can have a clear sky for my sewing.

A menu already prepared and nicely cooked and the house in order means that I rarely do any cooking except pick-up work until Wednesday, as I am off the "Fisherie Mothers" line of goods and behind in washing Monday and ironing and mending Tuesday whenever practicable.

Secondly, I assemble all things needed and do all the cutting out at once.

I say "all" but we know there are some parts of garments that must necessarily, perhaps, wait upon the fitting, we leave all the [illegible] usually under headway.

Sometimes I have two or three days of this cutting out and [illegible] my business, but it all means a great deal of completion when I [illegible] sewing. I usually make several [illegible] pairs at one time. I [illegible] a set of aprons, ships, [illegible] and it's much easier [illegible]

I get the sewing machine [illegible] thoroughly cleaned and oiled, wind a number of bobbins and I always have [illegible] pins, etc. Our button box is attacked [illegible] we cut buttons religiously off worn-out garments, even when we [illegible] well know we'll never use [illegible] particular kind. An obsession as [illegible] were.

Tried and True Patterns

I make all sleeves at one time. Have the pockets all lying together to be hemmed or bound, as the case may be. All collars, belts and straps I sew into a continuous seam, clipping them apart as needed later to complete the garment.

It's amazing how much work one can manage to have a pile of cut-out parts lying right to your left hand, and keep going the machine going. I seldom baste, I use pins, and I use the machine attachments. The liberal use of bias binding and half-inch tape helps out marvelously. I keep pins, needles, thimbles, etc., in a little thread box and it's no trick at all to find what I want in a hurry.

When we buy a pattern we carefully consider its neck line, sleeve and drapery outline, for we use one pattern for about everything. Having a waist pattern that we know exactly how to make the collar, sleeves and shoulders eliminates tedious fitting and expedites the work.

We buy material for several articles at once. I lay aside the sewing when all has been done on the machine that can be and have a buttonhole orgy all to itself later. Finish up seams, tie threads, sew on snaps and buttons and the countless little things that go to the finished product. I ordinarily wait to do the pressing till I am ironing, though if the garment is needed I do it sooner.

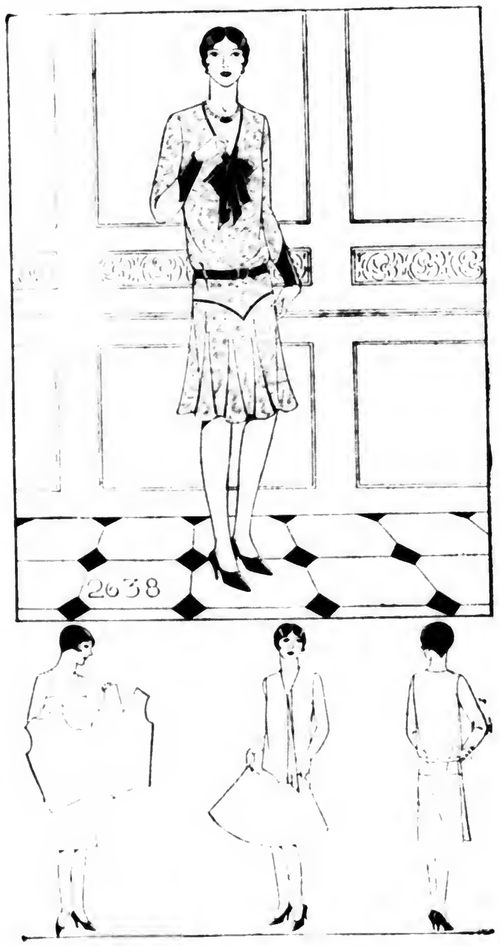
Mend by Machine

There are countless ways of shortening labor that experience teaches us and yet they seem so simple to tell them. In stitching a cuff on the sleeve I always do that before the sleeve seam is closed. Then lay the cuff ends together, begin to sew an inch back on the cuff on the sleeve and sew to the edge of the cuff, use the needle as a pivot and turn the garment around and proceed to sew the cuff's other seam continuously to the hem.

I sew the shoulder seams with one thread, clipping for the neck [illegible] I make shirts sometimes. I seal to all the time and could turn out a very creditable affair, but I do not delight in it. I made the son a heavy overshirt this winter that fits fine and cut the pattern off another shirt. But the collar of a shirt is a pitfall for the amateur.

I much prefer to sew for the ladies. I always enjoyed making dresses for [illegible] and usually dressed them [illegible] alike as they could wear [illegible] And I don't think any [illegible] could compare to a wear-[illegible] coat or cape, over [illegible] and [illegible] I have [illegible] and figure [illegible] something appropriately use [illegible] lots of me mending on [illegible] I began that when the [illegible] were all at home and the [illegible] have such a flair for [illegible] have worn. I was quite adroit [illegible] overalls leg and [illegible] sewing a front or back on said leg, then closing the seam. I always disliked patching overalls and jackets any way.

And I still cling to McGuffey's Readers, and most assuredly think I D. B. does not deserve a cat. He should be in the Bishop of Hatta's place.



Chic and Practical

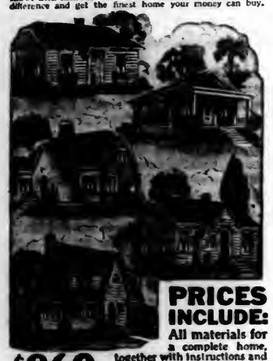
[illegible] women will want this [illegible] [illegible] interested in short [illegible] [illegible] new purple shades, [illegible] [illegible] [illegible] interesting [illegible] [illegible] [illegible]

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Eating Things to Save Them

By HILDA RICHMOND

A YOUNG housekeeper whose husband fainted to her on more than one occasion that he thought she did not cook meals bountiful enough, gaily laughed at his suggestions and said that there was always plenty of cold bread as well as spreads if things did run a trifle short. "I'm sick and tired of trying to eat things to save them, things that never should have been cooked," she said. "Nobody will starve at our table, I'll guarantee that."

And in a short time he came to see things her way. Her grandmother had brought her up, and the old lady was so fearful lest the neighbors might think her stingy that there were always depressing left-overs to be warmed up and made into dishes to fool the family into thinking they were new, until the girl resolved if she ever got into a home of her own to wipe the slate clean at the end of every meal. There was to be no eating things to save them in her domain.

A young farmer once said that he never could enjoy the wonderful company and threshing and butchering and shredding dinners his mother set forth for thinking of what would follow. For a week later there were potato cakes made out of cold mashed potato, meat pies with left-overs in the bottom and a mashed potato crust on top, mashed potato reheated and masked under a grating of cheese or ground meat, salads made of left-overs, puddings like wise, pies reheated till they were dried up and all the other devices to save food. All normal human beings like things piping hot, if they are to be hot, served on time and then forgotten. Memories of a big dinner in the shape of forlorn made-over dishes are always sad.

It may take a real effort to cook less, and if there should be a spoonful left throw it away, but it pays. The old story of a good woman giving a poor family some stale bread with the instruction to take some eggs and milk and sugar and raisins and flavoring and they could make a good pudding out of it, might be duplicated in many good farm kitchens. Some ladies can take a cup of cold meat scraps and spend a whole array of good fresh things, making a sauce to hide the farm looks to cut and save the left-overs. Cook and serve a reduced and depleted meal to help out it things are a little short. It is real economy or it is real waste of labor and patience.



Unbleached Muslin Apron

This is a most attractive design in muslin apron for general use. The material is of excellent quality and will improve with service. Enough material for two pockets is provided. The price of this apron, post paid to any address in the U. S. is only 45 cents. Pattern No. 1331. Fashion Dept. Pennsylvania Farmer, 7501 Penn Ave. Pittsburgh Pa.

Conglomerate Stew

One quart meat stock, one quart boiling water, one pint cold boiled potatoes, one cupful cold boiled rice, one cupful cold boiled macaroni, one cup cold boiled onions, one cupful cold boiled carrots, two cupfuls cooked meats, one cooked turnip or one cupful cabbage.

Chop or grind these ingredients. Add them to the liquids and cook slowly for one hour. Season with salt and pepper as liked. Add one cupful rich cream just before serving. Yum! Yum!

CLARICE RAYMOND

CORRECTION

In the issue of January 5 in my letter is a mistake I wish to correct. The two rooms, dining room and kitchen, are each 12x16 feet instead of 12x10 a difference the housewives will realize.

Nellie E. Nesselroade

The Years Before School

By MRS. NESTOR NOEL

ONE day I was on a visit with my four-year-old daughter. There were no other children in the house, and she was getting lonely.

"Lend her a book," I said.

They could not find a picture book.

"Any book with large print will do." I told them.

A book with good plain letters was brought. To their astonishment, the little girl was quite happy, reading words here and there.

"She should not know how to read at her age," objected a woman.

"Why not?" I asked.

"It's bad for her health," was the reply.

This child had not been urged to read. At an early age, I had given her alphabet blocks with which to play. As she wanted to know what the blocks meant, I told her the names of the letters. From that, it was not long before she knew the words under the pictures on the blocks and was picking them out of every book she came across. It afforded her much amusement for a rainy day. Knowing something about books, she was, later, less timid at the idea of going to school.

There are other things, however, more important. Before reaching the school age a child should be taught to speak good English and should understand and practice pleasing manners. Some children are entirely untrained in the little courtesies before they enter school, and often school does not improve them in the least in this respect.

"I do not know what kind of manners the children are taught," remarked a woman to me once. "They seem ever so much rougher than before they went to school."

If the home influence does not keep children as polite as they should be, it is unreasonable to expect the school to do so. It is the home life which has the most influence. It very largely determines the future. Before school age when we think our children are learning nothing, they are really learning a great deal. It rests with us to see what they learn. In the bright sayings of children we often get an insight into their daily home life.

The years before seven are the most impressionable, and their influences continue throughout life.

A child comes into the world knowing nothing. It does not know how to walk, to eat, to speak. Why not teach it to do all these things correctly, to save learning them twice?

These lessons should not be made difficult, all of us remember best the experiences most enjoyed.

We spoke in the beginning of reading. If your little one learns to recognize the letters and some of our common words it should be as an amusement, a game. Do not commit the mistake of making it a lesson.

All life is a lesson if you want to make and call it such. Accept as much as possible of it in the highest spirit of play and it will bring more joy. Especially, do this with those first few years of a child's life at home when all work should be play.

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May Day 1929

PRESIDENT Mr. Herbert Hoover, as President of the United States, May 1929, brings the opportunity to ... with the voice of highest authority that May Day is Child Health Day, and to call us urgently to consider ... we have done for the children of ... in the past year and what we ... do in the new one. From other ... Child Health Day messages ... given to the American people as ... expressions of concern for ... welfare of children. But in May, ... the Congress of the United States ... a joint resolution of both ... which has established May 1 ... as Child Health Day and has ... upon the President to proclaim ... annually to the people. Therefore, ... Mr. Hoover does this, he speaks ... only voluntarily as he has spoken ... the past, but obediently to the will ... the American people as manifested ... through their Congress.

In his capacity as President of the American Child Health Association, Mr. Hoover challenged us to the cause of May Day—Child Health Day when he said: "Everywhere this day let thoughtful people renew their efforts to assure to every child the complete birthright of a sound mind in a sound body."

There is something more, however, which May Day, 1929, demands of us in the name of American children and youth. These young citizens are growing up into a world endowed with the power and the dangers of abundant leisure. It is a world with gigantic strides where there is little space in which to spend the leisure, a world in which even in the rural districts, mechanical things are powerful usurpers of the kingdom of recreation.

As a nation we are in danger of forgetting how to play. We do not know the joy of abandon in play. Many of our young people, our children, do not know it. We know how to be entertained by radios, automobiles, motion pictures and attendance at spectacular games of football and baseball. May Day—Child Health Day, 1929, challenges us to provide for American children the kind of recreation that means invigorated bodies and spirits elevated by the joy of pure recreation, of play for play's sake. There must be space for play, equipment for play, education for play, physical fitness for play, and the kind of athletics that means a team for everyone and everyone on a team, and sports of every kind from basketball to snow-shoeing and tennis-quoits to archery.

When we have equipped the children and youth of today with the gymnopties and spirit of real play and pure recreation we will have advanced much farther in making the youth, who are the strength of America, strong. Let us this year, when the President proclaims May Day—Child Health Day, pledge ourselves to foster in American childhood and youth the joy of pure recreation, the spirit of play.—American Child Health Association.



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No. 2608 Smart wool frock. Designed in sizes 16, 18 years, 36, 38, 40, 42, 44 and 46 inch bust measure. Size 36 requires 3¾ yards of 40 inch material with ⅝ yard of 32 inch light and 1¼ yards of 36 inch dark contrasting.

Our Spring Fashion Magazine will help you in preparing your spring wardrobe. If you order a pattern at the same time, the price of the book is only 10 cents. All patterns fifteen cents; two for twenty five cents. Address Pattern Department.

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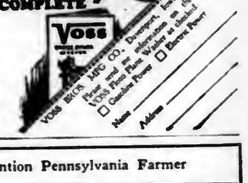
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Conquest of Fudge

By FLORIS CULVER THOMPSON

NONE of us but remembers how few were the fudge makers of college days. Nor did they spring from the domestic science laboratories, but were, rather, certain gifted persons from the ordinary walks of life. Obtain from any one of them the magic rule and follow it implicitly, still the result would be different.

Nor do the cook books yield a perfect recipe for fudge. Having failed as a fudge maker during many years spent in the field of home economics, and having succeeded in the gentle art only by practicing hints picked up here and there, we feel justified in telling the truth.

It was a baker in Wisconsin who melted the chocolate in the hot water before adding the sugar; it was a California heiress who added the butter last to prevent sugaring; a red-headed high school boy who didn't stir the mixture while it cooked, and it was a Latin teacher who added cream during the final beating to create a more delicate consistency.

Fudge

Three-fourths cupful boiling water, two squares bitter chocolate, two cupfuls sugar, one teaspoonful cream of tartar, one tablespoonful butter, one-third cupful nut meats.

Blend the chocolate with the boiling water over the flame. Add the sugar and cream of tartar. Stir until the mixture boils. Cook without stirring to the firm soft-ball stage. At this point, the mixture is low in the kettle and the bubbles have become small and dense.

Set the kettle of fudge to cool. Drop in the butter which should coat the top of the mixture.

When the kettle seems cool, beat the mixture with a wooden spoon or ladle until it thickens. It is ready to be poured on to a buttered or wet platter as soon as it changes to a lighter color and looks dry. Then the nuts and a little salt should be added and the pouring quickly done.

If, however, the mixture becomes solid or starts to grain slightly in the kettle, add cream by the teaspoonful to bring it back to a decent consistency. Even poor fudge can be rescued in this way, but one must work fast. Beat between additions of cream and take care not to add too much. One or two tablespoonfuls should be enough for platter fudge.

For fudge frosting, follow the above rule but add a little more cream at the last so that the frosting can be poured onto the cake.

Fudge for Juveniles

Two cupfuls sugar, two tablespoonfuls cocoa, one-third cupful corn syrup, two-thirds cupful hot water.

Mix all ingredients in the kettle before putting it over the flame. Then cook it until a little of it will form a firm soft ball when dropped into cold water. Remove from fire and set the kettle into pan of cold water. When the mixture is luke warm beat it until thick. Pour it onto a buttered platter. Sprinkle a little salt over the top. When it is cold, cut into squares and serve. This simpler version of fudge is easier for children to make and also is reasonably sure to be creamy because of the addition of the corn syrup.

Fried Cheese Corn Meal Mush

FRIED cereals of all kinds are excellent. They may be served in place of potatoes or rice at dinner time. If cheese is added to a corn meal mush, the resulting mixture is hearty enough for a main dish for lunch or supper, and is very tasty when fried. It is made as follows, according to the Bureau of Home Economics:

Two cupfuls yellow corn meal, three teaspoonfuls salt, four cupfuls cold water, three-fourths to one pound sharp cheese.

Mix the corn meal, salt and cold water in the upper part of a double boiler. Cook over the direct flame until boiling and boil for one minute stirring constantly. Place the upper part of the double boiler into the lower part and cook the corn meal mush for one hour. Shave or flake the cheese into small pieces, add it to the mush, stir until the cheese is melted. Pour the cheese mush into a wet dish or pan and let stand overnight. When set into a firm mold, cut the mush into slices about one half inch thick, sprinkle with flour, and fry slowly in shallow fat until golden brown on both sides. Serve hot with tart jelly.

What Babies Eat

WHAT a child eats at three years of age will influence his ability to resist infection and sickness at the age of ten or twelve, according to an editorial in a recent copy of the Journal of the American Medical Association. As the editors comment, this new idea directly contradicts the usual impression that "a child will outgrow any individual abnormality or physical trouble."

Pointing out that this "nutrition beginning" should be brought home to every mother, Miss Ada Lockhart of the National Dairy Council says: "The old idea that the three year old is simply a baby and that as long as he is plump and seemingly well fed, the future will take care of itself, is being upset in the modern mother's mind. Recent nutrition findings that point out the need for calcium and other body building products such as found in whole milk, fruit juices and fresh vegetables, is doing much to make modern mothers realize that their babies are even in the baby years building health for all the years to come."

Custard Variations

SCALD one quart of milk in a double boiler. Beat four eggs slightly, add one teaspoonful or a teaspoonful of salt and half a cupful of sugar, gradually add the hot milk, stirring constantly. This may be cooked to make:

Soft Custard

Return the mixture to the double boiler, stir until it thickens. This may be used as a sauce with stale cake, with any fruit such as sliced bananas or oranges with cream added or as a sauce with bread or fruit pudding.

Baked Custard

Pour the mixture into buttered custard cups or baking dish, sprinkle with nutmeg, set in a pan of hot water and bake in a slow oven. If a knife blade comes out clean when testing, the custard is done.

The fact that this same custard can be used as a base for bread and butter pudding is reported by Miss Helen Andros of the National Dairy Council in Baltimore, who advises pouring this custard over buttered slices of dried bread to which raisins have been added.



Riding His Hobby

In winter baby's sun bath cannot be so complete, and carriage sunnings with only his little face exposed must take the place of the sun-suit-clad rides in the hobby horse, unless the home is equipped with a window of special glass which lets through the violet rays of the sun. Cod-liver oil helps take the place of the summer sun bath.

M. C. B.

Splendid Recipe To Stop A Cough That "Hangs On"

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Any druggist can supply you with 2½ ounces of Pinex. Pour this into a pint bottle, and fill up with plain granulated sugar syrup or strained honey. It's no trouble at all to mix, and you once use it you will never be without it. Keeps perfectly and tastes good—children like it.

It is surprising how quickly this fine cough remedy loosens the germ-laden phlegm, soothes and heals the inflamed membranes, and at the same time, it is absorbed into the blood, where it acts directly on the bronchial membranes and helps the system throw off the cough trouble. Even those severe coughs that follow the "flu", are promptly ended.

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PINEX for Coughs



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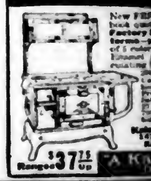
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Therefore, when you feel a cold coming on, or your throat is irritated, gargle with Listerine, full strength, several times a day. You will be delighted to see how quickly you improve unless the trouble has made too much headway, in which case consult your physician.

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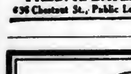
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Fertilizing 1929 Truck Crops

By GILBERT S. WATTS

AGAIN it is time to make up the fertilizer order. Once more we must decide on formulas, methods of application and amounts per acre. But what is there to guide us? That is the difficult side of this whole fertilizer problem.

Experience is the answer—not only our own experience but that of other growers and investigators. Much of this has been boiled down into recommendations which in actual practice have proved to be trustworthy. Experimental work is tedious and technical. Most of us can do no better than guide ourselves by the recommendations of others. Moreover, conservative fertilizer practice as generally recommended brings results and there is no need to lose sleep over controversial points.

It is impossible for any writer to tell positively what mixture will produce best results on your crops and soil. But it is possible to say that certain mixtures are almost sure to be profitable on particular crops when grown on certain types of soils.

Thus formulae such as 4-8-6, 5-8-7 and 5-10-5 have proved very popular for early potatoes and many other truck crops, particularly on soils which are inclined more toward light than toward heavy characteristics. A 7-12-7 mixture now available is practically the same as the old 5-8-5 except that it is more concentrated, only two-third as much need be applied to supply an equal amount of plant food.

What Formulas to Use

On heavier soils, especially following green manures plowed in, a come-back or following leguminous soils, mixtures containing about three times as much phosphorus as nitrogen and potash usually have given good results. Examples are 3-10-4, 4-12-4 and 5-15-5 mixtures. These are especially popular for tomatoes and sweet corn on a wide range of soils. If very good soils have been plowed under or much manure has been used it is possible that mixtures containing four times as much phosphorus as nitrogen will prove most profitable. A standard formula in this class is 4-16-4.

As a rule truck crops produce largest net returns from the use of a complete fertilizer. Yet land which has received large applications of manure or on which heavy clover sods have been turned down may give very satisfactory response from the use of superphosphate alone, either 16 or 20 per cent superphosphate, the latter being exactly the same thing one fourth stronger. If a very low cost fertilizer program must be employed the use of superphosphate alone may be advisable, especially if the crop is not one which it is necessary to bring on rapidly in the cool and often over wet soils of early spring.

Muck soils, those that have been reclaimed from old lake beds or similar situations, may do very well on potash. Muck sometimes contains about as much potash as phosphorus usually give best results. Examples are 0-10-10 and 2-8-10.

A few years ago a county in western Pennsylvania ran many truck crops. The "A half ton or more per acre of a good complete fertilizer." But today we are offered several extremely concentrated fertilizers that carry three or four times as much plant food per ton as other standard mixtures. Therefore we must compare prices as well as rates of application of different mixtures on the basis of equivalent plant food if we are to avoid fooling ourselves.

How Much to Apply

What is meant by equivalent plant food? Just this, an equal number of pounds per acre of nitrogen, phosphorus and potash. To make a concrete example, suppose we figure on applying 1,500 pounds per acre of a 5-10-5 mixture for early cabbage. The figures 5-10-5 represent per cent by pounds per hundred of nitrogen, phosphorus and potash. A little grade school arithmetic shows that we will be putting on 75 pounds of nitrogen, 150 pounds of phosphorus and 75 pounds of potash. Now, the same brand of analysis proves that 500 pounds of a 15-30-15 mixture will supply exactly the same amount of plant food.

To continue the illustration, if one prefers to home mix, simply apply twice as much carrier by weight. Use 1,000 pounds of 15 per cent superphosphate or 500 pounds of 30 per cent superphosphate, 300 pounds of 50 per cent muriate of potash or 375 pounds of 40 per cent sulphate of potash. Or you may use about 75 pounds of nitrogen. Without splitting hairs 1,000 pounds of 16 per cent superphosphate or 750 pounds of 20 per cent superphosphate will supply equivalent phosphorus and 150 pounds of 48 per cent muriate of potash will furnish the potash. Simple addition shows that a batch of this fertilizer will weigh between 1,200 and 1,250 pounds, depending on the materials used. But plant food is there equivalent to 1,500 pounds of 5-10-5 so we should set the spreader to apply one batch to the acre.

The amount of fertilizer per acre which may be applied wisely depends quite directly on the potential value of the crop. The use of large amounts of the magnation could be expected to reach a return much beyond 50 dollars per acre and half this is above the average. Ten dollars per acre ordinarily would be entirely too much to put in fertilizer on a beet. In comparison market crops—beans, sweet corn and so on—might may return 200 or more dollars per acre. For these crops a fertilizer investment of ten to twenty dollars per acre is common and profitable and may be applied by spading

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See Page 17, February 16th

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tons of 700 to 1,500 pounds per acre of the ordinary (not concentrated) mixtures. Finally, extremely high value crops such as celery may show greatest returns when 1,500 to 2,500 pounds of ordinary mixtures are used at an investment of twenty-five to fifty dollars per acre.

How and When to Apply

Controversy rages over the relative merits of applying fertilizer in the row or broadcast and over the question of whether to harrow in all the fertilizer before planting or to save part, especially of the nitrogen, for top-dressing or side-dressing later. However, there is more or less agreement along the lines of the following generalizations.

Applications of 100 to 400 pounds per acre (probably not over 200 pounds of concentrates) ordinarily produce greatest returns when used in the row but not in direct contact with the seed. The best position seems to be to the sides and below the seed or plant.

Where the quantities used range from 800 to 1,000 pounds per acre it is a popular practice to put a ball to a fourth of the application in the row, the remainder being harrowed in before planting.

Heavy applications, 1,500 to 2,500 pounds per acre, ordinarily are broadcast and worked in before planting. It is doubtful whether much is to be gained by row applications when such quantities are used.

Concerning top or side-dressing, in several experiments on silt or clay soils nitrogen has produced the greatest benefit when it all has been put on before planting. This has been the writer's usual practice but he sometimes top-dresses with nitrate of soda or sulphate of ammonia if wet or cold weather results in yellowish foliage. On the other hand, especially among growers situated on light or sandy soils that leach easily, it is almost a standard practice to divide the nitrogen into two or three applications. Growers who have much of this to do should investigate the fertilizer attachments which may be mounted on riding cultivators. A more even job is done that by hand, there is no danger of burning the plants and much labor is saved.

However we apply fertilizers it is well to keep in mind that nitrates move about through the soil quite freely. Potash also moves to a considerable extent. But phosphorus scarcely moves at all and we must work this element where it will be within reach of the roots at benefit is to be done the crop to which the fertilizer is applied in order to get next season's crops.

The Selection of Varieties

By JOHN U. RUEF

THE arrival of nursery and seed catalogs opens a chill of winter pastime on many farms that improve to be either [illegible] or detrimental. The results are [illegible] important when the [illegible] varieties on the strength of [illegible] descriptions and [illegible] graphic cuts.

Fruit growers should be especially [illegible] their errors are realized [illegible] or fifteen years of [illegible] sive growing. New [illegible] ductions should be [illegible] tion until they have [illegible] The market has a great [illegible] son Beauty, King David, Black [illegible] Red Bird, Collins or [illegible]

Perhaps the sales [illegible] recent introductions would [illegible] a few scions to several [illegible] In this way it would be [illegible] cure first-hand information [illegible] value for us. Growers should [illegible] mind the failure of nitrogen [illegible] were once expected to replace [illegible] standard varieties.

The task of selecting varieties to appear to be a trivial matter. Not [illegible] safe to say that a solution of the problem is more difficult than is at first apparent. The selection of varieties to be chosen for the future orchard is influenced by a number of factors, of which personal preference, the market demands and adaptation of varieties to environment are outstanding, but to make a selection from the two or three thousand named varieties of apples and an equal number of seedlings is a gigantic problem even with all the aids of present-day market demands.

Personal Preference

Taking up the choice of varieties for the home orchard the first point usually considered is personal preference. A grower once told me that he considered the old "Sheepnose" or [illegible] as the one variety for his orchard. How many persons are [illegible] variety at one time considered essential to complete the list of apples for the farm orchard? It is a striking apple of peculiar shape, size and color, maturing with the earlier varieties but due to its failure to meet market demands its importance has been removed by the present generation.

Many readers of one of the leading horticultural works are surprised to learn that the Yellow Bellflower is given the throne of appledom. The fruit is par excellence, but how often does it appear on the market and it is doubtful how many people would recognize or purchase this wonderful apple of the old farm orchard. I, myself, know of no apple that satisfies my desire for perfection as the mellow Rambo [illegible] on a hot July day almost as well as the [illegible] of the tree, but would it be advisable for me to plant a home orchard entirely to this apple?

Every one has his pet [illegible] but [illegible] a home orchard I [illegible] planting even a home orchard I [illegible] the old farm orchard. I [illegible] know of no apple that satisfies my desire for perfection as the mellow Rambo [illegible] on a hot July day almost as well as the [illegible] of the tree, but would it be advisable for me to plant a home orchard entirely to this apple?

A Suggested List

One should select as such a home orchard as to have a definite percentage of summer, fall and winter varieties. It is permissible in this type of orchard to select varieties of unusual quality and to sacrifice handling qualities. In compiling a list of varieties which conform to the demands of the home orchard of a local trade the following list might be suggested from which several different varieties could be chosen.

Summer: Yellow Transparent, Summer Rambo, Red Astrachan, Sheepnose, Duchess, Early Harvest.

Fall: Early Wealthy, Gravenstein, Golden Sweet, Jonathan, Grimes Golden, Fameuse, Jonathan, Gravenstein, Maiden Blush, Fall Pippin, Hubbardston, McIntosh.

Winter: Baldwin, Rome Beauty, King, Stayman Winesap, Red Winter, Northern Spy, Ben Davis, Rhode Island Greening, Winesap, Black Twig, Delicious, Jonathan, Grimes Golden, Fameuse, Jonathan, Gravenstein, Maiden Blush, Fall Pippin, Hubbardston, McIntosh.

Winter Bananas, York King, Stayman Winesap, Rome Beauty, Vernon Beauty, Red Winter, Baldwin, Spitzenburg, Rhode Island Greening, York Imperial, Winesap.

The commercial grower [illegible] with a more definite [illegible] he must consider [illegible] market. He must grow [illegible] the market [illegible] Let us examine the American [illegible] a glance down [illegible]

[illegible] Baldwin [illegible] Rhode Island Greening, Rome Beauty, Northern Spy, Jonathan, Delicious, Winesap, Stayman Winesap, Grimes Golden, Wealthy, Mcintosh, Fameuse, Gravenstein, Red Astrachan, Yellow Transparent, Duchess, Wolf River, Tetofsky, Oldenburg, Williams, Early Harvest, Sheepnose, Summer Rambo.

[illegible] should be [illegible] the [illegible] Baldwin, Rhode Island Greening, Rome Beauty, Northern Spy, Jonathan, Delicious, Winesap, Stayman Winesap, Grimes Golden, Wealthy, Mcintosh, Fameuse, Gravenstein, Red Astrachan, Yellow Transparent, Duchess, Wolf River, Tetofsky, Oldenburg, Williams, Early Harvest, Sheepnose, Summer Rambo.

[illegible] the [illegible] Baldwin, Rhode Island Greening, Rome Beauty, Northern Spy, Jonathan, Delicious, Winesap, Stayman Winesap, Grimes Golden, Wealthy, Mcintosh, Fameuse, Gravenstein, Red Astrachan, Yellow Transparent, Duchess, Wolf River, Tetofsky, Oldenburg, Williams, Early Harvest, Sheepnose, Summer Rambo.

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called the King apple, is a shy bearer, the tree is susceptible to collar rot while the fruit develops water core or internal breakdown. The Northern Spy, considered by many as the apple of apples, is known as a biennial bearer and also a late bearer. The Jonathan, Grimes Golden and McIntosh, all apples of high quality, drop before reaching maturity, while the first is susceptible to spot and the second to scald.

Provide for Pollination

The third point to which to give thought is the problem of pollination. It would be impossible to consider the planting of a solid block of Grimes, Winesap, Baldwin or Wealthy apples on account of their self-sterility. It is necessary to select such varieties as will aid in the proper setting of fruit by thorough pollination. The Grimes Golden, McIntosh and Jonathan have been found to be unexcelled varieties for this purpose.

The keeping quality of the fruit as well as the ripening dates needs to be considered. The grower contemplating a commercial orchard should select his varieties so as to be able to harvest and market his fruit most economically and profitably by choosing varieties which ripen at different times.

Good Commercial Kinds

Keeping all these points in mind a suggestive list for a commercial grower's choice would be a few of the following varieties placed in their respective groups.

Summer—Duchess, Stayman, Rambo.
Fall—Grimes Golden, Jonathan, McIntosh.
Winter—Stayman, Winesap, Delicious, Rome Beauty, York, Smokehouse, Northern Spy, Baldwin, Wagner, Stark.

The varieties mentioned are only suggestive and a wide variation from Pennsylvania conditions would necessitate the use of more adaptable varieties. In order to reduce the number of varieties and thus promote a crop that conforms to market demands a Pennsylvania "Big Ten" would include:

Stayman, York, Delicious, Northern Spy, McIntosh, Smokehouse, Rome Beauty, Baldwin, Grimes Golden, Summer Rambo.

To Transplant Grapes

Will you please tell me how old grape stalks can be successfully transplanted? What time of the year is best to move them? M. G., Fayette county, Pa.

IT IS BEST TO recommend transplanting of grape vines more than two years old. Grapes grow so rapidly as yearling plants, which the nurserymen sell, and they are so easily planted at this age, that it would be unwise to spend very much time and effort in moving an old plant. Ordinarily, you can expect a pretty good crop of grapes the third season from planting and you will get some the second year from planting and I doubt if you would do any better if you move your old plants.

Sweet Clover in Orchard

THE experience of I. G. Reiter, Iler county, Pa., indicates that sweet clover may have distinct usefulness as a source of organic matter in Pennsylvania orchards, although alfalfa is preferred by most eastern growers, as it is in the irrigated districts of the Pacific states. He seeds it in early spring. Being a biennial plant, it does not produce seed until the second season. It is not mowed either of these years.

Early in the spring of the third year the orchard is cut up with the disk harrow. The self-seeded plants then come up freely. If this process is repeated every two years thereafter, apparently there is no limit to the life of the sweet clover. It grows well on the poorer types of soil that would not make a good stand of alfalfa, and adds fully as much organic matter as alfalfa.

The chief disadvantages are the greater inconveniences in handling, and the tall stature of the plants. They reach up into the lower branches of the trees, and cut off circulation of air, thus favoring disease. Since the plants cannot be mowed the second year before seed is ripened, there may be some inconvenience in getting through the orchard. Where it can be grown without too much expense in preparing the soil, disking is preferable. S. W. F.

About Scions

Are scions cut from two-year-old nursery trees as good to use as if cut from bearing apple and pear trees? A. E. A.

IF YOU are sure of the variety the scions cut from the two-year-old trees are just as good as if taken from bearing trees. But you want to be sure of the variety. Grafting or budding is the only practice we can resort to in growing new trees of these fruits true to variety and it therefore makes no difference how old the tree is that you are getting the scion wood from just as long as we are sure we are getting the variety of scion wood that we want. The characteristics in a piece of wood on a two-year-old tree of a given variety are the same as when that wood is taken when the tree is much older, say twenty years old. F. H. B.

Grafting Wax

In the spring we have many calls for directions on making good grafting wax. A good wax can be made by melting together these ingredients in the proportion suggested. Rosin four pounds, beeswax or paraffin two pounds, tallow or linseed oil one pound. After melting together pour out in water to set. Then oil the hands with linseed oil and take out the wax from the water and pull it like taffy until it is even grained and light in color and of good working consistency. The wax can be rolled into balls and covered with oiled paper and stored until ready for use. When ready to use it can be gently warmed in warm water and then worked with the hands until the right consistency is secured for use.



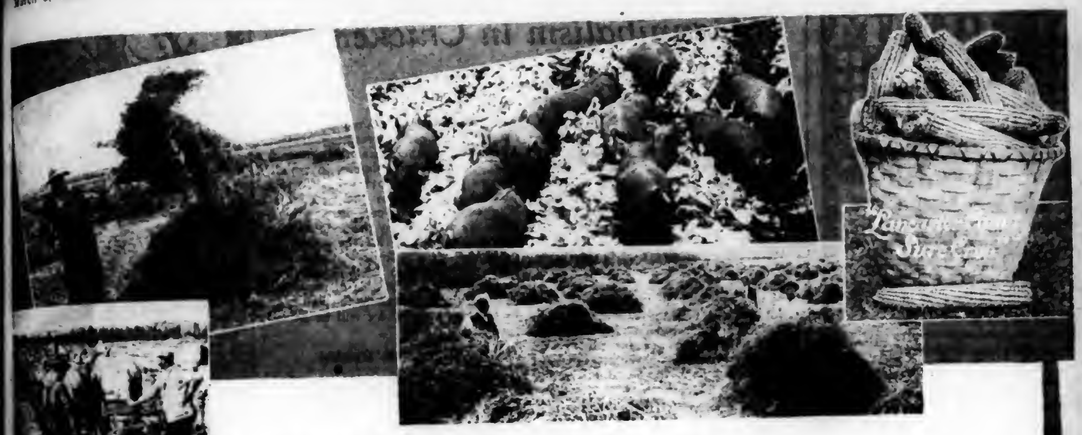
An Orchard Ladder

THE ladder shown in the illustration is extremely handy for pruning fruit trees or for picking the fruit. The ladder can be handled quite nicely if it is twelve to sixteen feet high. However the height can be made to suit the user's needs.

The two braces should be either hinged in the center or else bolted to the frame in such a manner that the ladder can be lowered for storing under shelter and for moving long distances.

It is necessary that the ladder be made quite wide at the bottom in order that it will not have a tendency to tip sideways. The wheels can be bolster trucks, mower wheels or wagon wheels. Heavy wheels, such as steel wagon wheels, work very well.

The space between the braces and the ladder can be floored with light boards. This makes a handy space to carry the picking pails, bags and so on. A. C. Wilson.



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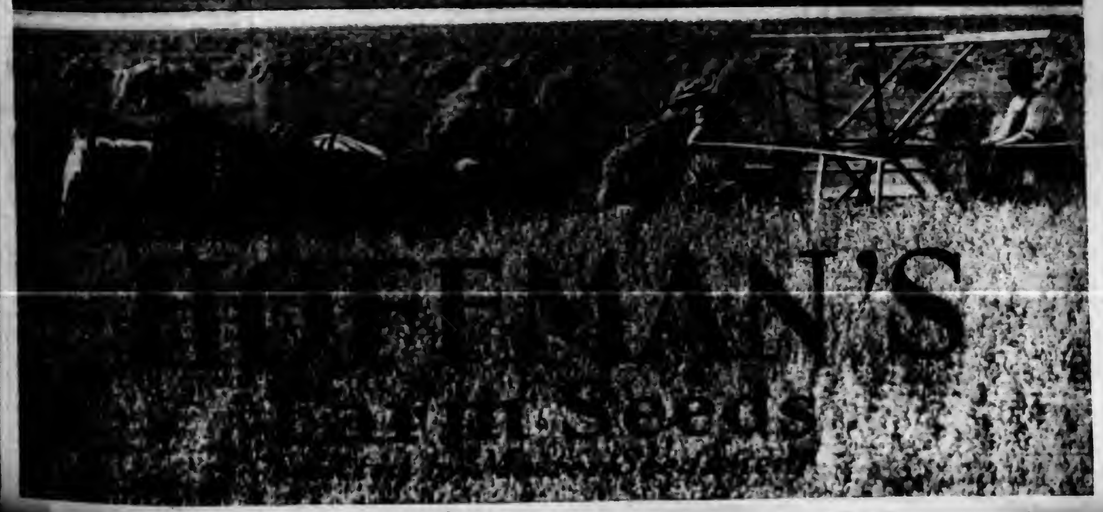


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Cannibalism in Chickens

By R. L. SCHARRING-HAUSEN

I RECENTLY listened to a talk given by a well-known poultry authority in which he stated that losses by death among chickens of all ages are increasing rapidly in poultry flocks throughout the country, a disquieting feature of the more intensive methods of poultry keeping now being generally practiced. One of the important causes of mortality is cannibalism, manifested as toe-picking and tail-picking in chicks and picking of the vent or "pick-out" in laying birds.

The causes of cannibalism are not thoroughly understood, and while it is hardly possible to prevent all losses of this sort, there are nevertheless ways to cut down such losses, and I want to set down the results of observation and experience along this line in this article.

The other day a practical poultryman, in discussing the subject of toe-picking among chicks, declared that he considered it largely the result of mischief caused by idleness.

"When children in school do not have enough to do," he said to illustrate his point, "they become mischievous. When the teacher keeps them busy, they do not get into trouble."

While I never taught school, I do know that lack of water, absence of feed and bare floors on which there is nothing to scratch in—conditions which when remedied keep the little fellows busy drinking, eating and exercising—are potent causes of toe-picking and tail-picking. Too high a temperature with lack of ventilation are also causes. Over-crowding is just as bad.

What to Do

Once this trouble starts injured chicks should be removed as soon as discovered, and either kept by themselves or the wounds daubed with tar before they are replaced. Darkening the house by the use of curtains over the windows may also help, letting in the light only at feeding time. I have stopped attacks in my brooder pens by feeding liberally of condensed buttermilk, just as it came from the barrel, although others have told me that the buttermilk did no good for them. The thing to do is to prevent conditions which might cause trouble, as when an outbreak of cannibalism starts in chicks it is hard to stop and often causes serious losses.

Outbreaks of cannibalism in laying flocks are particularly serious and discouraging, as it is the heavy layers which are lost. This usually takes the form of picking at the vent, which continues until the abdominal contents are eaten out of some unwilling victim to death. I believe that there are two causes for this. The one is prolapsus, in which a portion of the oviduct protrudes through the vent as the egg is laid. The other is pick-out, in which the birds are attracted by the reddish membranes disclosed during the laying process, and start picking at them. It is hard to say which is the more common, as unless a fowl is discovered as soon as she is attacked the result will be the same and there will be no way to tell the cause.

Changes in Opinion

There have been some remarkable changes of opinion in regard to prolapsis in the past few years. It used to be thought that the trouble was caused by a working of the egg passages by the sport of continued heavy laying coupled with a thin and run-down condition of the bird. The advice which used to be given was to reduce the egg production by feeding less greens and protein, the amount of grain to be increased. However, birds which are fat sometimes have this trouble and the opinion is now that an excess of fat in the abdominal cavity interfered with normal egg laying and was responsible. Constipation has also been blamed. Probably either a too thin or a too fat condition would cause trouble, but the underlying causes are not fully understood.

Pick-outs are not caused by any special weakness in the bird, but are the result of a hen's natural liking for blood and red meat which under some conditions may become an abnormal craving and finally develop into a vicious and destructive habit. I have heard of flocks which got so bad that birds would be attacked at any time, whether during the process of laying or not. Very often this trouble begins when hens lay on the floor instead of in the nest where they are protected.

The other morning while going through my laying pens I noticed a pullet laying on the floor. She was having trouble, and as the egg started to appear the end of it was covered by a clot of blood. Several pullets were attracted by this blood, and if I had not been there to drive them away they would have continued to peck, and the pullet would have been a victim of pick-out. As it was, she laid the egg without serious difficulty, and was then apparently all right. There was no condition of prolapse.

It is my opinion, based on this little incident, that an abundance of nests for the birds to lay in will help out greatly in reducing pick-outs, although there will always be contrary individuals that will lay on the floor and run the risk of committing suicide thereby. I have a notion that pick-out causes more deaths than prolapsis, although there is no way to tell the original cause once the bird is discovered hollowed out on the floor.

Aside from providing plenty of nest room, there are other ways of reducing losses from cannibalism in adult flocks. I believe that it is best to keep the birds in good condition, neither too fat nor too thin, and feed a fairly laxative diet containing green feed. Some have suggested using a commercial mash containing oatmeal or adding a little oil meal to the home-mixed ration.

Contrary to the old advice about cutting down protein, some of the experiment stations and practical poultrymen handling birds in large numbers now advise putting a small pan of clear meat scrap in the mash hopper where the birds have free access to it at all times. The theory is that during periods of heavy production some of the birds at least require extra protein, and if this is not supplied an abnormal craving will develop which will result in cannibalism.

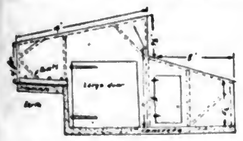
In some cases where nothing else avails, paring the upper beak nearly to the quick will stop an outbreak. A method of doing this recommended by Doctor Kennard of the Ohio Station is to make a cut on each side of the bird's beak near the tip, then tearing rather than cutting off the tip so that the quick is almost exposed. The beak remains sensitive for about two weeks, during which time it may be necessary to hopper-feed the grain.

House Plans

I was interested in your article on brooder houses in issue of January 19th. Am planning to build a laying house against a bank on the side of a hill where my present house is located. This diagram is to represent a cross section of the house, monitor type, 22 feet in depth, on a concrete wall, with a concrete floor, also using a concrete slab for permanent dropping board. Would you consider it practical for hens to roost so close (about 18 inches) above concrete?

What is your opinion in regard to blood-tested stock? I will have to pay three cents per chick more for chicks from tested stock. Elam B. Kauffman.

WHILE the idea of constructing a poultry house against a bank is somewhat unusual, I believe that it would add warmth and if properly constructed be perfectly dry. To avoid dampness, a line of drain tile should



be laid around the back and ends under the foundation, and the concrete bedded on several inches of cinders. It is a very good idea to lay a rough floor first, and when it has hardened cover it with tar or heavy roofing paper carefully cemented at the laps, and then put a finish coat of about an inch and a half on top of this. This prevents dampness from striking through. I imagine that no harmful results would come from roosting over a concrete slab laid as suggested, but I fear that you are wasting space that you would have if you excavated and dropped the rear wall straight down, putting in board drops.

I firmly believe in blood-tested stock, have always bought chicks from such stock, and now have all my own breeders and trap-nest pullets tested. Bacillary white diarrhea is commonly not so serious in Leghorns as in heavier breeds, especially Reds, and not all diarrhea occurring in chicks is B. W. D.; nevertheless this disease often causes serious losses in baby chicks, and if it is possible to eliminate losses of this nature through the blood test, it certainly pays to do so. Blood testing is gaining ground throughout the East because the better class of poultrymen demand chicks from tested stock. Of course there are many chicken raisers who consider price before quality, and hatcheries which cater to this class of trade naturally cannot go to the extra expense of having the test made.

R. L. S.

Drinking Cups

I noticed your article some time ago in the Pennsylvania Farmer about running water in the poultry houses you had visited. I am installing an electric pump and will be getting water from a spring. The system where the line comes up through drain tile is the system I liked the best. Where can I purchase these cups?

Sol. S. Seigworth.

THE drinking cups you ask about were seen on the farm of a Mercer county, N. J., farmer. He was formerly a machinist, and I understand that he either made them himself or had them made according to his plans. I will draw you a rough sketch to give you the idea, and suggest that a two-inch pipe cap, drilled and capped at the bottom to receive a small brass pipe, might serve equally well. R. L. S.

Turkey Troubles

Would like to know what to do to prevent the gapes and indigestion in turkeys. I lost a good many turkeys last year and would like to know how to prevent it. Mrs. John V. Coleman.

GAPES are caused by a small worm which attaches itself to the lining of the windpipe. They cause irritation, make breathing difficult and finally result in death if not removed. Gapes are most prevalent in poults between the ages of a few days and four weeks. An ounce of prevention is worth a pound of cure and it is suggested that the poults be raised on clean ground in sanitary buildings. Continued rotation of the yards so that the poults have access to one yard for only one or two weeks is considered to be the best practice of the day.

The horse hair method of removing the gape worms is recommended. This consists of looping the horse hair, dipping it in turpentine and running it down the windpipe of the little turkey. Care should be taken that the horse hair is introduced into the windpipe and not into the throat. Twist the horse hair several times and then pull it out. This should be repeated several times and will result in the removal of the gape worms.

Diarrhea is a common ailment of turkeys. Very often it is a symptom of some disease. Improper feeding is many times the cause. Examine carefully the feed to make sure that the poults and mature turkeys have only wholesome things to eat. It is never a good plan to feed turkeys on the ground. Always feed them in hoppers and then so arrange the hoppers that

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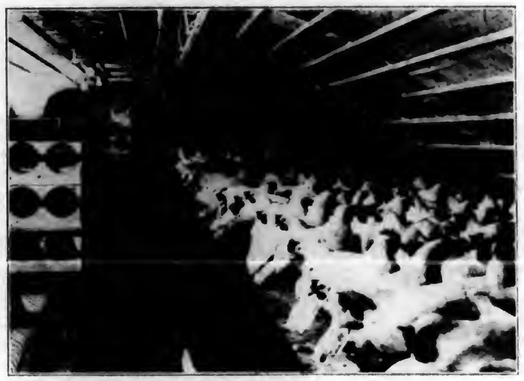
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CHICKS Pure bred, Blood tested free range breeders Leghorns, Anconas, 12c. Rocks, Reds, Mc. Wyandottes, Orpingtons, Minorcas, 13c. Black Giants, 30c. 100% live delivery. Valuable Chick Manual Free.

SEIDELTON FARMS, Washingtonville, Pa.

Baby Chicks from free range, choice flocks of heavy laying Barred Rocks, White Rocks, S.C.R.I. Reds, White Leghorns, 10c; heavy mixed, 9c; light mixed, 8c. 100% live delivery.

PENNS CREEK HATCHERY, Selins Grove, Pa.

CHICKS from leading strain; Postpaid.

	100	500	1000
S. C. W. Leghorns	$11	$52.50	$100
S. C. Barred Rocks	12	57.50	110
Mixed Chicks	8	40.00	80

L. E. STRAWSER, Box 30, McAllisterville, Pa.

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the turkeys cannot walk in them. Some turkey raisers believe that boiled rice has a curative effect in the case of diarrhea. The use of cast or oil to adult fowls at the rate of one to three teaspoonfuls is also considered a curative measure for diarrhea. H. C. K.

Disease Control

I enjoyed your article on brooder houses in the January 19th issue immensely. It lets me in on some secrets. By the way, I also intended to call White Leghorns Tancred and I had some trouble finding out how to spell it correctly.

We also had some worries of our own. We lose two 240-ft. colony houses which we have been moving from one range to another and tried ourselves to get results until this year. I could never get enthusiastic over confinement but I guess I must subscribe to that system.

I am planning to erect our houses in sections and group them in parts with a run partly between two. We'll see how it works out. I have floors for the pens and houses enclosed with chicken wire. V. K. E.

Montgomery County, Pa.

FROM what I have seen of absolute confinement I would recommend it only as a last resort as while it is good in cases the human factor enters in to such a large extent that it does not work out well in practice and is pretty expensive besides. One of the worst outbreaks of roup and colds I ever saw was in a system of total confinement where the operator thought he had observed all the precautions and while he called it something else it was confinement nevertheless.

Last season I used a system of partial confinement keeping the chicks in a permanent brooder house littered with peat moss, and all-wing them outside on a wire floor covered with half-inch square mesh wire. At about eight weeks I transferred the pullets to clean range that had good results with them, and have got very good production from them in the laying houses. After six weeks a chick is not so susceptible to worms and if on clean range away from the buildings may escape coccidiosis.

I believe that I prefer wire-floored stanchions to concrete or boards. I made frames of 2x4's, 3x10 feet, using two such for each pen. The chicks do not mind going out on the wire, and the droppings fall through and can be scraped up with a hoe occasionally. The frames should be set on concrete blocks or hollow tile. To enclose these outside pens I made frames two feet high covered with inch poultry mesh, and covered the top with frames covered with two-inch mesh. The whole porch can thus be taken down and stored away after the season is over.

The objection to concrete or board floors is that they get pretty sloppy in wet weather, and cannot be moved if this is desired. R. L. S.

Hen Has Canker

Can you tell me what caused my hen to have a large swelling in the roof of her mouth? The nostrils are swollen full and it is so bad she cannot pick up grain. Swelling keeps bill open about a quarter of an inch. Has yellow places on it. W. L. C.

UNQUESTIONABLY your fowl is suffering from a disease known as canker. Canker may be caused by mechanical means as well as the result of a cold. It would be well for you to remove these cankerous patches from the mouth and throat of the fowl and paint the sores with a two per cent solution of mercurochrome.

I would suggest that you use chloride of lime in the drinking water at the rate of two to three teaspoonfuls per gallon. This is to prevent the spread of the disease.

Feed your birds a moist mash at noon and try to build up their body resistance. Canker and roup are closely associated and serious losses often occur when either of these diseases are prevalent. H. C. K.

Need a Brooder House? Act Now—Save Money

To introduce Harder Round Brooder Houses into new communities, we are offering our 12, 10 and 8 ft. sizes at sharply reduced prices. These special prices are for a short time only. This is a real opportunity to save money on a high grade Brooder House that is giving great satisfaction. Write for details and descriptive Folder.

To the Small Poultry Raiser

we offer the Harder "Midget" at $49.50, f.o.b. Cayuga, 100 to 500 chicks. Write for details.

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HARDER Brooder House

SIZES: 12 ft., 14 ft. and 16 ft.



300,000 White-Brown Buff Leghorns **CHICKS** SHIPPED Send No Money

PURE STRAINS Tancred Hollywood Barron (Ameri. and S. C. White Leghorns; Brown and Buff Leghorns; Chicks produced from mating of Tancred Hollywood Barron strains. Pennsylvania Breeders Specializing in High Egg Production. Especially Chicks for Commercial Poultrymen. Low Arrival. Prices Reasonable. Place orders early, and Get Chicks when Wanted. Chicks Shipped C.O.D. Catalog.

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Send us money just what you want, we ship C.O.D. and guarantee 100% delivery. Prices on 25 and 50 lots, also prices on 500 and 1000 lots of pullorum tested chicks.

	25	50	100
S. C. Wh. and Br. Leghorns	$3.00	$5.50	$10
Rd. Rocks and R. I. Reds	3.50	6.50	12
Wh. and Bd. Rocks	3.50	6.50	12
Rose Comb Reds	3.50	6.50	12

Prices are reasonable and chicks are of unusually high quality. Write for catalog.

Bellefonte Poultry Farm, Bellefonte, Pa.

Ohio Accredited Chicks

Quality blicker and prices turn. Breeders selected and bred for type and egg production. Improvement Association and culling by accredited inspectors. Leghorns, Rocks, Reds, Wyandottes, Minorcas, Orpingtons. Write for catalog. Special prices on 500 and 1000 lots. Live delivery guaranteed on 500 or more. Write today.

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Chicks S.C.W. & Br. Legh'ns $11.00 per 100. S.C. Barred Rocks $12.00 per 100. S.C.W. Leg. Tan. Str. 12.00 per 100. Assorted chicks 9.00 per 100. Special prices on large lots. 100% live delivery guaranteed. Prepaid. Order from adv. or circular. Chester Valley Hatchery, R 2, McAllisterville, Pa.

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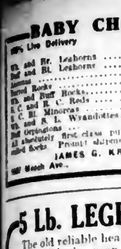
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	Postage Prepaid			
	50	100	500	1000
Wh., Br. and Bf. Leghorns	$6.00	$11.00	$52.50	
Rd. and Bf. Leghorns	6.00	11.00	52.50	
Barred Rocks	6.00	11.00	52.50	
Wh. and Buff. Rocks	6.50	12.50	60.00	
R. C. and R. C. Reds	6.50	12.50	60.00	
S. C. Minorcas	7.50	14.00	67.50	
R. I. and S. L. Wyandottes	7.50	14.00	67.50	

All prices for first class purebred stock from selected flocks. Prompt shipments.

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The old reliable heavyweight stock. Produced high up on Pennsylvania's mountain top. Get your healthy mountain chicks from certified record strains shore 300 eggs. R. O. P. Hollywood, Tancred, Barron Matings. Hatch weekly pure white eggs up to 24 ounces per dozen. Beautiful Color Plate Leghorn Catalogue Free.

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$8.00 per hundred and up.

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BABY CHICKS

	25	50	100	500	1,000
S. C. W. Leghorns	$3.25	$6.50	$12	$57.50	$110
R. C. Reds & R. I. Reds	3.25	6.50	12	57.50	110
Barred Rocks	3.25	6.50	12	57.50	110
Heavy Mixed	3.25	6.50	12	57.50	110
Light Mixed	2.50	4.75	9	42.50	80

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	25	50	100
S. C. W. Leghorns	$3.50	$6.50	$12.00
Rocks & R. I. Reds	4.00	7.50	14.00
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500 lots 5c less, 1,000 lots 1c less. Free range 100% live delivery guaranteed. Circular.

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CHICKS Will ship C.O.D.

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S. C. Reds	$4.00	$7.50	$14.00
Barred Rocks	4.00	7.50	14.00
White Leghorns	4.00	7.50	14.00
Heavy Mixed	3.50	6.50	12.00
Light Mixed	2.75	5.00	9.00

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ZELLER'S EXTRA QUALITY CHICKS from Large Type S. C. White Leghorns. Tancred, production bred matings. $16 per 100; $77.50 per 500; $150 per 1000. Also quality Rocks and reds. 100% live delivery. Order today.

EDGAR A. ZELLER, 2014 Manada St., Harrisburg, Pa.

Big Chicks from Big Eggs



	25	50	100	300	500	1000
Wh., Bf., B. C. & S. C. Br. Leghorns, Anconas	$3.75	$7.00	$13	$38	$60	$118
Rd. & Wh. Rocks, R. C. & S. C. R. I. Reds	4.50	8.00	15	44	72	138
Blk. Minorcas, Wh. Wyandottes, Bf. & Wh. Orpingtons	4.75	8.50	16	47	77	148
Bf. & Wh. Minorcas, Bf. & Part Rocks	5.00	9.00	17	48	80	
S. L. Wyandottes, Jersey Giants	5.00	9.00	17	48	80	

Assorted light breeds $9.50 per 100 straight. Assorted heavy $11.50 per 100 straight. Hatched in NEW IMPROVED DISEASE-FREE ELECTRIC INCUBATORS. They are LARGER and STRONGER than most ordinary incubator chicks, in most cases larger than HEN HATCHED.

AMAZING EGG PRODUCTION IN ALL BREEDS

Customers report 3,258 eggs from 32 White Wyandotte pullets in six months, flock average 101 eggs per Bird. 17 eggs on coldest day and laying during moulting season. David Zuercher, Berne, Ind., Br. Rocks laying at 5 months old. Rev. Smith, Superior, Nebraska, much pleased. Satisfied customers everywhere. Have paid $50.00 for Male Breeders; $35.00 for Females. Hatching from best egg strains in America. Postpaid, 100% live delivery. Beautiful Four Color ART BOOK FREE. "GOOD LUCK CHICKS FOR GREATER PROFIT."

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Our flocks for this very Special Mating consist of 350 YEARLING hens carefully selected by an Expert Poultryman. These hens weigh not less than 4½ pounds, and up to 6 pounds. They produce better than 250 eggs per year, per hen, imported from TOM BARRON of England.

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THOUSANDS OF PLEASED CUSTOMERS can tell you about the splendid chicks and wonderful profits made by our Marvelous High Class, Heavy Laying, Standard Bred, American Vert-O-Gold Matings for 29 years; Pure Bred, practically culled for size, type, color, vigor and egg laying ability. Look at the low prices—100% Live Delivery Guaranteed—you can safely order from this advertisement.

	50	100	500	1000
Barron Imported S. C. White Leghorns	$7.00	$13.00	$60.00	$115.00
S. C. Wh. Br. Buff, Blk. Leghorns, Anconas	8.00	15.00	70.00	135.00
Barred and Wh. Rocks, R. C. and S. C. Reds, Blk. Minorcas	8.50	15.00	75.00	145.00
Wyandottes, Buff Orpingtons, Buff Minorcas	8.50	16.00	65.00	160.00
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Heavy Mixed, 9½ per 100. Light Mixed, $9.00 per 100. White Pekin Ducklings, 25c each.

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Here is Corn King's advice...

MANY a farmer is watching his corn grow poorer and poorer each year. Something's wrong. What is it?

Your corn needs nitrogen. Each year's crop takes nitrogen out of your soil. You ought to put it back.

Feed your crop Chilean Nitrate of Soda this year and watch your corn grow better than it ever did before . . . faster . . . stronger . . . bigger, fuller ears . . . great big increase in yield, too.

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You heard about Ira Marshall, Dola, Ohio, Corn King of the World for the 4th straight year. He used Chilean Nitrate of Soda on every one of his amazing crops. Here is what he says:

"In 1925 on ten measured acres, I produced 1600 bushels of corn; in 1926—1680 bushels; in 1927—1577 bushels; and in 1928—1762 bushels. With these yields I achieved recognition as the World's Champion Corn Grower for these four years. I attribute this achievement to the nitrogen carrier I used in my fertilizer—Chilean Nitrate of Soda, the only natural form of nitrate nitrogen in the world."

(*Signed*) IRA C. MARSHALL, Dola, Ohio.

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The MARKET PLACE

By W. R. WHITACRE

NOT long ago while I was talking with several potato growers one man asked just what was meant when a market report stated that the demand was "moderate" or "good" and what was the difference between "firm" market and a firm one. A knowledge of market terms and the various shades of meanings is a big help in keeping up market conditions.

Experienced market reporters use the word "demand" to indicate the buyer's attitude. For instance, if the report reads "demand slow" it means that the rate of turnover is relatively slow and that buyers are not very anxious to purchase. A fair or moderate demand represents a normal condition when buyers are purchasing without any undue excitement and it does not indicate fluctuations in price. "Demand active" or "demand good" are used when buyers are confident in the condition of the market.

Views of Seller

The term "market" is used to express the views of the seller. "Market stronger" is used when the seller is confident that the supplies on hand will be taken at prevailing or somewhat higher prices. In general this term is accompanied by higher prices. "Market firm" indicates that the seller is confident in the situation but it seldom is used with price advances. A more understandable term might be "the market is in good shape." Market "steady" is a term representing a normal movement with unchanged prices. It is not quite as favorable from the standpoint of the seller as a "firm market." "Market weak" describes a condition when prices are dropping with a probability of further decline. Sometimes the term "market weak" is used when a decline has not actually occurred but it is the general opinion that it is inevitable.

These terms that I have mentioned are the most common, but there are variations that the reporter uses to convey his impression of the market more completely. The terms unsettled or irregular describe a condition of fluctuating prices with general uncertainty on the part of sellers and buyers as to the final outcome of the market.

Supply and Demand

A rather technical term "easy" is used occasionally, especially in describing conditions affecting the egg or butter market. This means much the same as "weak" but to a somewhat lesser degree. The term "dull market" expresses inactivity and is also not as strong a term as "weak." A few other terms used are "tone" and "tendency." For instance a report may state that the market showed a "firmer tendency." This means that the sentiment of dealers and buyers is slightly more optimistic.

The three chief terms describing a market are supplies, demand and market. Supplies are referred to as light, moderate or heavy. These expressions are not difficult to understand, as they indicate the amount of produce available at the time the report was issued. Occasionally on large markets supplies are actually heavy, but dealers are holding these supplies in expectation of higher prices and in this case it is customary to use the term "offerings" rather than supply as it more accurately pictures conditions.

Prices

There is not a set quantity which constitutes a heavy supply or a light one and for this reason ten cars of potatoes might be a heavy supply in Harrisburg but in New York City it would be very light. Five cars of grapes might be considered a heavy supply early in the season but at the height of the season five cars would be only a small amount.

Prices are the meat of any market report and are easily understood. In practically all cases the commodity is marketed in units, such as apples, the size, the grade, the container and occasionally explanatory remarks such as fancy, good etc. The price is generally represented by a range such as $3@4. This means that the majority of sales of that particular commodity of that class or grade fell within those prices. The conditions that make the reporter's work hard are that there are usually extra fancy well packed lots considerably higher and some poor stock lower. In the event the exceptionally high price the farmer who receives a low price is likely to be dissatisfied and if he does not report it the farmer who received the high price believes that his report is unreliable.

If the reporter happens to miss some of the low sales for cash complaints from the dealer since his shipper's state that the market report does not mention anything selling that low and they insist that the commission man is making false returns or is a poor salesman. It is not an easy task to quote prices that fairly represent the market and to describe market conditions in such way that the farmer can picture conditions for himself.

Cooperation-Competition

(Continued from page 6.)

tion, or a system under which even those who prefer competition are not permitted to compete, or to run business enterprises in competition with cooperative enterprises."

The cooperative propaganda, both private and that of the government through the agricultural department, has not yet generally reached the stage of openly advocating compulsory cooperation, but there would be probability of such a demand in the event of the enaction of the McNary bill, with a farm board whose successful operation could be based conceivably only upon price-fixing power, and enforcement upon compulsory cooperation of producers. The issue would ultimately be the question of a substitution of compulsory cooperation for competition with the intent to abolish the latter as "wasteful".

The reasoning, obviously would be "that there is more waste in competition than in compulsory competition or whatever system is substituted for competition. This," as Prof. Carver adds, "has not been shown and cannot be shown." But, in the face of political pressure for compulsory cooperation by a militant cooperating minority, Congress would hesitate no longer on that score, than it will, apparently, at enacting the McNary "farm relief" bill. Evidently the farmers are disposed to endure the evils of that experiment in paternalism. Congress, as at present composed, rarely concerns itself with "such subtleties as the difference between Law and Cause.

A DIMINUTIVE but wiry Irishman applied at the dock for a job as stevedor. The foreman looked him over and told him he was too small. "Faith," said Pat. "Oi'll carry as much weight as your biggest man." So he was hired. They were loading sacks onto a boat, carrying them one by one from the dock along a narrow plank. After a few rounds Pat thought he'd show his strength, so he took two sacks, one under each arm. Half way across, the plank broke under the weight and Pat hit the water. Coming to the surface he looked at the fellow stevedors, but was soon out of sight. Coming back again to the surface and diving Coming up the third time and finally hanging on to the anvils, Pat hollered "If wan of you'se don't trow me a rope soon I'll drop one of these blankety things!"

Now in March

Men's Suits in a new style group

Each Month — A Selected Value!

A REGULAR part of our store service is to bring to your attention some one department each month. In this way you get a better idea of the outstanding values that are typical of the whole store.

This month you are especially invited to look over our newest Men's Suits.

You will see from this group of suits that what men are looking for this season is *style*. More than ever the lines of the coat, the set of the collar, the roll of the lapel *must be correct*. In your local J. C. Penney store you will find style that is new. You can count on the up-to-date modeling of our suits, direct from our buying office in New York.

You need not be an expert on fabrics in a J. C. Penney store. We serve as experts for you and we sell you only reputable, worthy fabrics. We work with some of the best-known mills. Our thousands of men customers trust us absolutely for fabric and tailoring. You make the choice; we take the responsibility.

Go into your local J. C. Penney store and let us show you a new style suit, in a becoming fabric pattern. You will like our service—always sincerely helpful. Our people know what smart style is and can aid you to select a suit that is good looking and right *for you*. Also, we see that it fits you correctly.



If you are a young man who sets the pace as well as follows it, here is the "Avenue" model. Its snappy character is backed up by high-grade tailoring. You can have this style in any one of several modish fabric patterns. Beginning in March we are making a feature of the "Avenue" at $24.75, with extra pants at $5.90. This suit is a real leader in style and will be carefully fitted to suit you.



THIS IS OUR "DORSET" MODEL. *It comes in a variety of fabrics, from which you can certainly make a pleasing choice. You can have it with peak or notch lapels. It is cut and made to your own specifications. Priced $24.75; extra pants $5.90. Dorset is styled for the man who wants to be well-dressed.*

• • •

Here you can buy a better suit

You could probably afford to spend more for your suits than we charge. But why should you? Everyone respects thrift. You would have to pay *substantially more* for these



FOR THE MAN OF CONSERVATIVE TASTES, *this style is fashionable and suitable. It is tailored for us by a maker who adheres strictly to our own specifications. J. C. Penney Co. stores last year sold over $12,500,000 worth of men's clothing. Such quantities obtain lower prices, which we pass on to you. Come in and examine for yourself the high quality of this suit.*

suits if another store sold them, we sincerely believe. Only because we buy for men in 1088 cities can we offer you so much greater values at $19.75, $24.75 and up. Our big purchases enable us to obtain very low prices for you in the *highest grades* of clothing.

Let us show you personally. If you do not know where the nearest J. C. Penney store is, write us. Address J. C. Penney Company, Inc., 330 West 34th Street, New York, N. Y.

There is a J. C. Penney Co. store near you in:

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Agricultural and Scientific Bureau

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THEY RAISED THE BARN IN FOUR HOURS

This picture was taken several years ago during the busy hours of an old-time Lancaster county barn raising. Between 8 a. m. and noon 120 good neighbors put up this structure to replace a smaller one on the farm of C. B. Snyder, one of the Pennsylvania farmers who received the Master Farmer Medal for 1928.

A Remedy for Overproduction

By W. D. ZINN

DURING the past few years much has been spoken and written about overproduction. One of my friend Ager has worried over it a bit, about the matter and he has quite a lot some mighty good stuff on the subject, but I do not think he has solved it. he has solved the question. Congress has been wrestling with the problem and there are a few people who believe they do not fully understand it nor do they have a panacea for all its ills.

The two great national political parties made a dash at it during the last campaign and it still remains unsolved. There are people who are foolish enough to believe that overproduction is responsible for the present low price of farm products. Then there is another class who are foolish enough to believe if the farmer gets more for his products the consumer must pay more for what he buys. This may or may not be true.

Some time ago I ate dinner at a hotel and paid 75 cents for the meal. My associate was a lady and one who had gone to the market and bought eatables and had taken them home and prepared them for the table. In other words she was an authority on the subject we were analyzing.

Consumer Demands Service

After the meal we figured up just what the farmer got for the food we had consumed and we found it to be 16 cents each. Here was a case where the producer got little enough but the consumer paid too much. Why this difference? It was easy to explain.

While the meal was being served there were more than twice as many waitresses standing around the dining room as had work to do and each had a white dress on that the public would say was too much soiled to be worn at the next meal. Who were paying these waitresses? Evidently the guests at the table.

We paid so much for the dinner and so much for the unnecessary extra service we enjoyed. We have gone mad on service. Merchants employ twice as many clerks as they really need, because their customers demand that they must be waited on the moment they step inside the door. It is thus all around the board. Who pays for all these extras? The consumer of course.

The farmer gets so little for his products because there is too great a gulf between him and the consumer. There seems to be good logic in that kind of reasoning. A remedy then for this trouble is to cut out all unnecessary service. Will the people do it? Not any more than they will quit riding in automobiles. But I did not start out to suggest this as the remedy.

What then are we going to do about the surplus that has given so much [illegible] statesmen [illegible] I am going to suggest [illegible] and will [illegible] and he might [illegible] as well be [illegible] somebody might be hurt if the question is solved.

One of the chief farmers of the United States are making a good living and saving a little money. One-third are barely breaking even. They are making nothing, neither are they losing money.

One-third are losing money all the time. This may be due to the fact that they have land that belongs to the class which Mr. Ager says ought to be abandoned. I pity that class of farmers, but would they not do better to go off and leave the farm if they could not sell it? It is not the best [illegible] for a country for the government to own too much land, but all such land ought to be owned by the government. The government will be commended much for buying all such land as has been criticised, and as we see justly, for developing more land to put in competition with the one-third of the farmers who are making some money but whose profits will decrease just in proportion to the amount of land developed. This losing class may own land that is susceptible of being made productive, but the cost will exceed the value of the land after it is improved, hence they would better get rid of it and the government should buy it.

The break-even class may be made and should, out of self respect, go out of the business. Now I believe the above-named scheme will solve the problem of overproduction and there but one trouble with it, and that it cannot be worked.

Cow Testers

A GREAT many farmers are going into the dairy business and whether they succeed or fail depends on the kind of cows they keep and the cost of the feed they feed the cows. Recently a dairyman told me that he was milking 20 cows and retailing his milk at 48 cents a gallon and was barely breaking even. I simply told him that there was a screw loose somewhere about his farm. A farmer who grows his own feed and has good cows and no waste ers ought to make a little money at the price for milk.

Upon investigation I found he had no silo. I am unable to see how the farmer can afford to milk cows without a silo. I also found he did not know what the butterfat content was of a single cow that he was milking, though he sold his milk on that test.

This farmer did what thousands of farmers have done went into the dairy business before he was ready. What he needs to do now is to get into the cow testing association and the tester will soon be able to tell him where the loss is. The first tester I ever heard make a report said that Mr. Brown in his association had twelve cows and he had just finished his year's test of his herd and the figures showed that had he kept the two best cows and sold the other ten at the beginning of the year he would have made just as much money. Five cows were boarders and the five others made just as much money as the first five lost. The investment of a little money in a cow-testing association would be a very good venture for a great many dairymen.

No matter in what line of farming we are embarking it will pay to get ready for the business before we begin. The cow tester will come as near earning the money his employer pays him as any one the dairyman can employ.

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Lime and Fertilizer Spreader

That will do good work. Made to attach to any farm cart or wagon

$15 00

J. S. GREENLEAF, Anson, Maine

To Thicken Sweet Clover

I planted sweet clover last year and some came up, but not very heavy. Could I sow some more right over this [illegible] I put one ton of lime on it. It is just [illegible] G. H.

IT IS a little trouble to thicken up the stand of sweet clover. Now, about the first of April from 10 to 12 pounds of seed and harrow it in. When sowing for pasture we always recommended that seed be sown by itself to insure a good stand. That gives a crop for pasture every year and a crop to ripen seed if it is properly handled and it needs no more seeding.

Sweet Clover Alone

A PENNSYLVANIA reader asks if it will do to sow sweet clover alone in the spring. There is only one trouble. If the ground is full of weed seeds there is danger of the weeds coming on and choking the sweet clover out. Barring this danger it will be all right. We usually sow from one-half to one bushel of oats to prevent this trouble.

Draining Hill Land

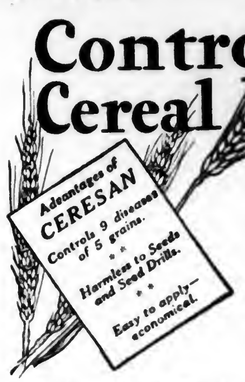
WHEN a farmer drains his level land he usually gets such good results that he begins to drain his rolling lands. There are often swampy places against the hillside that need to be drained. A very cheap and good way to do this is to cut a ditch two to two and one-half feet deep, and it is better not to cut this ditch straight up the hill but along the hill, and till this ditch with broken stone up to within three or four inches of the plow depth. These stones may be from the size of one's fist up to the double fist and they may be thrown in promiscuously. Some straw or leaves should be thrown on the stone before the dirt is put back. In putting dirt back on stone or tiling a great deal of time can be saved by using a team and plow.

This kind of draining will last indefinitely. We have a ditch of this kind on Woodbine that was put in 25 years ago and it is doing as good work now as it did when put in. A farmer who puts in this kind of a ditch is often killing two birds with one stone. He is getting rid of his stone and draining his land at the same time.

Lime and Wheat

A WEST VIRGINIA reader asks whether it will do to apply lime to the wheat in the spring and whether it should be harrowed in. Will it benefit the wheat? Lime may be applied to wheat in the spring very profitably. If it is burnt lime it should be harrowed in as soon as scattered. If it is allowed to get wet it will coagulate and will not do the good it would if the lime was harrowed in before it got wet. If it is ground limestone it may be scattered over the ground and not harrowed in and still give good results, but it will be better to harrow it in even with ground limestone.

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GRAIN farmers, who know that seed treatment can save crop losses by controlling diseases, are turning by thousands to the *new* effective disinfectant—*for all cereals*—Du Bay Ceresan.

Years of research . . . thousands upon thousands of dollars . . . were spent for its development. Now this improved *dust disinfectant* is available to every farmer for the control of these important grain diseases.

Wheat—Bunt or stinking smut, and seed-borne flag smut.

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Rye—Seed-borne stem smut.

Two years of severe tests by many authorities, including experts of Agricultural Experiment Stations and the U. S. Department of Agriculture, have convincingly proved the value of this *new* disinfectant to American farmers.

On 1928 spring wheat, Ceresan reduced smut to almost nothing. The untreated check plots had from 22 to 32% of smut. A report by Dr. Benjamin Koehler, of the Illinois Experiment Station, shows Ceresan on oats gave double the yield increase obtained with formaldehyde. Dr. H. A. Rodenhiser, writing in *Phytopathology*, reported Ceresan gave complete control of barley stripe.

Ceresan is a fine dry dust, which cannot clog the drill or corrode metal parts. It treats seed grains at a cost of only 6 to 9 cents a bushel. Easily applied as a dust; no soaking. Harmless to seed. Full directions with package.

Diseases of many other crops can be controlled with Du Bay Seed Disinfectants. Mail the coupon below for information, or ask your seedsman, druggist, hardware dealer or general merchant for pamphlets on Semesan Jr., for seed corn; Semesan Bel, the *instantaneous* potato dip; and Semesan for vegetable and flower seed and bulbs.

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As the old saying goes, "Handsome is as handsome does."

There's only one safe way to buy tires, and that is to buy a well-known reputable make.

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Limestone School, Center of Farm and Community Life as Told in This Article.

School Serves as Community Center

THE Washington District Consolidated School, at Limestone, Marshall county, W. Va., has become the center of farm and community life for the surrounding community through the agricultural program it has been conducting since 1926. The satisfying integration of the home, school and the community came as the result of manifold activities such as a fair, country life conference, 4-H Club work, compiling a community history, monthly community meetings and various other activities.

About July committees are appointed by the principal for a district fair and homecoming, which has become an annual event for September. The committees consist of the members of the community. The committees meet at the school house and plan their jobs definitely. They know before the fair date arrives what they are to do, and the committees and people always respond willingly. People bring their exhibits of livestock, farm products, relics, sewing, cakes, pastries and anything else that they desire.

A Census Taken

A livestock, reading and silo census is taken every autumn, preceding the annual community scoring, to determine the progress along these lines from year to year. The pupils are each assigned certain sections of the community and each home is visited in order to get an accurate report. This is published in the county paper, explaining the progress during the year.

A community council is elected by the community to assist in getting ready and scoring the community. The school principal usually heads the council and works with the committees, which are chosen under the following heads: Community Spirit, Citizenship, Recreation, Health, Homes, Schools, Business, Livestock, and Soils.

The scoring is an annual affair and is done under the supervision of the Extension Department at Morgantown. Each of the above heads has the value of 100 points, or a 1,000-point community in all. Limestone community scored 718 points in 1926 and 734 in 1927.

At the close of the conference a program of work is planned and left in the hands of the chairman of the community council. It is his duty to see that the newly elected community council, which is elected at the close of the conference, adopts it and "puts it across" for the next year. If this program of work is carried out, the community has grown so many points during the year. If the program of work fails, the community progress is retarded, because no community can stand still.

A community school for adults was held in February, 1928, for two days and nights in the school auditorium. The teachers were Dr. De Crane, potato specialist; Professor E. C. Sherwood, insect specialist; and Professor J. V. Hopkins, dairy specialist. Classes were conducted in potato growing, fruit and vegetable growing, and dairying. The Ladies' Aid Society served lunch at noon on the days this school was in session.

In the spring of 1928 the school children with the aid of their parents chose a community bird, the robin; and a community flower, the rose. Each family in the community agreed to plant at least six new rose bushes in 1928 and raise a family of robins. This project is meeting with much favor from outsiders, especially those who pass through this community.

Many Activities

A great number of activities and projects were engaged in on a cooperative basis by the homes and the school, such as:

The Babcock test of milk.
Limestone for calcium carbonate.
Soils for acidity.
Seed corn for germination.
Moving picture demonstrations, plays and lectures concerning the Mexican bean beetle, European corn borer, conservation and planting of forests, and dairying.
Making of farm gates.
Making balanced rations for live stock.
Use of agricultural bulletins.
Use of score cards for scoring live stock.
Working out fertilizer formulas.
Pruning, spraying, budding and grafting demonstrations.
4-H Club work (a major project).
Monthly community meetings.
Community clean-up program.
Poultry culling demonstrations.
Selecting seed corn, oats, wheat and potatoes.
Winter planting of walnuts.
Making seed corn testers.
Proper use of farm papers.

A history of Limestone community has been compiled and published in pamphlet form. The history contains twenty-five scenes of the community and a community map, making a 32-page pamphlet. The publication of this project was made possible by the school staging a play which the community patronized. The proceeds were used to finance the history. A copy was given to each of the 143 homes comprising the community. This agricultural program that has made the Limestone Consolidated School the center of farm and community life in the community could and should be carried out in every rural community in West Virginia. C. B. ALLMAN.
Marshall county, W. Va.

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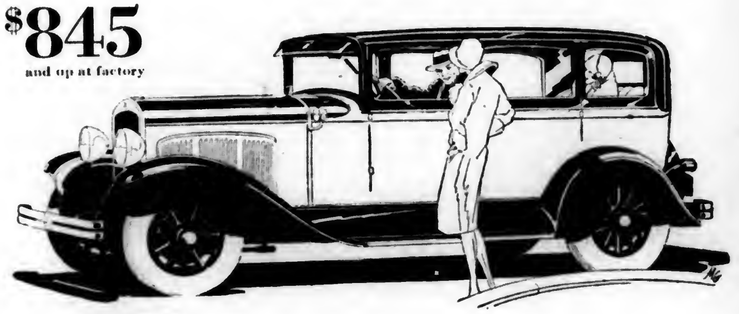
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But it is significant that even such a car should set a new sales record for the industry during the early months of its existence.

The answer must lie in a widespread public conviction that the genius and resources of Chrysler confer upon De Soto a standard of value that is unmatched by any car of comparable price.

Factor, $845; Roadster Espanol, $845; Sedan Coche, $845; Cupe Business, $845; Sedan, $885; Cupe de Lujo, $885; Sedan de Lujo, $995. All prices at factory.

DE SOTO SIX

A CHRYSLER MOTORS PRODUCT

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FARM BOYS AND GIRLS



The Beaver Dam in Flood Time

About Potter County Beavers

I HAVE read with interest what N. S. Grubbs had to say about our beavers and wondered if a little more might be added. My home is near the pond he describes, so I have enjoyed watching the colony. They were most active two years ago, during the summer of 1927. Last year a state trapper removed some of the beavers to stock other streams and the ones remaining were shy and did little work for many weeks. I am hoping they will be more active this season.

Early evening before a storm is the best time to watch them. The plastering of house or dam is an interesting sight. A beaver will swim out into the pond, dive and soon appear with a load of mud clasped with forepaws against his breast. When he reaches the house he will rise on his hind feet and balancing himself with his flat tail walk up the brushy, sloping sides of the house. If he falls, as I have often seen them do, he clings to that mud.

I have watched trip after trip. They will carry brush or poles for the house or dam in their teeth trailing them along in the water. If there is any trouble putting them in place they will exert real force and ram and beat them in.

The old beavers swim very silently and I have had them pass by within a few feet of the bank where I watched, apparently utterly unconcerned. But if disturbed up will come that broad tail, like a flash and when it is slapped on the water it sounds like the splash of a big stone. This is the danger signal for the colony.

A Stern Parent

A beaver will sit quietly on a hump or tussock in the pond gnawing a bit of bark or eating fresh leaves, occasionally passing them under water to "freshen" them a bit. Sometimes they will make their toilets out on a tussock. It is a comical sight to see them rear up on their hind legs and scrape or comb their fat stomachs with their front paws. They usually keep this up for some little time. But when the babies or pups appear one hears much plaintive mewing and whimpering.

One evening I watched a bit of stern parental government. A little fellow was trying to take his parent's supper, a fresh branch of leafy poplar. The old one pulled it away and moved a little distance. This was repeated several times, the infant whimpering and pursuing. At last the stern parent gave the little fellow a sound cuff and though apparently much grieved he let his parent alone and got a branch for himself.

Across from the pond and on the hill were many young poplars. These they cut and dragged down to the pond, making regular beaten trails. Along the stream some large poplars have been cut. Some are left, others trimmed neatly out, and others floated down to the pond. I have wondered why so many are left without being used after the trouble of cutting. There are a number of such trees lying around in nearby woods. Perhaps the work is done for the sheer joy of the cutting.

The common bulrushes that grow by the pond are favorites for cutting. I have seen many covering a quiet bit of water near the house. I suppose they are used for inside purposes, but as the inside of the house is under water I cannot tell. On clear water days one can see the entire structure of the dam under water.

The little snapshot I enclose was taken two years ago, showing the dam in flood time, with water pouring over it. The beavers had done their work so well that it held under all the strain.

A Potter County Reader.

The Spider in History

IN 1305 Robert Bruce was crowned king of Scotland, but, being attacked by the English, retreated to Ireland, and all supposed him to be dead. While lying hidden in the little island of Rathlin he one day noticed a spider try six times to fix its web on a beam in the ceiling.

"Now shall this spider," said Bruce, "teach me what I am to do, for I also have failed six times." The spider made a seventh effort and succeeded; whereupon Bruce left the island in 1307 collected 300 followers, landed at Carrick, and at midnight surprised the English garrison in Turnberry Castle. The next overthrew the Earl of Gloucester, and in two years made himself master of well-nigh all Scotland which Edward III declared in 1328 to be an independent kingdom. Scott tells us that in remembrance of this incident it has always been deemed a foul crime in Scotland for any of the name of Bruce to injure a spider.

Another story of the spider is in connection with Frederick the Great. While Frederick II was at Sans Souci, he one day went into his anteroom to drink a cup of chocolate, but set his cup down to fetch his handkerchief from his bedroom. On his return he found a great spider had fallen from the ceiling into his cup. He called for fresh chocolate, and next moment heard the report of a pistol. The cook had been bribed to poison the chocolate, and, supposing his treachery had been found out, shot himself. On the ceiling of the room in Sans Souci a spider has been painted, according to tradition, in remembrance of this story.

Indoor Baseball

HERE [illegible] a party or at school [illegible] room. It is a ball game [illegible] girls can play [illegible]

Rules

Ground—[illegible] or a diamond [illegible] front of room.

Teams—two teams [illegible]

Object—to attain highest [illegible]

Pitcher—gives problems [illegible] questions to batter and tries to put [illegible] base runner by giving [illegible]

Base runner—the batter after answering one question is made a [illegible]

Catcher—gives answers when batter fails and tries to give all answers before the next batter can.

Baseman—tries to give answers before base-runner can. If he succeeds base-runner is out.

Strike—if the batter misses a problem and the catcher gives it correctly it is called a strike. Three strikes make an out.

Score—the base runner scores one for his side by successfully passing each base, either by answering questions correctly or having the batter answer questions by which he is advanced.

Hit—if the batter hits the ball [illegible] correct answer before catcher [illegible] to first base.

Outs—three outs constitute an inning. Outs are made by batter [illegible] catcher.

Balls—if the pitcher gives a pupil [illegible] incorrectly it is a ball. After three balls batter may go to first base [illegible] has three trials.

Umpire—unanimously elected by [illegible] sides.

Questions—mental arithmetic, [illegible] and their capitals, any geography [illegible] questions, or even a spelling bee.

Time Extended

[illegible] "Don't Wait to Drink" is [illegible] that Pennsylvania [illegible] decided to extend the [illegible] week for the farm [illegible] send in their entries. [illegible] other prizes still [illegible] The winners will be announced in our next edition.

[illegible] as might be possible [illegible] are according to the letters received but not the benefit of those who did not get in on the contest last week, you may have seven more days for your letter on "What I Would Do If I had 4000." Make it short and to the point. Three prizes are offered for the best.

Letters and cartoons should be mailed to Young People's Page, Pennsylvania Farmer, 730 Penn Ave., Pittsburgh, Pa.

Little Folks Corner

When Bobby Had Measles

LAST week Bobby was absent from school and when Jimmie stopped to inquire, Bobby's mother said: "Why Bobby has measles." For a few days Bobby thought it was lots of fun not to have to go to school, but pretty soon he got restless and began to think about the good times the other fellows were having coasting, skating and building snow forts.

Then mother had to put on her thinking cap and find some games like these to amuse him until the doctor said he might get up. Just at first when mother gave Bobby this list of Chinese-looking words, Bobby thought they were much too big and hard for even a fourth grader, but with mother's and Mr. Webster's help he finally discovered they were "Winter Vacation." Let's see what you can do with them.

1—Chrisbout	8—Pesann
2—Repolbarth	9—Hanningg Hugee
3—Hlose	10—Rendet Frext
4—Al Pmeep	11—Mlakeno
5—Ommpemna	12—Lord Reso
6—Lssestthn	13—Pelelhg Danish
7—Himballe	14—Krothne xp

When they had untwisted these funny words into just common everyday words like—well, we'll tell you next week—Mother had another [illegible] reads and what do you think it was? "Hide and Seek." What, you think Bobby couldn't play that while he was in bed?

Well here is how he did it. Mother even kept on mending [illegible] rompers while she played: First, he closed his eyes and said: "I [illegible] hiding on the pantry." Right on, Mother said. "In the cookie jar." Then she guessed he was in the [illegible] hole in the flour bin, in the front [illegible] heard just each time Bobby shook his head and finally he had to tell her he was in the mouse-trap. And how Mother laughed!

They played this game until [illegible] almost fell out of bed laughing at mother hiding in grandfather's [illegible] and it often thought he had enough entertainment for that day and so [illegible] it was getting late and mother had run downstairs to see about supper. Bobby began to wonder if any of the other fellows had a mother who was such a "good sport" and he made up his mind he was going to do something she asked him to do when he got well.

Odd Sights

I saw a row sip through the [illegible]
A horse fly in the store;
I saw a board walk up the street,
A stone step by the door.
I saw a mill race up the road,
A meeting house the gloom;
I saw a night fall on the lawn,
A clock run in the room.
I saw a peach stand up high,
A sardine box in town;
I saw a leaf sing at the gate,
An oak stand on the ground.

For You to Guess

My best is a planet, my second is an [illegible]
Who with baited hook waits for a fish.
My whole is a bright colored bird with [illegible]
Near the water you'll see it take [illegible]

If You Are Under Twelve

You may win a prize by sending in the best paper giving the answers to the funny looking words in the story. There will be two prizes—one for boys and one for girls. Selection will be made first, correct answers, and second, the neatest paper.

There is just one condition—no child over twelve may compete.

Mail your letter to the Little Folks' Corner, Pennsylvania Farmer, 730 Penn Avenue, Pittsburgh, Pa.

PASSING EVENTS IN PICTURES



[Copyright by Underwood & Underwood]

1. Breaks trans-continental flight record. Photo shows Capt. Frank Hawks [illegible] at the controls of his Lockheed "Air Express" before taking off on his trans-continental non-stop flight from Los Angeles to New York. The trip was completed in 18 hours and 22 minutes, clipping 36 minutes from Art Goebel's record of 18 hours and 58 minutes. Both Capt. Hawks and Mechanic Oscar Grubb were high unconscious after the gruelling flight.

2. The new Chief of the Marines. Photo shows Major General Wendell Cushing Neville, who has been selected by President Coolidge to succeed Major General John A. Lejeune as Commandant of the United States Marine Corps.

3. The Newark, N. J., Health Department, in an attempt to prevent the spread of contagious diseases, has furnished lobs to children stamped with the following warning: "I Don't Want to Be Sick—Don't Kiss Me." One such bib is sent out by the city with each new birth certificate, and health officials hope that the bibs "will help educate mothers against the hazards of kissing and consequent spread of disease."

4. Archie "Papoose" Exam, four year old orphan at Haskell Institute who has the distinction of being the only "All American" mascot. He enrolled at the Indian school last fall and was immediately appointed mascot of the football team. After the football season he became the basketball mascot, and when the court season ends, he will turn his activities to track and baseball.

5. Waiting for a trolley in Tokyo. Photo shows a picturesque scene on a rainy day near Nihonbashi in Tokyo. Some of the citizens use the native parasol while others use the imported umbrella.

6. Photo shows the "Madonna of the Trail", just after it was unveiled in Upland, California, in honor of the pioneer mothers who crossed the old Santa Fe Trail. The 20-ton sculpture portrays a pioneer mother and her children, typical of the courageous women who faced the hardships of the winning of the West. Eleven other similar ones are being placed on national highways of the United States by the Daughters of the American Revolution. In the foreground is Mrs. Caroline Cook, 83-year-old pioneer who crossed the plains in a covered wagon.

TIGHT BINDING TEXT CUT OFF

Pickett's Gap

By HOMER GREENE

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THE next moment he was gone, a stalwart, splendid figure, striding like an athlete through the luminous haze.

Up from Dannie's heart came the old desire, and out from his lips the spoken longing: "Oh, if I only had a father—like him!"

But there was no time now to dream or to ponder disappointments. He felt that he must get at once into the house and to bed. He went up the side path and round to the wood-shed, where he left his hatchet. Max, the dog, came whining and crouching at his feet, begging for notice and caresses. Dannie paid little heed to him, but hurried on. As he turned the corner of the house by the kitchen porch, he came face to face with his grandfather.

"Why, Dannie!" exclaimed the old man. "What routed you out so early this morning?"

For a moment Dannie was at a loss for an answer.

"Oh," he stammered at last, "I—I just thought I'd come out and look around."

"That's just what I thought I'd do, too," was the response. "I kind of want to see where those stakes are set. I want to know how much of my land and what part of it, I'm expected to present to the railroad company. Would you like to come along, Dan'?"

"Yes, grandpap, I would."

They passed out at the gate and down the road, and Dannie led the way to the potato-field. Near the big rock they found a stake. It was one of those set by the engineers who made the last survey, but it was within five feet of the place occupied by the one Dannie had pulled out the night before. The old man gazed at it bitterly.

"Takes the best part of the lot," he said. "Spoils the meadow," he continued, as he looked down the line; "cuts my farm in two; prevents me from gettin' to water, and destroys the public road."

They followed down the line of stakes as he talked. The survey took almost exactly the same route as that followed by the survey of the Delaware Valley & Eastern engineers the afternoon before. The crossing at the public road was not five feet from the first location, for Dannie saw the place in the bank where he had pulled out the stake.

"Ruins the road," muttered the old man, "ruins the farm, despoils the tomb!"

He was working himself into a passion again. Dannie foresaw that in ten minutes more he would be at a white heat.

"Why don't you pull the stakes out, grandpap, and throw 'em into the brook?"

Dannie never knew what strange impulse forced him to ask that question. The old man turned on him instantly.

"Don't speak of it; it's against the law."

"But you said last night that no better deed could be done."

"I was in a temper last night and said things I shouldn't. No Pickett was ever yet arrested for violatin' the law. You and I don't want to be the first ones."

"It might be done in the night time, grandpap, an' no one be the wiser."

Some strange fate was surely leading Dannie to his own undoing.

"No, that'd be cowardly, and no Pickett was ever yet a coward."

Dannie winced as if his grandfather had dealt him a physical blow.

They were walking on down the road now toward the graveyard wall. The bitterness in the old man's heart forced itself again to his lips. "They might have taken my land, and my road, and my stream, and my gap and all, if they'd only have let my graveyard alone. I can't stand that, I'll make 'em—"

HE stopped suddenly, his gaze fixed on the line of stakes as it skirted the shore of the brook and then crossed to the other side of the stream opposite the graveyard.

"Dannie!" he exclaimed. "Look! There they go across the brook. They don't touch the graveyard. Do you see? They don't touch it!"

He was pointing in intense excitement to the staked-out curve showing distinctly under the rising bank of fog.

"That line don't go within ten rods of the graveyard anywhere, Dannie—not within ten rods! Come, let's see!"

He started on at a rapid pace, and without waiting to go in by the entrance, began hastily to climb over the stone wall that surrounded the burial plot. Reaching the center of it, halfway between the monument and the road, he looked searchingly about him.

"Not a stake, Dannie!" he cried. "Not a stick or a stone anywhere inside! Not one!"

He was as intensely delighted as if he had come suddenly upon a mine of hidden treasure. All night his distressed fancy had conjured up visions of his burial plot ripped and torn with plow and pick and spade, of the monument and headstones begrimed with the smoke of the thundering locomotives. All night his embittered heart had burned with what he thought to be an insult to the living and an outrage on the dead. And now, to find his fancies and his fears suddenly dispelled—it was like waking from a dreadful dream. But—he turned sharply on the boy at his side.

"You told me they ran through the graveyard! Why did you tell me that?"

"Well—they—they—I saw them in here anyway. They must have changed it afterward. I can show you the place where the stake was set."

Sure enough, he could and did. The hole left by it was still distinctly visible. And he pointed out also where the grass was bruised by the treading of feet and the dragging of the chain across it.

The old man was satisfied, but Dannie's mind was in a tumult. He hardly knew which was to turn or what to say. He dreaded every question that might be asked him, lest the answer to it should involve him in some hopeless contradiction.

Oh, what a tangled web we weave
When first we practise to deceive!

But Abner Pickett's delight at finding his graveyard free left him in no mood to question or to criticize. The predominant thought in his mind was that the engineers, at the cost of increased distance, heavier grading and additional curvature, had avoided cutting through his graveyard. It relieved his mind and gratified his pride.

"Look, Dannie!" he exclaimed, with a sweep of his arm toward the mouth of the gap. "Ain't that a beautiful curve? I tell you, the engineer that laid that out knew his business! What kind of a lookin' man did you say he was, Dannie?"

"Tall, Grandpap. Handsome. Light hair, and blue eyes that look you through. Voice like a—"

"What, Dannie! What! Light hair and blue eyes?"

"Why—no. The man I talked with yesterday afternoon had dark eyes and hair and whiskers. I don't know as he was so very tall, either. I don't know—oh, I don't know anything! I'm so tired and hungry and done out!"

And he was tired and hungry and "done out." He dropped to the greensward at his grandfather's feet and burst into tears. And Abner Pickett, believing that the boy had undergone only what he himself had suffered, bent down to him with soothing words, lifted him to his feet, and hand in hand through the ever thickening mist the two walked the road toward home.

It is the law in Pennsylvania that when a railroad company locates its route for a railroad by making its survey and setting its stakes, and that route is duly approved by its board of directors, it can hold the location against any other company making a subsequent survey.

At the time of the events here recorded, two rival railroad corporations had become suddenly aware of the value of Pickett's Gap as an outlet from the anthracite coal fields easterly to the Delaware River and to tide-water. Not that the project of building a railroad across that section of country was a new one. On the contrary, it had been talked of for years. Indeed, a survey had once been made within a mile of the mouth of the gap, but the stakes had rotted away or been destroyed long before.

It was due to a combination of certain great coal and coal interests that the subject had been now revived, and the engineers, looking over the ground, became suddenly impressed with the importance of securing the Pickett's Gap route. For that moment it was a race between the Delaware Valley & Eastern Railroad Company and the Tidewater & Western Railroad Company to secure the right of way through Pickett's Gap.

This gorge, the only opening for fifteen miles through the ridge that flanked the westerly shore of the Delaware, became thenceforth the objective point toward which the engineers of both railroads bent all their energies. The Delaware Valley & Eastern worked up toward it from the Delaware and the east, while the Tidewater & Western worked down the country from the west, adopting, perforce, as to its rival, the survey of former years.

FROM information received at the offices of the Tidewater & Western it was known that Nicholson the Delaware Valley & Eastern engineer, was on a certain day in September, working up from the shore of the Delaware toward the mouth of the gorge, and that in all probability he would set the stakes in that coveted glen on the following day.

There was only one way to outwit him and take precedence, and that was by connecting with the terminal point of the old survey and making a new location through the gap. This scheme originated in the fertile mind of the chief engineer of the Tidewater & Western, and he sent his most trusted lieutenant, Charlie Pickett, to carry out the plan.

No better selection could have been made. Charlie Pickett was familiar with every foot of the ground. By his own unaided effort through three years he had risen through the various positions of rodman, chainman, flagman, rodman and leveler, and now, as transitman, he was entrusted with the most careful and critical work of one of the most important railroad corporations of Pennsylvania.

But instead of stopping for the night at the easterly slope of the ridge that overlooked the Delaware, Nicholson had, as we have already seen, pushed his survey vigorously through the gap and was the first to occupy the route.

That Charlie Pickett did not know this when the moonlight he set his stakes between the gap and the glen was not his fault. There was nothing on the ground to indicate that any engineer had preceded him.

Nor did Nicholson know, when he led his men through the gap on the following morning, that the stakes at which he glanced as he hurried on had not been set by himself. The mist hung above them like a thick cloud when he set up his instrument near the big rock in the potato-field and started his survey, and it was no wonder that the change in the line of stakes did not attract his attention. The true state of things was not known that day or at any time by any person except one—poor, unfortunate Dannie Pickett.

The Delaware Valley & Eastern people evidently meant to follow up their supposed advantage, for on the second day after staking their line they served their right of way agent unto the neighborhood of Pickett's Gap to secure title to the route.

Abner Pickett was sitting on his porch, enjoying his after-dinner smoke. Dannie was at school, and Isabrel was in the back lot. "A very trimly dressed young man descended from a wagon at the front gate and walked, somewhat hesitatingly, up the path. He had heard many stories of Abner Pickett's violent temper, and he was quite uncertain as to how the old man would receive the proposition to purchase a right of way through the gap.

"This is Mr. Pickett, I believe?" the young man said.

"Pickett's my name," replied the old man, sullenly. "Will you come up on the porch and take a chair?"

"Thank you very much. My name is Safford Pickett. I represent the Delaware Valley & Eastern Railroad Company."

"Yes?"

"You are doubtless aware that this company has laid out a route for a railroad through your property."

"Yes, I know it."

Here the agent launched out into a eulogy of his company, and dwelt upon the advantages which would accrue to the country in general, and to Pickett county in particular, by the building of the railroad as surveyed.

Abner Pickett did not appear to be impressed in the slightest degree. The agent became anxious and uncomfortable.

"We need the right to pass through your property, Mr. Pickett, and we are willing to pay you for it as we may say liberally. Have you considered what compensation would be satisfactory to you?"

"No, I haven't."

Well, if I am correctly informed, we run through your land a distance of about seven thousand feet. In no place do we need to take more than fifty feet in width. That would make, as you see, about eight acres. Now I really don't know what your land is worth per acre."

The rising inflection at the end of this last sentence called for an answer, but none was vouchsafed by Abner Pickett. He continued to puff slowly at his pipe and gaze out toward the distant hills.

"As I said, Mr. Pickett, we are willing to pay you liberally. We consider that the right of passage through the gap is of considerable importance and value to us. How—for instance—how would eight hundred dollars strike you?"

The agent waited, in breathless suspense, for a reply. The old man shifted his gaze from the distant landscape to the agent's face. He removed his pipe slowly from his mouth, leaned back in his chair and answered:

"Young man, it ain't worth it."

The agent was struck dumb with astonishment. He had never before had an experience like this. Men usually considered their property worth twice what he offered to pay them for it. Indeed, he had been prepared to double his offer to the owner of Pickett's Gap rather than have the slightest difficulty or delay in procuring a right of way. When he partially recovered from his surprise, he found voice to say:

"Well, Mr. Pickett, that gap, you know, is a most favorable outlet for us. We really need it, and we are willing to pay you for it what it is worth."

"Just so. But you can't pay me any such price as that. I say it ain't worth it."

THE agent was still wondering whether or not he was dreaming; but his sense of a good bargain was beginning to reassert itself, and he inquired hesitatingly:

"What, for instance, would you consider right, Mr. Pickett? What, in short, may I ask, is your figure?"

"Well, my land is worth twenty dollars an acre, take it on an average."

"But, Mr. Pickett, that would only come to a hundred and sixty dollars. That is—pardon me—but that is really inadequate."

"If you want that land at twenty dollars an acre, you can have it," said Abner Pickett. "If you don't, you can let it alone. I sha'n't take a cent more or less."

Continuing to protest, the agent drew from his pocket a blank contract of purchase and began to fill it up, drawing his chair to the little three-cornered porch stand. Poising his pen in his hand, he looked up at the old man appealingly. "Let's make it two hundred dollars, Mr. Pickett. Really, I—"

But Abner Pickett interrupted him impatiently. "I've told you what's what. If you want the property at my figure get your paper ready an' I'll sign it; if you don't want it say so, an' don't waste any more o' my time." That settled it.

When Abner Pickett had signed and sealed the contract he turned slowly to the agent.

"Now I want to tell you just one thing, young man," he said. "Your company sent their engineers and laid out their railroad in a scientific and gentlemanly way. They had consideration for me and for my property, and above all else—far and away above all else—they had respect and reverence for the dead. When they came to my graveyard they turned aside and run around it, didn't they?"

"Really, Mr. Pickett, I am not familiar with the details of the location, but stakes set by the engineers mark the center line of the right of way you are selling to us."

"Very good. But if your engineers had staked a line through my graveyard, they couldn't have bought a square inch of my land for all the money they could have piled on my farm. And what's more, I'd 'a' lawed 'em and jawed 'em and fought 'em from now till the crack o' doom! That's all. Good day!"

He thrust his hat on his head, shook hands with his visitor, and strode away in the direction of the barn. The right of way agent put his papers carefully into his pocket, and remarking to himself that this was certainly the most astonishing man it had ever been his good fortune to discover, walked down the path, resumed his seat in the carriage, and drove smartly up the road.

It was already beginning to rain. The heavy mist of the preceding morning had been the forerunner of a September storm. By the time night came the rain was pouring down, the wind was blowing furiously, and it required a blazing wood fire in the sitting-room of the Pickett house to make it comfortable.

Before this fire Abner Pickett and Dannie were seated, while Aunt Martha was still busy with her household duties. Every hour that had passed since the night of his adventure had left Dannie more perplexed, more distressed, more fearful of the final result of his rash and, as it seemed to him now, incomprehensible conduct.

He did not know that he had not yet reached the depth of his anxiety and misery. His grandfather broke the silence:

"Right of way agent was here today, Dannie."

"The—the what?"

"Right of way agent," Abner Pickett replied. "The man that buys the right of way for the new railroad."

"Which new railroad?" asked the boy.

"There's only one that I've heard anything about. They call it the Delaware Valley & Eastern, don't they?"

"I believe so. And what did he want, grandpap?"

"Wanted to buy the right of way for his railroad through my property, of course. And I sold it to him. Strip fifty feet wide right through. Sold it for a hundred and sixty dollars. What do you think of that bargain, Dan?"

"Why, grandpap, I've heard you say you wouldn't take five thousand dollars and give a railroad the right to run through the gap and through your farm."

"That depends on how I'm treated. These people acted the gentleman with me. They run their railroad around my graveyard at an expense to them, in the way of buildin', of at least a thousand dollars. If they'd run it straight through, they couldn't have got my land at any price."

"But—but how do you know they didn't run it straight through, grandpap?"

"Why, haven't you and me seen the stakes as plain as day, runnin' across the brook and curvin' around to the mouth of the gap? I sold 'em fifty feet wide along the line of their stakes—nowhere else."

"But suppose it was some other company that set those stakes around the graveyard. Suppose the Delaware Valley & Eastern had run their line right across it, and their stakes had got pulled out some way, and what you sold 'em was really through the graveyard, and suppose—suppose—"

"Well, what on earth are you conjurin' up?" said Abner Pickett. "What's the use of supposin' things that never happened and ain't likely to happen? You act just as though you'd gone daft on the subject of this railroad. What's the matter, Dan? What ails you, anyhow?"

"Oh, I don't know, grandpap. I've worried so about this railroad runnin' through your—potato-field."

"I guess we can raise as many potatoes."

"And your meadow."

"We can grow as much grass."

"And your gap."

"There's room for it there."

Dannie made a supreme effort. He feared that his grandfather had been deceived into selling a right of way through the graveyard, and he felt that if he spoke now and told what he knew, regardless of consequences, there might yet be time to save the old man from utter humiliation and loss.

"But they did run through your graveyard, grandpap," he said, at last. "They did set their line of stakes right across it. I know it. I saw them do it."

"So you said before. But they thought better of it afterward, and went around on the other side of the brook, didn't they?"

"Let me tell you, grandpap. Let me explain. Let me—"

What Dannie would have said, how he would have explained, what confession, if any, he would have made had he not been interrupted, is one of those things that will never be known. The emergency was sudden, and he intended to meet it at any cost.

But a simple interruption altered the entire current of his thought. The outer door of the kitchen was opened, and Gabriel came in. It seemed as if he were blown in by the gust of wind that followed him. Something in the kitchen fell with a clatter, and the old man and the boy both started up to see what it was. The clothes-horse with the washing on it, drying and airing by the fire, had blown over; but Aunt Martha picked it up before it had fairly touched the floor.

"You always did beat the world for carelessness!" growled Abner Pickett at the unfortunate hired man. "Come in here and tell me what David Brown said about lettin' me have the thrashin'-machine."

Gabriel hung up his wet hat and coat, muttering to himself, "If lightnin' struck him dead, he'd jump up and lay it onto me." Then he added aloud, "Says we can have it, Mr. Pickett. Says he al'ays did like to 'commodate his neighbors."

"WELL," responded the old man, "on the whole, David Brown ain't a bad neighbor. You might go further and fare worse."

Gabriel shuffled into the sitting-room and drew a chair up to the fire.

"Queer thing David was tellin' me about the railroad," he said.

Dannie's heart began to thump in his breast. He knew intuitively that the story of the night survey was coming. And with that story would come also—what? He glanced fearfully at his grandfather, who had again settled back in his big chair and was puffing at his pipe.

"Well, give it to us," said the old man.

"Why," responded Gabriel, "seems that along in the night some time, after them first fellers had set their stakes, another lot of surveyors come down the creek, and run another line through the gap by moonlight, or lamplight, or suthin'. The talk is that they made their survey for the Tidewater & Western. Tell ye what, if them two railroads get to fightin' each other, the fur's got to fly! 'The bigger the barrel, the bigger the battle,' as ol' Isra'l Pidgin used to say."

Abner Picket straightened up in his chair, took his pipe from his mouth, and looked at the hired man incredulously.

"Fact, Mr. Pickett," continued Gabriel. "Queer thing about it, too. The fellers that made the night survey run around the graveyard 'stead of crossin' it. I couldn't make out before what them stakes was doin' 'tother side o' the creek."

The old man was already beginning to lose his temper, as he foresaw the possible consequences to him if the story told by Gabriel should prove true.

"Why, you idiot," he ejaculated, "there's only one line of stakes! I've seen 'em all myself. I've been over the whole line."

The hired man was not in the least disturbed at being called idiot by Abner Pickett. He had got over being sensitive on that point years before. Seeing that his story had roused the keenest interest of his listener, he went on with the most apparent enjoyment.

"That's the queerest part of it. Both railroads claim the stakes. Fellers that done the night work says they wa'n't a stick nor a stake to be seen nor found, from the big rock in the potato-field to the land-line 'tother side of the gap, when they made their survey. Fellers that done the afternoon work swears their stakes was set every fifty feet from end to end of the line, and was all in place at six o'clock in the evenin', when they knocked off work."

Both the old man and Dannie were listening now with intense earnestness. Gabriel recrossed his legs, smacked his lips in keen enjoyment of the sensation he was creating, and continued:

"Fact, Mr. Pickett! Queerest thing of all! I'd swear them fellers in the afternoon run their line straight across the graveyard. Seen 'em drive stakes there with my own eyes. Didn't you, Dannie?"

"Yes, I did, Gabriel!"

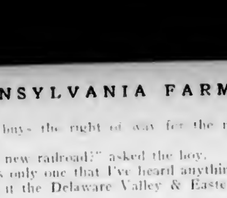
"Yes. Well, where was them stakes nex' mornin'? I hunted high an' low for 'em; couldn't find hide nor hair of any one. 'Stead o' that, there was them stakes across the creek. What do you think o' that, anyhow, Mr. Pickett?"

Abner turned in his chair till he was squarely face to face with Gabriel.

"Did David Brown tell you all that?" he asked, slowly.

"Every word of it, Mr. Pickett, an' more."

(To be continued.)



The Cheerful Plowman

IT'S MOSTLY IN THE MIND

MY COUSIN from the town of Bolt declares it's lonesome here, he says his feelings would revolt within a fleeting year. "How can you stand this droning life?" he often says to me. "There is no noise nor sound of strife that any one can see. I hear no clanging of the cars, no whistling of the cops, no cheering for the movie stars, no bustling of the shops.

"I must have throngs of passing folks to keep my heart alive. I must drink in some vaudeville jokes or I can never thrive. You rise and milk a creepy cow, you slop a stupid hog, you poke some fodder from the mow, you chop an oaken log, you lie yourself out to the field and tramp around for hours, your blood stream soon will be congealed, you'll lose your kicking powers!"

When cousin talks like that to me I laugh him in the face, I tell him that he cannot see, that blindness is disgrace. "Hey, listen to that bobolink and hear that singing wren. Those are good noises. I should think elixir meant for men! Just listen to that meadowlark with liquid gurgling note. I'd know that fellow in the dark. I know his song by color; the noise he makes is noise indeed it ought to stir a man. It will not let you go to seed, my good old Cousin Dan!

"Just hear the sound of whistling men all busy at their tasks. I'm quiet says again, again that those are all it asks! Just hear the noise of lowing kine, the gentle buzz of bees, just hear the breezes sweet and fine go humming through the trees! If noise is what your spirit craves you'll find it here, I'm sure, and not the kind that clangs and raves, but noise that's Simon pure! This longing that you have for din, for crashes, bangs and roars, for hip-hurrah as loud as sin on Pretzel-tory's shores, is just a phantom of the mind, for all those mad alarms have substitutes refreshing, kind, upon our wholesome farms!"

J. E. T.

TIGHT BINDING TEXT CUT OFF

It's a funny thing—cheap paint costs *more* than good paint

IT isn't awfully funny either—not when you are paying the bill. Yet many people buy the product that costs the least money. But cheap paint is necessarily made from cheap ingredients! It *has* to be. to keep the cost down!

The result is it covers a smaller area. it doesn't look as well and the whole job will soon need repainting.

Don't fool *yourself*. In the end cheap paint costs more than good paint! Make sure and buy Felton-Sibley's. Sold by your Felton-Sibley Dealer. Ask him to show you the F-S Color-Guide. It will help you.

FELTON, SIBLEY & CO., Inc.
Fourth and Cherry Sts., Philadelphia, Pa.
Manufacturers of Paints, Varnishes & Lacquers Since 1863

FELTON SIBLEY
Ready Mixed Paints

I Sold My Business to Become a WATKINS Dealer!



—Now I own my home
—Have a good bank account
—A fine business car
—A dandy pleasure car

I ONLY WISH I HAD DONE IT SOONER

F. E. WILSON, Mass.
(Address on Request)

Wilson Averages **$60.00** a Week SUPPLYING FARM TRADE

Several established routes available in your State.

Up to 1908 I worked in a grocery store; at $14.00 a week. In 1908 I opened up a meat business of my own, and stayed in it until 1914, when I took a Watkins Contract. I only wish that I had made the change sooner.

My Watkins business enabled me to pay for a fine home, a car for business and one for pleasure. I have some good investments in stocks, and I also own a clean stock of goods. I personally do not know of any business that will bring such splendid results.

You do not need capital or experience. This mighty ten million dollar Company will back you—but you must be a man of good habits, honest and ambitious to get ahead.

Long-Established Farm Users Will Welcome You

If you want success like this Mail Coupon at Once

I would like to know how Wilson did it. Send me complete information free.

YOUR NAME.....

ADDRESS.....

THE J. R. WATKINS COMPANY
Rural Dept. L
233 JOHNSON AVE., NEWARK, N. J.



Regardless of the value and importance of "cost accounting" in farm management studies there is nothing quite equal to keeping ahead of your work. This man is a farm tenant with rent fully paid to date and spreading manure on February snow in preparation for his sixth corn crop on the same farm.

Plans for a Timber Crop

Will it pay to plant young pines about two feet in height. Would it be profitable for a man of 33 to start young pines along a hillside not farmed? How long would it take for a tree to grow to ten inches [illegible]

F. L. Strasser.

I JUDGE that what you have in mind is the growing of trees which have come up naturally and which are now about two feet high. You will find that the root systems of these trees are very irregularly developed. Not only will they be expensive to take up but they will be even more costly to plant due to the presence of several rather long roots which would make it necessary to dig large holes. Furthermore, you are very likely to have a rather low percentage of survival. A person might be justified in using such trees for shade or ornamental purposes or perhaps a wind break, but not for a straight out and out forest plantation.

Ordinarily you can get small trees suitable for forest planting from the State Department of Forests and Waters at a very much lower figure than you could possibly hope to dig these pines which you describe. The trees would not be so large, but you could plant them much more cheaply and you will get a much higher percentage of survival than with those which nature has grown for you.

In answer to your second question which is, "Would it be profitable for a man of 33 to start young pines along a hillside not farmed?" I might say that this is a pretty hard question to answer as to just whether a person is going to make a profit or a loss on a particular piece of land which he may set to forest trees. Taking average conditions into account, however, you would be safe in figuring that your young crop of forest trees would increase in value from two to three dollars per acre per year during the next twenty years and from eight to ten dollars per acre per year during the second twenty.

Some of the trees in the plantation will be ten inches in diameter at the end of twenty years of age if either white pine or red pine is used. Some of them will be larger than this at the age. Many of them will be smaller but the most of those which would be smaller than that would not be the trees which would make the final crop. I am making this on the assumption that the land is average land. I think it is altogether likely that red pine would do very well on the land in question.

J. R. Anderson.
Pennsylvania State College.

Alfalfa Seed for Penn'a

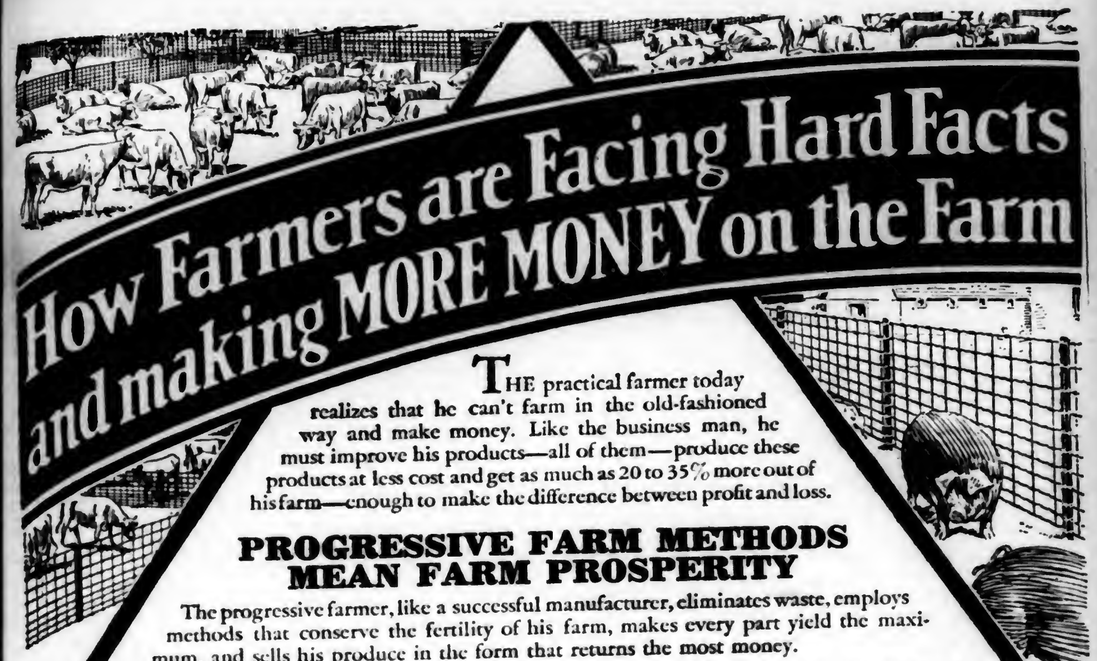
(Continued from page 9)

other than the correct origin. But it is extremely improbable. The dealer's records and samples are checked and his operations supervised not only in his own establishment but in other places from which he receives alfalfa seed or to which he ships seed. All records and samples must be in strict agreement. If the examination of such records and samples indicates that a dealer has willfully substituted seed of one origin for another he will be dropped from the list of verified-origin seed dealers and will be refused permission to issue any further verified-origin seed certificates. Obviously this would be a very serious matter and this penalty is a sufficient safeguard to prevent any one who might be inclined to make substitutions from so doing.

The verified-origin seed certificate relates only to the origin of alfalfa seed and not to variety, purity, germination, quality, grade, etc., and statements to the contrary are without authority and should be reported to the U. S. Bureau of Agricultural Economics, Washington, D. C.



We rent our farm on shares. It is the landlord's settled policy to donate to the tenant 300 pounds per acre of superphosphate for all land that the tenant has been able to cover with manure. We depend on getting better corn and we do get it. The tenant gets better corn too by reason of the superphosphate that costs him nothing—but the arrangement keeps the manure out clean in season and we have no occasion ever to do any kicking because of unhauled manure wasting in the yards or at the barn doors. Thomas Jones.



How Farmers are Facing Hard Facts and making MORE MONEY on the Farm

THE practical farmer today realizes that he can't farm in the old-fashioned way and make money. Like the business man, he must improve his products—all of them—produce these products at less cost and get as much as 20 to 35% more out of his farm—enough to make the difference between profit and loss.

PROGRESSIVE FARM METHODS MEAN FARM PROSPERITY

The progressive farmer, like a successful manufacturer, eliminates waste, employs methods that conserve the fertility of his farm, makes every part yield the maximum, and sells his produce in the form that returns the most money.

Thus he increases his income, increases the value of his farm, where the old-fashioned farmer impoverishes his farm and barely exists.

THE MORTGAGE LIFTER

More and more farmers are proving every year that balanced farming—made possible by good fencing—returns handsome profits, in fact they make as much as the other farmer would make if prices were 20% higher.

FENCE YOUR WAY TO PROFIT

There's no question of a doubt but that good fencing will pay its cost in increased profits. With plenty of permanent, and temporary fences you can practice balanced farming or sanitary hog and cattle raising and make more profit.

THE WISE BUYER

Knows that cheap fence is dear at any price. He knows that replacement costs and repairs often double the fencing cost of the cheap fence buyer. He knows that the best fence and steel posts repay their necessarily slightly higher price many times over by giving more years of complete protection.

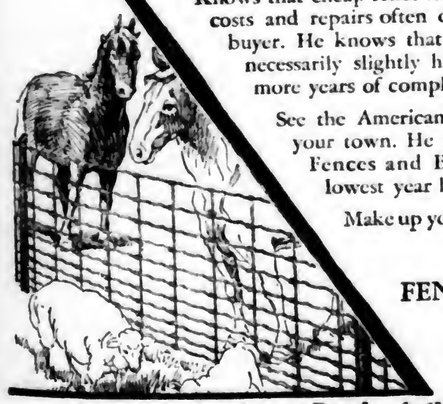
See the American Steel & Wire Company Dealer in your town. He can show you why Zinc Insulated Fences and Banner or Ideal Posts offer the lowest year by year costs.

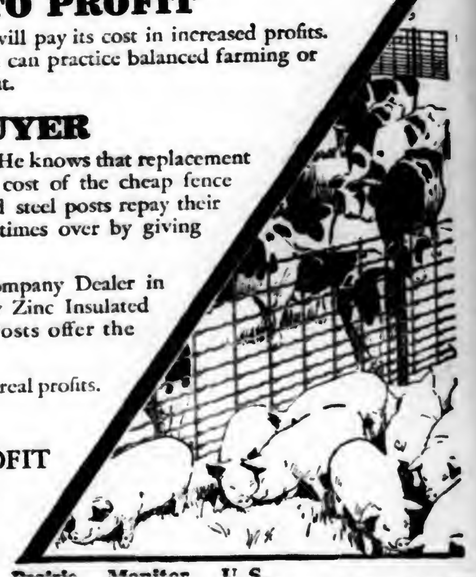
Make up your mind to get into real profits.

Act—today.

FENCE FOR PROFIT

Zinc Insulated FENCES





American Royal Anthony National Prairie Monitor U.S.
Banner and Ideal Steel Posts—Steel Gates National Fxpanding Anchor Dirt Set End and Corner Posts

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SUBSIDIARY OF UNITED STATES STEEL CORPORATION
Chicago New York Boston Birmingham Atlanta Kansas City St. Paul Dallas Denver Salt Lake City
U. S. STEEL PRODUCTS COMPANY San Francisco Los Angeles Portland Seattle

TIGHT BINDING TEXT CUT OFF



Wheat grown by Mr. C. H. Swan from 1 sq. rod top-dressed with Arcadian (left) and 1 sq. rod not top-dressed (right).

. . . and this story of

TOP-DRESSED WHEAT

is interesting—

MR. C. H. SWAN operates a farm of 200 acres in Wayne County, Ohio. The soil on part of the farm is derived from shale and is not very productive, but in his rotation Mr. Swan grows 30 to 60 acres of wheat annually.

After the severe winter of 1927-28 all the wheat was badly damaged. Mr. G. A. Dustman, County Agent, advised top-dressing with Sulphate of Ammonia and Mr. Swan purchased enough to top-dress about six acres at the rate of 125 lbs. per acre.

Within a few days the top-dressed portion of the field showed a decided improvement over the rest of the field.

At harvest a square rod in each portion of the field was cut by hand and threshed by the Ohio Agricultural Experiment Station. The yield per acre was as follows:

	Straw	Grain
Without Sulphate of Ammonia	1170 lbs.	9 bu. 50 lbs.
With Sulphate of Ammonia	2250 lbs.	16 bu. 30 lbs.

Here was a gain of 6 2-3 bushels of grain, worth $8.12 and over half a ton of straw per acre, at a cost of about $4.00. At this rate, Mr. Swan would have gained $129.60 more if he had top-dressed his entire field with Arcadian Sulphate of Ammonia.

Ask your dealer for Arcadian Sulphate of Ammonia or mail the coupon for a free sample and illustrated booklet telling how best to apply Arcadian.

ARCADIAN
Reg. U.S. Pat. Off.
Sulphate of Ammonia
The Barrett Company

AMMONIA-BENZOL DEPARTMENT
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New York, N. Y.
Atlanta, Ga. Cleveland, Ohio
Memphis, Tenn. San Francisco, Cal.
Norfolk, Va. Toronto, Ont.

Free Sample
See for yourself how fine running Arcadian Sulphate of Ammonia is. We'll send you a FREE sample—enough to fertilize 25 sq. ft. of soil. Just fill in the coupon and mail it—today!

The Barrett Company (address nearest office) N-5-29 NG

Please send me sample package of Arcadian Sulphate of Ammonia. I am especially interested in.....
(Write names of crops on line above)
and wish you to send me bulletins on these subjects.

Name.....

Address.....

KINDLY PRINT NAME AND ADDRESS

Alba Marl Lime
NATURAL SOIL SWEETENER
Not Ground—Natural Precipitate
Fine as flour.
Granulated for easy sowing.
Highest Analysis. Quick Acting.
Will not burn anything.
LOW COST.
Write for guaranteed delivered prices to
ALBA MARL LIME COMPAN
Charles Town, Jefferson Co., W. Va.

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Fire and Lightning Proof
ARMCO INGOT IRON Resists Rust
It does not pay to buy cheap painted steel roofing when you can get a guaranteed pure iron roofing that lasts five to ten times longer than the ordinary steel roof. Armco Ingot Iron Roofing is your most economical buy. *It will pay you to send for our free illustrated catalog. Write today.*
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PURE IRON NOT STEEL

Dempwolf's Fertilizers
20% SUPER PHOSPHATE
Dry—Drillable
SAVE FREIGHT HAULING STORAGE SPACE LABOR OF HANDLING
Figure your cost on the delivered per unit basis and you will see the saving. 1,000 lbs. 20% Superphosphate contains the same quantity of phosphoric acid as 2,000 lbs. of the 16% grade.
No business farmer will overlook these savings.
York Chemical Works
York, Pa
TODAY WRITE US

Bannerman Army Bargains

Haversack	.75	New Bugle	$3.40
Machete-bolo	$1.50	Flint Pistol	$6.90
Rope lariat	$1.00	Saddle	$9.85
Springfield cal. 30 rifle, 24 inch barrel	$19.50		

New catalog, illustrated, 200 pages of pistols, guns, uniforms, etc. for 50 cents. Special new circular for 2c stamp.
Established 1865.
Francis Bannerman Sons, 501 B'way, N. Y. City

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For Sale All kinds of fruit trees, shrubs, evergreen, berry plants, California privet, etc. Improve your Property. Catalog. Orders shipped promptly.
MITCHELL'S NURSERY, Beverly, Ohio

What Our Readers Say

Clover for Soil

AS a soil builder and crop producer mammoth clover is excellent and the hay grows in abundance. About seven years ago we sowed three acres to it, using first-class seed. We got a good stand and in the fall following we manured it lightly with fresh stable horse manure. The next summer in August we cut eleven two-horse loads of hay. When we planted it to corn we got about 20 barrels to the acre, deriving much benefit thereby.

John B. Shank.

Franklin county, Pa.

Saved by Telephone

ON July 4th the house of Joseph Sasso in Atlantic county, N. J., caught fire. He only one at home was Mrs. Sasso and her baby boy aged 2½ months, the rest of the family had gone to the Hammonton park. All she could do was to call the Hammonton fire company, which answered within twenty minutes from miles away. The firemen did the best they could do to get there in time, and the only damage done to the house was a few brick on windows, which were done before the call was put in. The house and barn are valued at $7,500 and it would all have gone but for the call by telephone. The telephone saved this farm house and barns.

C. V. U.

An Old-Time Apple

WILL you allow me space to boost an old-time apple? It is the old Vandover, known in some sections as Milam, or Parmana. There are trees in Nicholas and Fayette counties, W. Va., that are over a century old.

About forty years ago I procured some sprouts from an old Vandover tree on an adjoining farm and stuck them in the ground. They grew and are still growing. At the same time I bought one dozen improved nursery stock, and set out with the Vandover sprouts. They bore a few crops and died.

Since that time I have set out about two hundred improved apple trees of several leading varieties, such as Grimes Golden, Stayman, Winesap and York. For fine cooking qualities or eating out of the hand, in my opinion nothing is superior to the old-time Vandover, nor is there any tree that will live longer with the same care.

I have often wondered where this grand old apple originated, whether it was an American product or whether the American settlers brought it from Europe.

A. L. Mason.

Money for Roads

YOU published an editorial recently entitled "Asking for More," concerning the bill in the State Legislature sponsored by the Highway Department, for an increase in registration and license fees on automobiles and buses necessary for the building and upkeep of state roads.

I am now living in southern California, having moved here from Pennsylvania last summer. I secured my California automobile license for 1929 at a cost of three dollars, as this is the price for all makes and sizes of automobiles; of course trucks, buses, etc., have to pay more. Operator's license is given free and does not have to be renewed unless through reckless driving one's license is revoked.

The tax on gasoline is three cents per gallon. I inquired how they could build and maintain good roads at the rate they charged for licenses, and was informed that the ones who used the roads most were the ones who paid most on building and upkeep of roads, that is, through the three cents gasoline tax.

California has hundreds of miles of the best roads. Having been over quite a few of them, I find the traffic very heavy; the weather conditions are such here that people make good use of their automobiles. Such being the case of course the state derives a large amount of revenue from gas tax.

The question in my mind is why more money is needed in Pennsylvania to build roads than in California. From my observations road building is very expensive here.

J. D. Williams.

For a Better Yield of Wheat

I AM always glad to see in print the name of my old friend Hugh Ferguson, and equally glad of an opportunity to read his interesting articles for that's the kind Hugh writes. . . and I were boys in college together. Hugh was an earnest student and his work in agricultural extension and practical farming has been right in line with his successful endeavors of those earlier days.

In his article in Pennsylvania Farmer of February 9 I gain that he is in favor of growing satisfactory crops of wheat and is puzzled to know the reason for it. In all the formula as laid down would seem to insure a thirty or forty bushel yield under most any conditions but such has not been the case.

I believe a slight revision of formula, especially as regards seed bed preparation will yield several bushels to the acre more, and may yet enable him to grow wheat profitably. As I understand the requirements of grass and small grains what they demand is a fine but compact seed bed and the implements supplied by friend Fergus will accomplish the latter. If he will use the disk and cultipacker instead of disk and plank drag and then follow the drill with a final stroke by the cultipacker he will more nearly meet the desired condition and it is conceivable that he may add five or more bushels to the present acre yield.

Our newly plowed land it is questionable if the disk should be used more than once in preparing for wheat and certainly for each time it is used the cultipacker should follow. Alternate strokes with the springtooth harrow and cultipacker will produce an ideal seed bed. Now if Hugh doesn't have a cultipacker he should begin to figure on at least the use of one by next fall, for a cultipacker is the grandest thing entirely for providing a seed bed for grass and grain crops.

In casting about for a few additional bushels the matter of varieties engages our attention, for while Pennsylvania 44 like Ford's Model T was a great thing in its day we now have something better. As a further substitution in Hugh's formula we recommend Forward instead of Pennsylvania 44. It produces more bushels in our experience and being a smooth variety causes less irritation on a July afternoon and provokes fewer cuss words on the part of farm help.

C. F. Preston.

Lancaster county, Pa.

Weedless Farming Near

THE end of the next decade will find the farmer in an earthly paradise. Already he has come to the end of the old road, drudgery, turned the corner and is now on his way to the Elysian fields for which he has sighed and longed for these many centuries. By this I mean that we are coming to the age of weedless farming.

I am a farmer. I cannot express the joy I feel at the innovation. For years—the last three of which have been moist and well suited to all weeds—I have hoed and hacked weeds, such as thistles, wild artichokes, quack grass, etc., until I became black and blue in face and feelings. Many abandoned farms raise only weed seeds which are scattered by wind and bird until our whole rural world has turned into an unsightly commingle filled, seemingly, with weeds and brush.

Paper mulching and spraying will do the trick. To Charles F. Eckart, who first used paper instead of the hoe in the pineapple rows of far-off Hawaii

be all praise and honor he due. The here in time this easy way of farming will benefit the world by some hundred per cent more than did the invention of the cotton gin by Eli Whitney. Not alone does Eckart's way keep crops free from weeds, but the quantity and quality of the crop is bettered by anywhere from one to a dozen times.

Paper for this mulch method of crop raising is yet too high priced for general farming. It is a positive fact, however, that ways and methods of changing cornstalks, straw and other roughage now going to waste will be discovered. Then it is possible that paper may be had by all alike.

Not so much is yet known about spraying. However, all up-to-date experiment stations and extension associations are devoting a great deal of time to weed spraying. For some years many Lancaster county gardeners have used hot water spray on the gardens to eradicate weeds by killing the seeds.

All the farm organizations in our county of Lebanon, Pa., centralizing around County Farm Agent A. C. Berger, experimented in weed spraying last year. They arrived at one definite conclusion, which is, that spraying with sodium chlorate at the rate of one pound to the gallon kills the morning glory. It remains for the coming summer weather to determine whether quack grass and the thistle also can be eradicated by this substance. These apparently cleared patches of weeds in the fall may again show new growth in the spring. Notwithstanding what the result may be, the experimental work will go on. Calcium chlorate and magnesium chlorate will be added to sodium chlorate in tests.

Robert I. Weigley

Farm Fire Insurance

IT is the policy of our insurance company—The Southwestern Mutual of Fayette County—to have its policy holders carry one-third of the risk on buildings. In other words we insure for only two-thirds of the estimated value, thus making the assured feel that the burning of a building from any cause would be a substantial loss to him, thereby causing a greater degree of carefulness against fire hazard than if he had insurance to the amount that would replace the building with a new and perhaps more modern and satisfactory one.

A by-law of our company attached to the policy requires that when additional insurance is taken in another company the same must be reported to our company for approval. Then there is the state insurance laws printed on our policies in which appears the following: "Unless otherwise provided by agreement in writing added hereto, this company shall not be liable for loss or damage occurring while the insured shall have any other contract of insurance, whether valid or not, on property covered in whole or in part by this policy".

It is therefore apparent that having insurance in one company and taking additional in another company without consent of the former company renders the first insurance void.

It is a serious fault of most of the policy holders that they fail to read their policies from beginning to end, lest they unawares violate one or more of the conditions of their insurance contracts that may invalidate their insurance. Several times policies have been returned to the office for cancellation because of sale of property and in them were checks or stamps enclosed when policies were written, as over pay on premium, the policies never having been opened up.

This company was chartered 53 years ago with two hundred thousand dollars in risks and by steady growth without canvassing for business has reached almost nine and one-half millions and holds premium notes aggregating nearly six hundred thousand dollars as security for payment of losses.

We attribute our success very largely to our policy of having the policy holders carry a part of their own risks, especially is this advisable now when in many cases the buildings on the

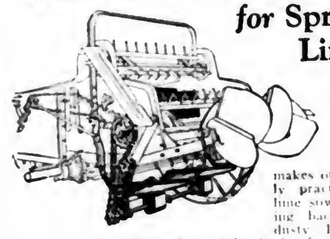
NEW IDEA Spreader *now offers* Double Service



Model 8 *with the new Attachment*

LEADING all spreader development for thirty years, NEW IDEA has long been the spreader of ***double value.*** And now comes still ***another*** improvement, so remarkable as to make every Model 8 NEW IDEA actually the spreader of ***double service.***

***Remarkable new* Attachment *for* Spreading Lime**



Simple, strong, low-cost. Attaches only to the NEW IDEA Model 8 Spreader and makes of it an absolutely practical, one-man lime sower. No shoveling back of load, no dusty labor. Handles lime, marl—anything finely pulverized. Controlled feed (1½ to 5 tons per acre). Large capacity. Spreads 15 to 20 feet wide. Attached or removed in 30 minutes. Makes you ready for either liming or manuring, with one machine.



Special Anti-Wrap Upper Cylinder
For use where unusually tough and stringy manure prevails. Completely overcomes wrapping and choking of cylinder. Furnished as an extra.

All present owners of NEW IDEA Model 8 should write at once for description of the new liming attachment.

NO Model 8 NEW IDEA has ever been reported *worn out*, although it has been tested for five years on a hundred thousand farms, often at the rate of two, three—and even more—loads per day *every day in the year.* Strength and durability are *built into* all its features. Yet for light draft, short turning radius, easy loading, free ground clearance, comfortable operation and absolute control, this machine has never been excelled. Neither does any owner ever expect less than *a perfect spreading job* from his NEW IDEA. And now, the new Lime Spreading invention makes NEW IDEA absolutely supreme.

Manufacturers of Spreaders, Lime Sowing Attachments, Husker-Shredders, Transplanters and Two Row Corn Pickers. Ask for full descriptions on any of these machines.



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$2000 in Prizes to Dealers and Users of REICHARD'S "ANIMAL" BASE FERTILIZERS

I sed by Ray Briggs, Northpark, Pa., to raise 125 Bu. Shelled Corn per acre. Also he nearly one-fourth the 1 ost Bushel Potato Men of Pennsylvania, as well as by the Boy Champion Potato Grower of the State.

Also Pre-War Lime Prices

For Prices and Full Particulars write
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Mechanics Trust Bldg., HARRISBURG, PA.
PROTECTS both the OWNER and EMPLOYEE
Get our rate on special minimum for farmers. *Write today.*

STRAWBERRIES $2.95 per 1000 and up.
Our 18th Annual Barnes Book of guaranteed berry plants, fruit trees, ornamentals, and bulbs, including MASTODON Everbearing strawberry, sent free. Wholesale prices reduced. 250 Mixed Gladiolus (bulblets) postpaid for 25c. J. N. Roberts & Son, Box 4, Bridgman, Michigan

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Excellent for chicken, stock or any yards. Write for prices and catalog. Agents wanted
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Spray your Orchard and Garden with our Spray Materials.
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farm have a value above what the farm would sell for and in such a case a mortgage burdened person might be tempted to be careless about fire precautions. This might result in the owner losing both the land and the price of his farm.

Very few of the stock companies will carry farm property now. The old Hartford Insurance Company canceled all its insurance on farm property in the state of Michigan because it was losing on that class of risks. Perhaps the trouble was over insurance, for the stock company's agents receive a percentage on the amount of the insurance written by them. In our company the agent has no inducement to over insure, for his pay is just so much per application sent to the office.

Furthermore the farmer insured in a stock company is not concerned about the hazardous conditions of his neighbors property, over insurance, etc. While in a mutual company he will report to his company any dangerous or undesirable risks that come to his notice, as what such is apt to affect the cost of his insurance in the long run.—Ira C. H. Rittenhouse.

Wild and Tame Walnuts

A FEW years ago the United States Department of Agriculture sent out a circular advising every farmer to plant a bushel of walnuts. This statement is certainly without intelligent thought when one considers the vast difference between the seedling and the improved varieties. As much difference as between seedling and improved fruit or mongrel and pure-bred stock.

Despite the fact that any intelligent mind could have seen the error in such counsel this message to the farmers floated out thither and yon on the waves of news distributors until it has been taken up by other enthusiasts and is advocated as a wonderful thing. The truth is it is a sin against the innocent public. While the errors continue in full swing being sponsored by county farm agents, school supervisors, boy scout leaders and horticultural professors both federal and state, we see a glow of light by the Department of Forests and Waters of our good old Keystone state.

After several years of growing and distributing the black walnut on a large scale the light of higher reason has soaked through and the Department sees the mighty error of solid walnut plantings because it has proved a failure and recognized the virtue in suggesting to inquirers that they plant the improved varieties for mixed forest planting or for commercial groves. It is gratifying indeed to see a public department of any state step out and four square state that it believes the improved tree is the thing to advise planting. It is of inestimable encouragement to hear officials say, "We feel it a terrible thing for a man of 40 to plant a setting of seedlings and at the age of 60 find he has, in this one and only life he has to live, made a mistake in planting."

An example of this can be shown in Milford, Del., where it is proved by the English walnut grove that the climate and soil are adapted to their culture. But because the planter of a 140-tree grove planted seedlings 24 years ago the inferior bearing of the trees and the quality of the nuts make it nearly worthless.

And I say again while the agricultural agents over the country are working up an interest on getting hundreds of farmers to plant nuts the Pennsylvania forestry officials are getting their good feeling from knowing they are advising in such a way that the Commonwealth will be reimbursed appreciably for the cost of their seedlings in the next several decades.

True, the way is slower and the effort strenuous in convincing the land owner to see the virtue of paying big money for trees when they can be had for almost nothing from seed, but I'll wager a block of nut trees against the hole in a doughnut that when the wrath of the thousands of southern farmers breaks loose because of the deception

on them the Pennsylvania office will feel happier than the present set of southern officials who are using their innocent adherents to fill disaster. John W. Hershey.

For Tax Reform

In a recent Pennsylvania Farmer you have an editorial on "Our Greatest Problem," which tells nothing but the truth. Prof. F. P. Weaver of State College has the study made of six or seven typical counties in Pennsylvania, and gave his findings, illustrated with charts, here at Clearfield in our own county before the agricultural extension meeting.

What are doing something about it. The greatest local tax in all rural districts and most small town districts is that for school purposes, and that revenue is entirely inadequate to give the rural and small town boys and girls a square deal beside children in city districts.

There is House bill No. 468 which originated in a Pomona Grange resolutions committee in our county, was introduced in the assembly by one of our members—A. D. Walker, on January 29. It was referred to the Educational committee of the House and is now in the hands of a sub-committee.

We have the State Grange and the State School Directors' Association back of it, with the various county superintendents writing letters to members of the House and the Senate showing local need. The Department of Public Instruction is giving us all the help possible by showing how it will affect the different districts.

This bill simply increases the amount of state appropriations to districts now receiving 75 per cent of teachers' minimum to 100 per cent—one-third. And to districts now receiving 70 per cent of teachers' minimum salaries the increase is to 80 per cent—again just one-third. It would be effective next year and in all districts having less than $160,000 for each teacher.

The increased appropriation to the districts of the state affected is $5,000,000.

House bill No. 477 increases the School Building Aid Fund from $100,000 to what it was the last biennium, $190,000, and is also to go into immediate effect July 1st.

If everybody gets back of these bills, they will pass in spite of all the politicians can do, and what will pass them is that every child in the commonwealth has a right to equal opportunity of education. T. L. Wall

A Lily Pond

A CONCRETE lily pond with goldfish in it is the latest addition to our lawn. We have lots of different flowers and shrubbery and evergreens, but the greatest attraction is the concrete pond of fishes. We had the goldfish in up to real cold weather when we took them out and put them in a bowl on a table in the house. We had different varieties in the pond. We caught a few suckers, a few minnows and a few sunfish and put them with the goldfish and they seemed happy together.

We had only a few goldfish so we bought some more small ones and put them in and soon some were missing, and before long we saw the big ones eat the little ones. It is best to have only about one size.

This pond is about eight feet in diameter at the top and about two and one-half feet deep in the center. The sides are about six inches thick and slant in toward the center at the bottom. The top is about eight inches higher than the lawn. The bottom of this pond is filled with earth for about ten inches and on top of this is about two inches of clean sand. In the center we planted a water lily and around the edge we planted about half a dozen bullrushes. We partly drained the pond weekly and put fresh water in with a hose and the fish seemed to thrive. C. R. Bashore.

Berks county, Pa.

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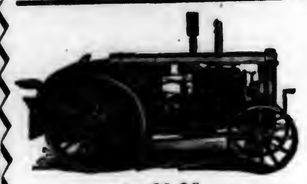
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Sheep are very fond of corn silks and will snap them from fodder the last thing. Extract of corn silk is a constituent of medicine often taken by humans. H. B.

Babies and Baby Pigs

I KNEW a woman in the old days who had just finished washing the baby's best dress when she got an invitation to come right away to a neighbor's to a goose roast. Well, she held that baby dress in front of the fireplace until it was about three-fourths dry and put it on the little kid and off she went to eat roast goose! Damp clothes are not so very good for a little baby, so he got a sick spell.

I was looking at a couple of litters of little pigs not long ago and the owner was complaining about the fact that the sows and was going to fatten them up because they didn't raise better pigs. Now, as sure as sin and taxes those little pigs were having a damp time of it. You could see at a glance with your best eye on the owner and your lesser eye on that host, that the nest was bound to be got only damp but hot underneath.

When the skin and hair of a week-old pig is rough and unhappy looking instead of bright and fresh and blooming it isn't absolutely dead sure, but highly probable that the piglets have been steamed and then chilled in a damp bed.

Most of the milk sucked by day-old pigs is passed forthwith as urine right into the nest. This is bound to be around a gallon per day—and now suppose you poured a gallon of water on that nest every day, and urine is worse because it heats the straw and it decomposes. For this reason I want to see young pigs in a fresh nest of straw every day until they begin to run around. Hiram Dobbin

The Small Farm Flock

ON MANY farms a large flock of sheep is impossible due to other livestock and other phases of farm industry taking up the time and space, yet a small flock of sheep can be made profitable as a sideline. I find that sheep will thrive on pasture where cattle, horses and hogs will almost starve. From ten to twenty good ewes will be a paying investment on most farms along with the other livestock.

With the small flock it is best to have the ewes lamb the latter part of February or March first, as the early lamb brings the highest price. With a large flock it may not be practical to have the ewes lamb until they are on pasture, or after the weather gets warm.

Of course lambs in January or early February are more trouble than in late spring, yet we will usually be repaid for this extra trouble. My brother several years ago had a flock of only 20 ewes which netted him annually around $200, wool included. Both lamb and wool was then much cheaper than it is now.

Early lambs get good size before the flies get so bad, and flies are a troublesome pest to young lambs. After the lambs are two or three weeks old, we commence feeding them on wheat bran and corn meal mixed about equal parts. After spring sets in and the grass comes out they require little attention as to feed.

No matter how many sheep or how few you keep, if possible get [illegible] but the very best. I find that Shropshires and Southdowns crossed [illegible] excellent results. W. H. H.

A Giant from Maryland

I WAS very much interested in the photo on page 7 of Pennsylvania Farmer. "Some hog!" But see what Garrett county, Maryland, can produce. An enclosing clipping from some paper which tells the story. Practically same age of hog, but in weight a difference of 477 pounds.

H. C. Hostetler

His clipping which Mr. Hostetler sent us says: "On January 6 Messrs. C. W. and James Wilson of Garrett county, near Oormania, W. Va., butchered the largest hog on record, tipping the scales at the weight of 1,082 pounds. The hog was a pure-bred Poland-China stag, three years and ten months old.

"The hog was originally purchased from Frank DeWitt of Ohio and bore the registered number 159975 and the name Rainbow. His body length was 8 feet 6 inches and when hanging, feet 7 inches. The girth measurement was 72 inches, neck 26 inches, [illegible] circumference of hind legs, 11 inches and height, 52 inches.

"It took seven shots from a .25 calibre rifle to bring him down, and if it had not been for the last shot lodging in the hole of a previous one, this monster might be still going.

"Another hog butchered at the same time weighed 1,350, with a body length of 7 feet 4 inches, a total length of 8 feet 6 inches and a girth measurement of 58 inches.

"The stag was weighed on scales belonging to Mr. Charles Duckworth and was witnessed by Mr. Duckworth, Frank Wildeson and C. W. Wilson. The butchering was witnessed by [illegible] persons."

To Make Sheds Warm

WE HAVE experienced a real old-fashioned winter this year and lots of it. The season of young [illegible] especially has been unusually cold. In this connection I was interested to learn in seeing the simple and effective manner that some farmers are using to make the lambing or farrowing pens more comfortable for the animals.

The shed opens on the south and the north side is protected by a heavy insulation of straw. A fence with posts set apart, as there is little strain on it, is set about two feet from the north side of the house and the space between filled with straw. In many cases this straw wall is carried around both ends of the building, thus protecting the building from cold winds on three sides. This makes the interior as warm as is desirable.

The fence is cheap to construct. Both posts and woven wire that may not be suitable for a pasture fence will be used. It is surprising how much more effective the buildings are when treated in this simple manner. The system is especially valuable also in connection with the popular straw-loft laying houses, in fact the idea is applicable for improving almost any kind of a drafty shelter. David Greig

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But you cannot continue to sell Poultry or Dairy Products unless the ultimate consumers of your products make a profit.

Nor can you continue unless you also make a profit.

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The profit the consumer makes from your product is the service that product renders, that service must be of more value to the consumer than the money he pays. It must possess that quality which is consistently good.

You must cooperate with the consumer, and the consumer with you.

The life of any manufacturing business is limited to its ability and skill in serving as well as deserving the cooperation of its customers.

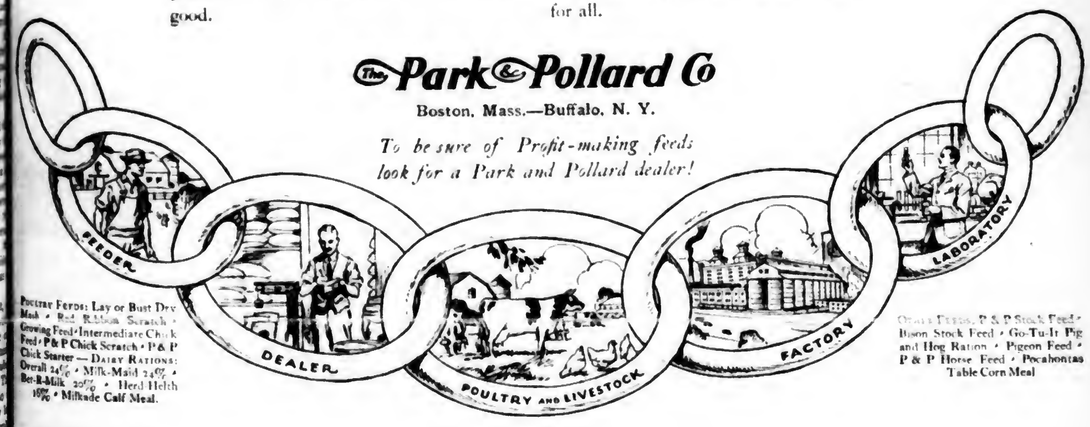
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TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

RECEIPTS of cattle were again moderate, and trade improved somewhat, with prices largely 50 to 75 cents higher. It is thought now that last week may prove to be the low spot in the market for sometime, though that remains to be seen. Certain it is that the market showed plenty of signs of weakness this week. Top sale was at $15, against $14.25 last week; average on steers was $12.05, against $11.45 last week; and bulk of sales were at a range of $11@13, against $10.50 @12.40 last week.

Receipts of cattle here this week, at 43,000, were a little larger than last week, but a thousand under the same week last year and 12,000 under the same week two years ago. So far this year 20 markets have received a total of 1,483,000 cattle, compared with 1,777,000 last year; 1,872,000 in 1927; 1,801,000 in 1926; and 1,785,000 in 1925.

Hog Market Climbs

The hog market, spurred by moderate receipts, showed a disposition to advance this week, with $11 paid. Prices at the close of the week were around 50 cents higher than at the opening. Receipts at 172,000 were smallest since the week of November 10, barring holidays. Shipping orders were large, taking a little more than a third of the run. Average price of hogs advanced to $10.45, highest since the week of October 6, and comparing with $10.20 last week, and $8.05 the same week last year.

Lambs Higher

Receipts of sheep and lambs were moderate with prices 25 to 50 cents higher. Top fed westerns brought $17.60 and top natives $17.50, against $17.35 for the former and $17.10 for the latter last week. The run here totaled only 61,000, 4,000 less than last week, but shipping orders accounted for 21,000 head, 6,000 more than last week. Yearlings sold up to $15 this week. Equal to the high since last June.

Many range lambs have been contracted this year before birth. They will be delivered next fall, mostly at a range of $11.50 @12.

Factors in Grain Trade

Grain markets were closed at the week end on account of the holiday. Wheat futures registered moderate net gains. The market rhows strength, but sharp advances are prevented by profit-taking. The feeling seems to be that wheat has a better chance to work higher than lower, but there is not great certainty about it. Much depends on whether there has been winter injury, and that is not yet known. Many tests have been reported of blocks of wheat plants thawed out with the plants greening up in good shape. But an Illinois man contends that such tests prove but little. He points out that the wheat plant does not die suddenly.

"What the ice covering does," he says, "is to prevent oxygen from getting to the plant. Gradually it approaches death if the covering remains long enough. Usually the ice melts before the plant is completely killed Then the dry March winds gradually wear out the remaining life in the plant. Ice always causes more or less injury. Frequent freezings and thawings bring grief."

Corn futures also gained a little during the abbreviated week's trade. Here the feeling is not as bullish as it was a month or two ago. The effect of weather on marketing is a matter of conjecture. Tradera do not know how to figure it. One authority has it that Europe shows a tendency to use more corn. He says that during the past three years the Continent has imported a steadily increasing tonnage, and prices have moved in line with imports. Corn is finding greater favor as a foodstuff for animal and human consumption, and particularly in poultry feeding, and prices today are higher than for low-grade wheat. He believes further that Europe will begin to use corn for manufacture of such products as starch, syrup, glucose and so on.

Some corn-belt farmers believe the heavy snows mean bounteous pasturage next summer.

Horse Trade Picks Up

Demand for horses picked up this week but prices were no higher. About 500 head were sold on the market, with top of $225, and $375 for a pair. Bulk of sales $75 to $150. Farm chunks, 1,350 to 1,500 pounds, are in best demand, at around $100, a little over rather than under, for good sound workers.

Farm Relief

Regarless of what may be accomplished for agricultural relief through legislation, the fact remains that each individual farmer must work out his own destiny, it is stated in the annual report of the University of Wisconsin college of agriculture extension division. "No amount of 'subsidy' or 'equalization fee' or 'tariff' or 'what not' that can or will be given to agriculture, can offset the damaging effect, on individual farms, of high production costs and low yields, or herds, flocks and fields afflicted with controllable pests," the report, prepared by Dean H. L. Russell and K. L. Hatch, states. Those things, termed "the reliable relief of agriculture," are matters over which the farmers themselves must gain control. "That the results of research work in agriculture, when carried to the farm and used there, afford reliable relief is apparent on every hand," the report says. Watson.

Chicago, February 23, 1929.

Produce Markets

THE egg market surprised most every one last week when it advanced sharply at a time when a decline was expected. A rather unusual condition for this season of the year has developed which is responsible for the advance in prices. Storms through the West and the Southwest have held back receipts for several weeks and the supply of nearby eggs was not sufficent to fill the needs of the market. Cold weather has increased consumption to some extent and the opening of the hatchery season has held back some eggs that would normally come on the market. This would hardly be sufficient to cause any noticeable effect if the Western and Southwestern shipments were up to normal but in a time of scarcity it becomes more important.

Another factor that has had much influence is the scarcity of storage eggs. Earlier in the year storage holdings were large and the costs were high. In other words the operators paid a high price for them last spring and were unable to bring them out at a profit. There was also considerable complaint about poor quality. As the winter came on the dealers worked them out as best they could taking as small losses as they could manage. No price advance and scarcity as now exists was anticipated. The result of all of this is that now there are comparatively few eggs in cold storage and nearby eggs furnish the bulk of the supply. Just how long this home market for eggs will continue will depend upon the supply and that is an unwise proposition to gamble on as it depends upon weather conditions.

Prices in Philadelphia jumped about five cents a dozen in one day and at the close of the week extra firsts were quoted at 52c per dozen, firsts at 50@50½c and seconds at 45@47c. But they fell back 4@6 cents on Monday of this week.

Butter and Poultry

The butter markets in the eastern part of the country were dull. There was a general lack of confidence among buyers and sellers which caused very slow trading. Receipts accumulated and receivers tried to push sales. Rivers were cautious and purchased only for their immediate needs which further aggravated conditions. While the market was dull there was still enough demand to prevent a decided break in the market and the top grades did not accumulate to any extent. Philadelphia dealers, however, shipped some fancy butter to New York to relieve the pressure of excess supplies.

The live poultry market in New York was barely steady. The snow storm held up trucking in the cits and made receipts by rail rather uncertain. Chickens met a fair demand at steady prices. Fowl were steady and broilers met a fair demand. Leghorn and colored fowl were quoted at 31@32c per pound and broilers at 40@43c. The supply of fresh dressed poultry was rather light from both nearby and western sections. Weather conditions and the holiday made the market rather uncertain but prices were generally steady. Fowl were quoted at 26@33c, roasting chickens at 30@43c and capons at 30@43c.

Potatoes

The potato market after several weeks of inactivity and dull trading conditions showed a decidedly weaker tendency. Prices were slightly lower at most consuming and shipping point markets. Increased shipments by rail and resumed heavier supplies at the terminal markets were one cause for the weakness of the market. There is little or no speculative interest in the market and buyers continue to take only enough potatoes for their immediate needs. Occasionally some lot of outstanding potatoes brings a higher price than the general market but taken generally the receipts are of only average quality.

In Philadelphia there was an increase in truck receipts from Pennsylvania. Prices ranged from $1.25@1.50 per 120-pound sack and $1.75. There were some very poor stock that sold as low as 90c but most sales were made between $1.35 and $1.45. Something bringing higher prices than this were well graded and of a better than average quality. Growers in New York state are receiving about 30@40c per bushel. The Mountains were lower at Maine points and were bringing about 60@65c per bushel weight.

Down in the Eastern Shore section growers are considering devoting some of their potato land to other crops. Beans and cotton are two relatively new crops which are being seriously considered.

Sweets and Apples

The sweet potato in Philadelphia and New York was quiet during the week. Cold weather hampered the movement to some extent. Prices did not show any material change. Yellows were quoted at 82½@2.50 per bushel in New York for extra fancy wrapped bringing $2.65@3, some poor stock sold as low as $1.75. In Philadelphia the best yellows sold mostly at $1@1.25 per ½ basket and reds at 75c@1.35. There were a few extra fancy stock that brought a premium of about 10c per basket but it was difficult to move large quantity at these prices.

The apple market in Philadelphia and New York was dull. Most offerings moved slowly but fancy packs were in moderate demand. Pennsylvania and New Jersey Romes, Paragon, Stayman and Delicious of good quality sold mostly at $1@1.75 per bushel, but there was some fancy lots of Stayman and Delicious that sold at $2 to $2. Prices in New York averaged much the same as those in Philadelphia for the same class of fruit.

Based on conditions of February 1, the estimate of Florida citrus has been revised upward, states a federal report. About a million boxes each were added to the figures for oranges and grapefruit. Commercial shipments or oranges are now forecast at 12,000,000 boxes and grapefruit 8,000,000 boxes. It is not believed that the California orange crop was affected by the freeze of early February. W. R. W.

CASH GRAIN

Chicago, Feb. 25.—The following prices ruled here today: No. 2 hard wheat $1.24@1.25½; No. 3 yellow corn, 80½@80½c; No. 4 mixed corn, 80½@80½c; No. 3 white oats, 51¾c.

Miscellaneous Produce

Philadelphia

Eggs.—Extra firsts, 52c; firsts, 50½c; seconds, 45@47c; selected and candled fresh eggs, 58@60c; select in cartons, 60@62c.

Butter.—Creamery, tubs, 92 score 56c; 88-89 score, 47@47½c.

Poultry.—Fowls, 29@31c; Leghorns, 30@32c; young chickens, 34@37c; broilers, 40@43c; old roosters, 23@25c; ducks, 25@33c; turkeys, 30@40c; rabbits, pr., 18@20c; Guineas, per pair, $1@1.85.

Strawberries.—Fla., 32-qt. crate, mostly 32@35c per qt.; pony refrigerator express, best, 35@40c.

Apples. U. S. No. 1, per bbl., Virginia Yorks and Staymans, $4.50; Penn'a Yorks, $1.35; Stayman, $1.65; bu. bskts., Md. Stayman, $2@2.10; nearby ⅝ bskts., Delicious, 75@$1.25; Stayman, 65c@$1.

Cranberries.—Per ½ bbl. crates., N. J., $4.50@9.

Celery.—Fla., 10-inch crates, washed, 3 and 4 doz., $1.75@2.

Potatoes.—Pa. round whites, per 120 lbs., $1.50@1.60.

Sweet potatoes.—Md. and Del. bu. hamper, No. 1 yellows, $1.40@1.65; N. J. ⅝ bskts., $1@1.25.

Beets—Nearby, ⅝ crates, 60@$1.

Leeks.—Nearby, per bunch, 3@5c.

Carrots.—Nearby ⅝ bskts., $1@1.50.

Cabbage.—Old N. Y., 100-lb. sack, Danish, $2@2.25; new, Texas, 100-lb. crates, $2.50@2.75.

Lettuce.—Calif. Iceberg, crates, 4 to 5 doz., $4@4.50; Fla., ½ bbl. hamps, Big Boston, $1.25@3.

Onions.—Ind 50-lb. sacks, U. S. No. 1, yellow, $2.75; New York, 100-lb. sack, $4.50@5.

Mushrooms.—Nearby, 3-lb. bskt., 40c@$1.10.

Parsnips.—Nearby, ⅝ bskt., 75c@$1.25.

Rutabagas.—Nearby, 100-lb. sacks, $2@2.50.

Turnips.—Nearby, ⅝ bskts., purple tops, 20@40c.

Peppers.—Fla., crates, fancy count, $3@4.

Field Cress.—Eastern Shore, Va., bu., $1@1.25.

Pittsburgh

Butter.—Creamery prints, 92 score, 57@57½c; tubs, 56@56½c; local tubs, 52@55c.

Eggs. Fresh, select white, 45@47c; brown, 43@45c; current receipts, 40@42c; pullet eggs, 35@40c.

Poultry.—Heavy hens, 30@32c; Leghorns, 27@28c; springers, 30@32c; roosters, 18@20c; ducks, 26@30c; geese, 22@25c; pigeons, 40@50c per pair.

Lancaster

Butter.—Country butter, 55@60c; creamery, 52@60c.

Poultry.—Chickens, dressed, $1.25@2.50 each; springers, 75c@$1.25 each; ducks, $1.50@2.50 each; squabs, 25c@30c each.

Eggs.—Fresh eggs, 40@43c.

Vegetables.—Beets, 8@15c per bunch; egg plants, 20@30c each; string beans, 45@50c per ⅝ pk.; beans, lima, 45@50c per pt. box; cabbage 10@20c per head; carrots, 8@15c per bunch; cauliflower, 25@50c per head; celery, 10@25c per bunch; cucumbers, 8@15c each; spinach, 12@15c per ½ pk.; peppers, 5@8c each; endive, 5@10c per head; lettuce 10@25c per head; mushrooms, 25@30c per pt. box; onions, 20@25c per ⅝ pk.; green onions, 10c per bunch.

Potatoes. Per bu., 65@75c.

Sweet potatoes.—20@25c per ½ pk.

York

Butter.—Creamery, 55@58c; country, 45@50c; separator, 55@60c.

Poultry.—Hens, dressed, 22@26c; Leghorns, $1.25@1.50 each.

Vegetables. Potatoes, 75c@$1.10 per bu.; cabbage, 5@20c per head, lettuce, 8@15c bd.; spinach, 18@25c ¾ pk.; turnips, 15-¾ pk.; celery 5@15c stalk.

New York

Butter.—Creamery, higher than extras, 50@50½c; extras, 49½c; seconds, 46@46½c.

Eggs.—White eggs, current receipts average extras, 48@50c; extra firsts, 48@49c; firsts, 45c; mediums, 40@41c.

Poultry.—Live, by express, fowls, 31c; chickens, 27@33c; broilers, 37c; ducks, 28c; old roosters, 20c; turkeys, 40c.

Apples.—Eastern and Southern, bu. bskts., Romes, $1@2; Wealthy, $1@1.75; Delicious, $1@2.25; McIntosh, $1.50@3.50; barreled stock, No. Spy, $3@8; York Imperial, $2@5.25; mixed varieties, $2.75@5.50.

Potatoes.—L. I., 150-lb. sack, $1@2.50; Maine, $2@2.25.

Sweet potatoes.—Jersey, best bskt., $2.65@2.85.

Baltimore

Butter.—Creamery, fancy, 51@52c; rolls and dairy prints, 25@26c; packing stock, 24@25c; butterfat, lb., 49@50c.

Eggs.—Md.-Pa. nearby firsts (loss off), 41½c; western firsts, 33@38c; southern, 36@38c.

Live poultry.—Hens, old, 4½ lbs. and over, 30@31c; small to medium, 25@28c; Leghorns, 22@28c; young chickens, 35@36c; broilers, small, 40@45c; Guineas, young, 1½ lbs. or over, each, 75@85c; roosters, 17@20c; ducks, 25@32c; pigeons, pair, 30@35c; squabs, 30@50c; turkeys, 37@43c.

Apples. Fancy pack, bu., 81@2; per bbl., 80@6.

Potatoes.—Per 150-lb. sack, $1.75@2.25.

Sweet potatoes.—No. 1, hamper, $1@1.50; Yams, per bbl., $3@3.50.



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Livestock

PITTSBURGH

Cattle

SUPPLIES continue light, only 30 carloads appearing for Monday's trade. Demand was not broad but with the light supply it was sufficient to take everything at an advance of 25@50c per cwt., the light and handy-weight steers showing the biggest gain. One carload of 1,345 pound steers, and a few of lighter weight, brought $12. a few at $12.10 and some a shade plainer but fat at $11.75. Good to choice butcher steers brought $11.50@11.75 and good light steers $11.25@11.50. Fair to good light steers sold at $10.75@11. having some fat about them. A few little common steers sold below $10 but not many below $9.50. Heifers were rather scarce and strong, best here going at $10.50. Fat cows and canners showed little change from the same may be said of bulls. Good to choice steers look cheaper than anything else on the market, the demand running strongly to light and handy weights. Weighty steers at $12 per cwt. are not much higher than light steers or less fleish whereas they appear to be worth $50 per cwt more. But the market don't pay the difference.

Choice grain-fed steers 1,200 lbs or over	$12.00@12.25
Good to choice	11.75@12.00
Fair to good, do.	11.00@11.75
Plain heavy steers	10.00@11.50
Choice handyweight steers	11.75@12.00
Good butcher steers 1,000 to 1,150 lbs.	11.50@11.75
Fair to good, do.	11.00@11.40
Ordinary to fair, do.	10.50@11.00
Common, do.	9.50@10.25
Good light butcher steers	11.25@11.50
Fair to good light steers	10.75@11.25
Common to medium, do.	9.50@10.50
Inferior light steers	8.50@ 9.50
Feeders	Nominal
Stockers	Nominal
Choice heavy bulls	10.00@10.25
Choice handy butcher bulls	10.25@10.50
Good handy bulls	9.75@10.25
Fair to good bulls	9.25@ 9.75
Common to fair bulls	8.50@ 9.25
Inferior bulls	8.00@ 8.50
Choice fat heifers	10.25@10.75
Good to choice heifers	9.50@10.25
Fair to good heifers	9.00@ 9.50
Common to fair heifers	8.25@ 9.00
Choice fat cows	9.25@ 9.50
Good to choice fat cows	8.75@ 9.25
Fair to good cows	8.00@ 8.75
Common to fair cows	6.00@ 7.50
Canners and cutters	5.00@ 6.00
Fresh cows, calf at side	50.00@150.00

Hogs

Last week the market took a spurt and closed around 75c above Monday's prices. Monday of this week the supply here was light, only 25 carloads, and the trade was active at about last week's closing prices. Heavy hogs ranged all the way from $10.50 for some plain hogs over 300 lbs. to $11.25 for those not much above 250 lbs. Handy weights brought $11.60@11.65 and anything good of 140 lbs. or over went in. Ordinary light weights sold at $11 downward, pigs going at $9.50@10.25 and fair light Yorkers up to $11. Sows brought $9.50 largely, a few a little more.

Heavy wts., 250 lbs. or over	$10.50@11.25
Heavy mixed	11.25@11.50
Medium wts., 180-200 lbs.	11.60@11.65
Heavy Yorkers, 165-180 lbs.	11.60@11.65
Light Yorkers, 125-150 lbs.	10.50@11.00
Pigs, 100-110 lbs.	9.50@10.25
Roughs	9.00@ 9.50
Stags	6.00@ 7.50

Sheep and Lambs

Practically all of the eight carloads on sale on Monday were lambs. Sheep are not coming and probably few will come before shearing. There is very little demand for them, and quotations below are merely estimates in the absence of actual sales. Lambs were stronger, with tops at the highest prices of the year, $18 per cwt. Those which brought this figure were well-finished handy weights. Culls went out at $12@15, the latter figure for those from the $18 carloads. Medium class of lambs brought $15@16 largely. Not enough shipped lambs were on sale to justify quotations.

Good to best wethers	$10.00@10.50
Fair to good wethers	9.50@10.00
Good mixed	9.75@10.00
Fair to good, do.	8.50@ 9.50
Common to fair	6.00@ 8.00
Inferior sheep	4.00@ 6.00
Good to best spring lambs	17.75@18.00
Medium lambs	15.00@16.50
Culls and throwouts	11.00@15.00

Calves

With around 500 on sale the market was strong, top veals going at $18 and good seconds at around $15, others on down.

509 *bushels of* POTATOES *per acre*

on the Famous Trexlertown Farms



Above at the right of crate, is Mr. C. N. Parkinson, Manager, Trexlertown Farm. Mr. A. L. Hacker, Lehigh Co. Agricultural Agent, is at left of crate. Standing, at right, Mr. P. S. Fenstermacher, General Manager, of the Trexlertown Farms. Potatoes grown with AGRICO for Potatoes ("AA QUALITY") Fertilizer yielded 509 bu. per acre, placing this well-known Farm in the Pennsylvania 400-Bushel Club.

The famous Trexlertown Farms, located at Allentown, Lehigh Co., Pa., are known to farmers throughout the Eastern part of the United States. Last season these farms grew 109 acres of potatoes with AGRICO for Potatoes ("AA QUALITY"). Mr. C. N. Parkinson, Superintendent, tells about the crop in this letter:

On the Trexlertown Farms we planted 109 acres of potatoes this Spring, all of which were fertilized with AGRICO for Potatoes ("AA QUALITY") at the rate of 1000 lbs. per acre. It was our intention to make the Pennsylvania 400-Bushel Club, so this Fall our County Agent supervised the measuring of the areas and the digging and weighing of the crop. On one acre we grew 509 bushels and on another 486.6 bushels, so we are eligible to the 1928 400-Bushel Club by a generous margin and AGRICO has had its share in helping us make the record.

The average yield from our 109 acres was 375 bushels per acre and I believe this is 150 bushels more than the county average. We follow the four-year system of rotation and keep the land in good condition so that fertilizers will have every chance to do their best work. Your AGRICO is truly the "Premier Fertilizer."

Nov. 22, 1928 C. N. PARKINSON, Supt. of Trexlertown Farms, Trexlertown, Pa.

Mr. J. G. Nelson, of New Castle, Pa., has had 20 years of success with "AA QUALITY" goods. He writes:

I have used "AA QUALITY" Fertilizers for more than twenty years, and have never failed to get good results. This year I had nine acres in corn, on which I used 200 pounds of your Fertilizer to the acre. It was low ground, and due to the excessive wet weather I could only work it twice and many spots were entirely drowned out. However in the face of all of this, I got 1000 bushels of as fine corn as I ever saw.

From time to time I have been persuaded to try other makes of fertilizer, but they never produced the crops like "AA QUALITY" goods.

Another thing, "AA QUALITY" goods are always in good condition, and drill nicely, and if sometimes I have to carry a little over to the next season, it does not get hard or rot the bags. I will say that they please me year after year.

Oct. 14, 1928 J. G. NELSON

Mr. Conrad Meyer, of Pittsburgh, Pa., says "AA QUALITY" Fertilizer produces better crops than manure. He writes:

We applied 1250 lbs. of "AA QUALITY" Fertilizer on a half-acre of rhubarb and had the best rhubarb we have ever raised. This is our first year to use your Fertilizer on rhubarb. In past years we used at least 24 tons of manure on the same plot. The rhubarb grown with your Fertilizer had heavier stems and was more productive.

We also used "AA QUALITY" goods on our beans and our yield was 10% better than had we used manure alone. We received on an average $2 per bu. for our bean crop, which was a high price. Our other crops, especially our carrots and beets, were 15% above the average in yield and were of excellent quality. From our results the past three years, we recommend the use of "AA QUALITY" Fertilizers in preference to manure.

Nov. 1, 1928 CONRAD MEYER

Remember, please, that it isn't what you *pay* for a fertilizer that determines whether it is "dear" or "cheap" . . . it is what the fertilizer *pays* you. On that basis, "AA QUALITY" goods are by all odds the best and cheapest.

See the nearest "AA QUALITY" dealer at once or write us for quotations.

Our "Agricultural Service Bureau," under the direction of Dr. H. J. Wheeler, formerly Director of the Rhode Island Agricultural Experiment Station, will be glad to answer inquiries about crops, soil or fertilizers. Send for our Booklets. Please state the crops in which you are interested.

"AA QUALITY" FERTILIZERS

Look for the "AA QUALITY" seal on the back of every bag of fertilizer.

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Booklets that are offered through advertisements, usually without cost to you, stand the advertiser anywhere from ten cents to a dollar apiece. He is willing to send them to you free because he believes that you are really interested in the goods or the service he has to sell.

Read the advertisements in this paper. When booklets are offered on subjects in which you are interested, write for them, mentioning this publication. Advertised goods of known quality are safer to buy than unadvertised goods of unknown or doubtful quality. Read the advertisements!

TIGHT BINDING TEXT CUT OFF

BUY QUAKER FEEDS IN STRIPED SACKS

Puts Cows At Their Best—

And Keeps Them There!



MOLASSES! *in dry form is thoroughly mixed into Quaker (24%) Dairy Ration. Cows relish this good feed*

THE way Quaker (24%) Dairy Ration brings milk cows to their very best production will please you. But as the weeks and months roll on, and your records stay up you will appreciate why so many successful dairymen stick to Quaker Feeds and methods. Quaker (24%) Dairy Ration is a highly-efficient, safe and dependable feed. It combines nicely with your own roughages; it contains essential minerals. See your Quaker Dealer.

An ideal carbohydrate feed—Quaker Sugared Schumacher. Combines perfectly with any Quaker high protein concentrate (24%, 20% or 16%). A choice feed for young or dry stock, an entire grain ration for horses and a splendid fattening ration for steers, lambs, and swine. At all Quaker Dealers.

Made by THE QUAKER OATS COMPANY, Chicago, U. S. A.

BUY QUAKER FEEDS IN STRIPED SACKS

Farm & Dairy

By L. W. LIGHTY

DO YOU have arrangements in your scheme of action to test out things, plans and ideas? I have found it especially valuable to use the trial grounds on about everything that comes to the place. In using the term "we" I think first of the garden, no doubt, and there I have used the trial grounds with more pleasure and gains for a great many years. Practically everything we now grow in our garden went through the trial grounds first and proved itself.

For a number of years we have used the trial grounds for our flower garden. A new thing comes forth with a colored plate and much colored language, but as nine out of ten fell down in our experience we invest in a few and place them in the trial grounds. A flower plant is a pleasure proposition and to nurse a poor puny grower, to combat pests that the plant seems to invite, to give space and attention to a sickly bloomer is not a pleasure but an exasperation. Plants of that order never get from the trial grounds to the garden proper. The excellent grower that is very floriferous and immune from pests is indeed a pleasure and we cannot have too many.

The Trial Plot for Farm Crops

Some one interested blazons a grain or a forage crop. We conclude that it is what we have been looking for and plant fields of it and reap half a crop or almost no crop at all. I have seen that thing very often—twice in my own field, but then it ended on my place. We can easily wait a year or two on a real good thing. I would plant a plot to see what happened and if there was something really good it went to the fields after it proved itself in the little plot.

As a dairyman I was very greatly interested in forage crops and was all the time looking for something better than we had. A "billion-dollar grass" came along to revolutionize forage crop growing. It went to the trial plot and proved a worthless weed easily destroyed, but plenty of folks invested much cash in it to their sorrow. Came along "sacaline", using all the adjectives and their synonyms meaning great and wonderful. It went into the trial plot and I had a few years of fine physical culture exercises exterminating the abominable weed. But also in that trial plot I became acquainted with the great value of sorghum, cowpeas, soy beans, hairy vetch, crimson clover, Sudan grass and a number of other plants of much value to my farm and my stock.



A CHAMPION GUERNSEY

This is a picture of a pure-bred Guernsey, Langwater May Rose No. 83232, owned by N. B. Griffith, Marshall county, West Virginia.

From December 1, 1927, to December 1, 1928, this cow made a record of 10,729.6 lbs. of milk and 523.7 lbs. of butterfat.

During the past year Guernsey cattle have gained a strong hold in Marshall county, although the major dairy breed is yet Jerseys. Marshall county has always been a Jersey county, but the time is near when Guernseys will rival the Jerseys in this county. C. B. A.



The Best Insurance Against Bad Drops in Milk Production.

It is a very interesting and profitable proposition. I used the same in bringing new grain to my farm. Because corn, oats or wheat does well in some other section is not saying it will do well with us. I always stick to the well-tried and reliable until I found something better in that line, and it saved me many dollars.

Trial Grounds for Thoughts and Ideas

History informs us that the laws of the Medes and Persians were unchangeable, but you note the Medes and Persians have been extinct for many centuries. When our thoughts and ideas become fixed, petrified and unchangeable then we stop growth and soon are out of line with the world in which we try to live and of necessity must stop off the stage.

When new thoughts, ideas or plans came along put them in your trial grounds and view them and pass upon partial judgment and note the surprising intellectual moral and spiritual growth you are making.

Be not the first to adopt the new nor the last to discard the old.

One Different Bull

We are all duly impressed with the editorial bull tragedies recurring so often because we are so careless and thoughtless in risking our lives with an animal as dangerous as a bull. But during the late "open" season a bull taught a couple of city guys and our police force may on occasion be equal to theirs when trespass is committed.

The two city men with guns in hand went across fields and fences without leave or permission from the owner, but of a sudden near the middle of a field they discovered there was a bull that did not like their uniforms, their general appearance and promptly made known his dislike by rapidly moving in their direction, issuing warning sounds. One of the men was a sprinter and he made and cleared the fence, but the other was built on Clydesdale lines and the bull caught up with him as he almost reached the fence and gave him one great toss. Luckily he landed on the other side of the fence and escaped with a number of bruises and minus his gun. This paragraph is inserted as another warning against dangerous bulls and also as a word of caution to the trespassing gunner. Better talk to the owner about his bull and other things before you venture.

The Cow and Her Cud

The cow still loses her cud as she did in former days, inquiries continue to me indicate. When the man loses his cud he takes the plug out of his pocket and bites off a new one, but how to restore the lost cud to the cow is a puzzle to some inquirers.

May I explain that the cow's cud is quite different from the girl's cud of chewing gum? The cow is built to eat large quantities of rough coarse feed and this feed is only well crushed and moistened and put down into her storage stomach. Later at leisure the cow has the power to regurgitate or return this food to the mouth to chew it properly and fine ready to go to the stomach that digests it. So chewing the cud is simply a part of her eating process.

The cow, unlike the man, when she does not feel right stops eating and when she does not eat she has nothing to chew. She has not lost any cud, as she has lost her health.

Up at a New England Experiment Station they watched the cows while eating and chewing the cud and the information is interesting if not profitable. It took the cow about six hours per day to do her eating and about eight hours to do her chewing. She took 54 seconds to chew one cud and almost 40 seconds to swallow and regurgitate a cud, so she spent almost a minute on one cud. While eating grain or hay her jaw movements were 94 per minute and when eating hay only 78 per cud the jaw movement is only 55 per minute. The jaw movements in one day's work number forty-one thousand.

While I was writing this a friend came to visit me and I told him the wonders of the cow. He replied, "I was down to Washington last week and be assured your cow cannot hold a candle to our lawmakers when it comes to jaw movements."

Feed for Heifers

Recently I purchased a carload of Holstein yearling heifers averaging 850 pounds in fair to good flesh. I am now breeding these heifers to freshen next fall and winter. These cattle were bought in St. Paul, Minn. I am feeding timothy and clover hay and corn silage containing only a moderate amount of corn.

In order that I may keep these cattle growing and be in a thrifty condition to go on pasture May 15th would it be advisable and profitable to feed (I per cent cottonseed meal at $55 per ton delivered at my railroad station, and feed two pounds per head per day spread on silage, or feed corn meal at $40 per ton and feed three pounds per head per day? Or feed one-half cottonseed meal and one half corn meal?

Would larger or smaller amounts of one other kind of grain be more profitable?

Does cottonseed meal cause abortion or cause any harmful results when fed to heifers or cows? R. F. Wheeland.

It would be more profitable to feed a mixture of cottonseed meal and corn meal to your heifers than to feed either of them alone. As a matter of fact, I would consider it better practice to make a mixture of 200 pounds corn meal, 100 pounds wheat bran or ground oats and 100 pounds linseed meal or cottonseed meal, rather than to feed a grain mixture with less variety.

The amount of this grain mixture to feed would depend somewhat on the weight of the heifers. A fair allowance of grain is one pound for the first hundred pounds of live weight and a half pound of grain for each additional hundred pounds of live weight. This would mean that a heifer weighing 600 pounds would be entitled to three and one half pounds of grain, one weighing 700 pounds would be entitled to four pounds of grain, and one weighing 800 pounds would be entitled to four and one-half pounds of grain, and a 900-pound heifer would get five pounds of grain, daily.

Cottonseed meal, if fed in moderate amounts, does not cause any harmful results to heifers or cows. Some experiment stations have fed cows four pounds of cottonseed meal daily when mixed with other grains without any harmful results whatsoever. The feeding of this type of ration was continued for considerable periods of time. In view of this experimental evidence it would appear to be quite safe if you did not go above three pounds of cottonseed meal daily. Cottonseed meal should be mixed with other grains and the cows should receive silage in winter time and pasture in summer.

A. A. Borland

Announcing

New De Laval Milkers

No matter if your herd be large or small, or your cows the world's finest, regardless of the quality of milk you produce, there is now a De Laval Milker to meet your milking needs more satisfactorily, efficiently and economically than can be done in any other way. Save time, milk your cows better and faster, produce cleaner milk, get more profit and pleasure from your work with a De Laval Milker. Sold on such easy terms they pay for themselves.



New De Laval Magnetic Milker
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THIS milker combines all the good features ever developed in De Laval Milkers, plus a simplicity of construction and installation, minimum power requirements, uniformity and perfection of milking, with reliability and dependability of operation never before approached. Once again De Laval is first.

Extensive trials during the past three years in various parts of the country prove the Magnetic to be the world's best milker. Users are delighted with it—cows respond to it with fullest production.

In the De Laval Magnetic, pulsations are controlled by means of a simple, efficient and patented application of electro-magnetic force, which is created at the pulso-pump and transmitted by wire to the units. Not only is the famous De Laval principle of controlled and uniform pulsations retained, but it is accomplished with less power, less expense, less installation and greater reliability than was ever before possible. In the Magnetic, pulsation control is instantaneously uniform, simultaneous and perfectly balanced.

This means that with a De Laval Magnetic Milker every cow will be milked in the best possible way and in exactly the same manner at every milking, which is most essential if cows are to produce to the fullest extent of their abilities.

Made in a variety of sizes for milking one to 1000 or more cows. Can be operated with gas engines or electric motors.

New De Laval Utility Milker
—For the Low Price Field



THE De Laval Utility Milker Unit was developed in response to a demand from users of single pipe line milkers for De Laval Units to work with their outfits. A new and ingenious type of pulsator was developed which enables the Utility Units to work on such installations in a very satisfactory manner.

Many of these Utility Units were put into operation and have proved so successful that it was decided to offer for sale a complete Utility Outfit in one and two unit sizes.

Tests have shown that the De Laval Utility will give better results than can be obtained from any other milker in its class. It is a quality milker and reaches a lower price field so that more users can enjoy the advantages of De Laval milking.

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Please send me complete information on the following (check which):

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I milk.....cows.

Name.....

Town.....R. F. D.....State.....

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THE De Laval Golden Series is the world's best separator and will continue to be the choice of all who want the best. The De Laval Utility Series for a lower price field are ideal separators for all those who have always wanted De Lavals but have thought they were beyond their means.



Magnetic Force Lightning fast reliable, efficient.



Through the use of the electro magnet railroads operate the complicated signal systems that assure the safe and swift operation of trains. In the wonderful pipe organs, electro magnets control the hundreds of valves. In the telegraph, the telephone, the steel and ore cranes — wherever positive control, lightning speed and dependability are needed—the electro magnet is used.



In the De Laval Magnetic Milker the use of magnetic force provides the simplest, most dependable and most effective pulsation control ever devised. The generator shown at (1) creates the magnetic force. When contact is made by a revolving cam in the pulso-pump, instantaneous contact is made with a magnet in the pail top, which immediately exerts its force and lifts the metal disc shown at (2). This causes the front teat-cups to massage the cow's teats, while the two rear teat-cups are opened and milk is withdrawn. When contact of the revolving cam is broken the action is instantly reversed.



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while engine is being run, for washing milker.

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TIGHT BINDING TEXT CUT OFF



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Ever stop to think that no two herds have just the same requirements, as regards the grain ration? Down the road from you Bill Jenkins is growing alfalfa. Bill's cows produce well on a grain mixture of only 18% or 20% protein. But *you've* never been able to grow anything better than timothy and a little clover. Your cows need a 22% or 24% mixture. What of it? *That's* nothing to worry about.

The thing to worry about—the most important question—is to feed the ration that gives *your* cows all the nutrients they need, *as economically as possible.* Whether you have to buy a 20% or a 24% mixture, that mixture will be an economical and efficient one if it contains

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Dairy Topics

By A. G. HUMPHREYS

MARCH is the month we usually sow clover. It has often been said that the best time to put the seed in the ground is when freezing weather has left the soil honeycombed, and taking everything into consideration that is as good a time as any other. Watch the weather, and the morning the ground is right grab the seed sower and run over six or ten acres and you are ready to rest. The reason I keep calling attention to clover so much is its adaptability to a great area over several states and its feeding value. One year I was without clover and my protein bill went too high. It is surprising how much one can do without if he has a lot of clover.

Dry Ice

I am always on the lookout for something new in dairying. Last week I found the result of dry ice as applied to shipping ice cream over a long distance. A box of ice cream was shipped from Peoria, Ill., to St. Petersburg, Florida, and arrived in perfect condition. The contractor was ordinary card board containing four pounds of dry ice. When it ceased to be dry ice there were but six ounces of solid matter left.

The ice cream was in a tin container and the delicate floral designs on it were intact when received. Dry ice is a form of solidified carbonic acid gas that is perfectly dry even when evaporating. It is so cold that a piece of it dropped into a glass of water boils and gives off a cloud of steam. It is cost 1 making dry ice is so low that it should become a valuable refrigerant and might be used in many cases in place of natural ice.

The Covered Wagon

O. G. Warrington, Newark, Ohio, has a collection of antiques which have to do with farming, and among them is a wagon of the old style, which is perhaps called the "prairie schooner." It was made in Virginia and came to this state. I presume many readers will consider that an inscription in the side of the wagon is of much interest. It reads, "This wagon was made in 1779." It was the original property of Harry Miller of Wilkes County. In the days of the early members of the Wilkes and Miller families came across the mountains to find a home in what was then the far West. Every part is hand made even to the wrought iron nails in the body.

One is surprised at the number of household articles that could be stowed inside and hung to one of those old wagons. Whole families lived in them for weeks at a time and some there be who think they were happier than we who hurl ourselves across the country at fifty miles per hour. Maybe they were.

We know that behind those old wagons came the progenitors of a great industry. Cows with calves by their sides, herd sires doing their part at the wagon tongue, and perhaps an occasional calf which was taken for a ride when it got too tired. Sometimes we see a cow that seems to be a direct descendent of one of those old long horned individuals of the 79 variety. But we must not think that all those of that came behind the covered wagon were noteworthy in breeding. Some good individuals came and so there must be laid the honor of establishing

Protein

March is with us with its hurricane up weather and if we do not watch the cows they will go down in production. Perhaps in no month do they need an extra supply of protein more than in March. It may not show in increased production so much, but it will show in condition. A cow coming out of winter in good condition is next to starting hot into winter in good condition give them extra care during Oc and see if it does not pay.

Lack of Green Feed

During the early spring we sometimes have trouble with the cream refusing to churn into butter. Often cow is blamed for it and often not to blame. Lack of green feed in particular, is the reason of the ure to get butter. Uneven ripening the cream has more to do with it we know. It is a hard matter to cream even and to keep it at the temperature in most homes where thermometer fluctuates several every day. It is not known that churns have caused any divorces they have caused the loss of a temper which once lost is never again. This trouble is seldom met when the cows are on pasture.

Twisted Wire

It has been suggested that a number one wire twisted and on the barked cow's throat will essentially reduce the choke. A good sling on the hands of an operator or an amateur is [illegible] keep down the windpipe. [illegible] plays a dirge and [illegible] sweeps. Let the [illegible] monkey wrench [illegible] call the veterinarian [illegible] is a valuable one. It will do little harm to [illegible] later over her.

Annual Testing Report

Montgomery County

THE Montgomery Cow-Testing Association No. 2 finished its year January 1 1929, with [illegible] members. There were [illegible] the association during the year.

Eight [illegible] with an average of [illegible] cow exceeded an average production of [illegible] pounds of butterfat. [illegible] these herds follow:

	Breed	Lbs.
[illegible]	R.J.	[illegible]
J. L. Ogden & Sons	R.&G.H.	[illegible]
Israel Buckley	R.G.&G.H.	[illegible]
Wm. Steinbrenner	R.A.	[illegible]
State Hospital	R.&G.H.	[illegible]
Wm. Pettit	G.H.&G.J.	[illegible]
C. E. Ingersoll	R.G.	[illegible]
Frank Pennypacker	G.H.	[illegible]

Lee McCauslin [illegible]
E. G. Waltz [illegible] agent.
Compiled by J. O. Sch[illegible]

• • •

Clearfield County

THE Clearfield County Cow-Testing Association finished its second year January 1 1929, with twenty-four members, and five part year members. There were 302 cows in the association during all or part of the year.

The pure-bred Jersey herd of Hood, Sibula, again leads the association in production of both milk and butterfat with an average of [illegible] pounds of milk and 507.2 pounds of butterfat.

The results for the association for the two years are as follows:

	Average No. Cows	Lbs. Milk	Lbs. Fat
1927	302.75	3819	[illegible]
1928	295.58	4229	[illegible]

Nine herds with an average of [illegible] cows exceeded an average production of four pounds of butterfat. The complete list of these herds follows:

	Breed	Milk
C. L. Hood	R.J.	10,081
Mrs. C. V. Kettle	G.H.,G.G.	9,220
John Fassel	G.A.,G.H.	7,747
G. B. Wachob	R.G.,H.	8,494
Roy Winnett	R.H.,G.G.	7,205
S. E. Thompson	G.H.,G.G.	6,967
C. O. Mowery	R.G.	6,652
G. E. Taylor	R.G.,G.H.	6,868
James Miller	R.P.G.,G.G.	7,041

M. D. Shumaker, T[illegible]
W. O. Mitchell County Agent.
Compiled by J. O. Sch[illegible]



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UNADILLA SILO
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It requires fewer repairs and less attention than any other building on your farm.

Its strong, smooth staves fit closely to form an air-tight, frost-resisting and storm-defying structure. Steel cables hold the Unadilla erect, steady and secure on its foundation.

The big hoops are tightened in front. The door fasteners form a safe, easy and always ready ladder.

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Send free book No. E-3 on Feeding Management.
Name.....
Address.....

O. L. M. E. C. 1929

The Bull Tamer

THE Pennsylvania Farmer is continued calling attention to the many [illegible] mangly bulls, and perhaps no [illegible] is more dearly one of [illegible] Dangerous and [illegible] bulls [illegible] tell of human [illegible] annually [illegible] a record [illegible] a [illegible] [illegible] [illegible]

Do pests take YOUR PROFITS?



Fruit and vegetable pests rob farmers of millions of dollars every year. Reduce your loss by spraying early and often. Use "Bell-Mine" Rotary Kiln Pulverized Lime—a pure lime that covers well, sticks close, is easy to use and doesn't clog nozzles. Comes in air-tight steel barrels—keeps perfectly and indefinitely. Sensible formulas, sound spraying advice sent to you without cost. *Use the handy coupon below for* FREE *book.*

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R. F. D. .....Occupation .....

Postoffice ..... State..... Relationship of Beneficiary .....

Full name of beneficiary .....

If renewal give policy number .....

Farm Conditions

Upshur Co., Central W. Va.

Feb. 12: Zero for last two mornings with no snow for protection. An open winter, little snow but lots of hard freezing. Coldest for winter 15 degrees below zero. Stock wintering well with plenty of feed. No stock selling now. Eggs 35c, butter 45, chickens, old, 25c, potatoes retail $1. Better plowing done. Feeding and chores about 75 being done on farm now. Ice cheering. A. S. Time.

Juniata Co., Central Pa.

Feb. 11: We are having the greatest winter. All streams frozen with ice since January 6th. This has been an unusual winter. The pigeons have hatched every month and many of them came on Ash Wednesday. Chickens laying well. Eggs 30c. Hatching eggs at retail. Not much sickness. A serious scarcity of the wheat is here. M. M.

Erie Co., N. W. Pa.

Feb. 15: Snowing [illegible] the past week. Heavy snow Sun. and Mon. and a real blizzard Tuesday. The [illegible] making their rounds as usual. Chickens laying well. Eggs 70. Schools going good. Quite a few cases of flu reported. M. M.

Columbia Co., Central Pa.

Feb. 9: [illegible] last week. Roads are blocked with drifts. Not much stock being sold. Eggs 40c. Potatoes $1.50. Work on the farm is at a standstill. [illegible] Many farmers are cutting their supply of wood. Schools are closed on account of the storms. Not much sickness. W. C. B.

Franklin Co., Southern Pa.

Feb. 20: [illegible] about gone. Ice is not very thick. Heavy snows and drifts. Not much ground to be seen. Hay and grain scarce. Stock in good condition. Eggs 30c. Stock water is still frozen and may need chemicals. Another case of the tuber disease testing which has been in force since last summer and which will go into effect. The roads have been in good condition since the first and many stock and stock sales. Some of the prices have been unprecedented. Wheat $1.35, potatoes 50c, lard 12c, butter 45c, chickens 25c. John B. Shank.

Blair Co., Central Pa.

Feb. 18: Winter reached here at last. We have had some trouble with snow drifts in places and recently the highways were very icy but in the last few days the sun is removing the ice. There will be quite a few farm sales this spring and also a few retired farmers going back to farms. Water is very scarce all over the county. Wheat $1.35, corn $1, oats 50c, hay $30, straw $15, butter 50c, eggs 45c, sausage 20c, cured hams 25c, old chickens 25c. H. Edwin Hetrick.

Chautauqua Co., S. W. N. Y.

Feb. 12: People who just dearly love zero days are saying, "What nice winter weather this is!" and if one's idea of something nice is a long-continued series of ripping blizzards, then we're certainly having nice things. Anyhow old Chautauqua is not improving in its old age. Potatoes are 50@55c, apples $1, eggs 40c, butter 55c, wood $5@5.50 per cord. This is the very busy season for farmers, keeping themselves, their families, their stock and all their stored products that are "freezable" from freezing. Mrs. E. M. A.

AYRSHIRE SALES

DURING 1928, a total of 764 registered Ayrshires were reported sold at auction in the United States for an average of $184.57, which is considerably higher than the 1927 average. This average is regarded very satisfactory, especially when the large number of immature animals included is considered as well as the fact that three of the sales were advertised only locally. Furthermore six of the sales were dispersals which placed a number of old and unsound animals on the market.

When classified as to ages and sex, the cattle averaged as follows: 302 cows averaged $242; 90 two-year old heifers averaged $204; 124 yearling heifers averaged $149; 92 heifer calves averaged $106; 29 bulls, yearlings and over, averaged $205; 32 bull calves averaged $89; and 14 grade animals averaged $152.—Ayrshire Breeders' Ass'n.

Gear up sluggish milkers ...get a record milk crop



COWS on winter feed need something more than a good diet to insure a full yield. It is not so much what is fed, in fact, as what happens to the food after it is consumed, that counts. If digestion and assimilation lag good feed goes to waste. Some dairy authorities claim this is the case with two cows out of three—especially during the winter months when milk-making vigor is lowest and feed costs are highest.

Regular conditioning of barn-fed cows with Kow-Kare, the great conditioner, brings back via the milk pail many times its small cost. At a cost of a few cents per month per cow you can give the slow milkers the benefit of this scientific compound of Iron, the great builder and blood tonic, blended with potent medicinal herbs and roots. Sluggish genital and digestive organs are toned up, appetite improved, feed converted into milk without waste.

As a general conditioner and for building up cows for calving Kow-Kare has been a proven aid to cow owners for over thirty years. Sold by drug, hardware, feed and general stores. If dealer is not supplied we will mail postpaid.

DAIRY ASSOCIATION CO., Inc.
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FREE COW BOOK

We have just published a handsomely illustrated 36-page book on cows and dairying, "More Milk From the Cows You Have." This valuable handbook will be mailed on request.



CATTLE

—BROCKETT FARMS SHORTHORNS— Dark Red, calved May, 1928. Sire, [illegible] Grandford dam, Averne 2[illegible]. The best of breeding and low set and thick. You will like this bull. Priced right. Also several other promising bull calves of near breeding age. **BROCKETT FARMS.** Atwater, Ohio

HEREFORDS and SHORTHORNS FOR SALE 87 cows with calves, 146 yearling steers, 19 heifers, 54 fleshy two-year-old weighty bulls, 126 weaned calves. Females all T. B. tested. **V. W. CHANNELL.** Dunda, Iowa

THREE SHORTHORN BULLS, ready for service. Herd Bull Nacmore's Fortune. **J. B. TAIT & SON.** R. 2. Mercer, Pa.

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BUCK & DOE RUN VALLEY FARMS Hereford Cattle. Poland-China Hogs. Hampshire Sheep. Draft Horses. **THE SAINT ANGO COMPANY.** Martinsville, Penna.

Angus Cattle at reasonable prices. Write **HAYARD BROS.,** Waynesburg, Pa.

Veterinary

By Dr. J. F. SHIGLEY

WIND, BROKEN

Sometime ago I bought a colt [illegible] that is wind broken. He is some [illegible] and I guess that is [illegible] he [illegible] some food [illegible] him to [illegible] I'm anything he does [illegible] the [illegible] of feeling of [illegible] H.

This condition may be relieved by feeding clean hay that is moistened by sprinkling with water, feeding the bulk of it at night. The grain ration may be made up of bulky feeds dampened in some of this and bran may be fed freely with the good results.

SOW'S UDDER SWOLLEN

I have a sow whose right hind [illegible] or udder is swollen as large as [illegible] size. It gathered [illegible] coming out through the teat. Is not so large now but on the left side also of the middle another one is coming. F. P.

This is probably the result of [illegible] and this may account for the second one appearing. Washing the part with warm antiseptic solution and [illegible] may be necessary. Your veterinarian can also be called in case of [illegible] swellings.

COWS NOT THRIFTY

We have [illegible] and [illegible] each day and corn fodder and [illegible] cannot seem to put [illegible] They are losing [illegible] W. L. S.

These cows should [illegible] corn and plenty of [illegible] bran or oilmeal [illegible] ton. Salt one [illegible] parts should be [illegible] animals. The grain [illegible] sprinkled over the [illegible] morning.

HORSE CAN'T GET UP

Bought a horse three weeks ago in poor condition. He [illegible] but when [illegible] get up. Will raise [illegible] but cannot raise [illegible] W. H.

This horse should [illegible] not be [illegible] and oats with [illegible] to the daily ration. A [illegible] condition would be [illegible] sure whether or [illegible] and that would not be [illegible]

WART AROUND EYE

We have a two-year-old horse with a white wart all around her eye. We [illegible] nothing drive it away? [illegible]

Apply equal parts of [illegible] use, being careful [illegible] eye.

LUMP ON LEG

Last Monday I bought some horses in the city to winter on the farm. [illegible] a 1,500-pound horse [illegible] soft lump on right front leg just [illegible] knee. In the outside a little [illegible] the rear. It did not seem to bother him [illegible] He looked as though the tendon had been struck. In about two days he would [illegible] and the leg would [illegible] and below the lump. W. H. D.

It may be necessary to have this lump opened and drained before improvement can be expected. Your veterinarian should be the judge of this [illegible] and [illegible] nature of the injury.

RATION FOR YOUNG CALVES

I have some trouble in raising calves. Would you please suggest a good balanced ration that I could feed them from the time they are old enough to eat ground grain? I have been feeding equal parts of bran and middlings. W. W. B.

It would be of value to a request of this nature to indicate the supplemental feeding such as skimmilk or milk powder. A grain ration consisting of equal parts of corn, oats, linseed meal and bran makes a good combination for young calves.

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has taken the place of grandfather's knowledge. You may be sure a thing advertised is as represented. If it is not, the person making it and the one selling it will quickly lose your confidence and your patronage. People do not dare misrepresent in their advertising—to do so is to invite closed factories and stores.

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TIGHT BINDING TEXT CUT OFF

MALE HELP

WANTED.—Experienced farmer, preferably one with grown sons, to develop 640-acre farm. Wonderful proposition. Zottwich, 604 W. Jefferson, Louisville, Kentucky.

WANTED.—Farmers to farm on share basis in Somerset and Cambria Counties. Write Wilmore Real Estate Company, Windber, Pa.

AGENTS

THIS WILL PAY A MAN WELL.—Farmer preferred to sell Wymix (formerly "Wormix"), my concentrated medicated salt on money-back guarantee. Fifteen pounds sells for $1.50; added to 85 pounds of salt it makes a better conditioner than can be bought ready-mixed and saves feeders half the cost of latter. Thousands of livestock owners testify Wymix is best remedy they ever fed. Many say that since feeding it they haven't lost a sheep or hog although before they lost many. I offer you an agency with liberal profits and will advertise Wymix for you direct to livestock owners in your territory. Write for particulars; begin immediately. Increase of your income. Address Sidney Pelz, Proprietor, Ivo-San Laboratory, 4612 St. Clair Ave., Dept. 35, Cleveland, Ohio.

POLMET POLISHING CLOTH cleans all metals like magic. Gets enthusiastic attention. Sells fast at 25c. Sample free. F. C. Gale & Co., 80 Edinboro St., Boston, Mass.

MEN WANTED to canvass farmers, $160 monthly and expenses. Possibility for advancement. Higler Co., F147, Springfield, Illinois.

MAKE $200 NEXT MONTH SPARE TIME. Clare Dickie, Augusta, Mich.

SALESMEN

EVERY HOME A PROSPECT.—Make big money. Employ crew. Take orders trees, shrubbery. Work entire year. All or part time. Complete cooperation. Landscape service. Commission paid weekly. We deliver, collect. Apply Wilhelm Sons' Nurseries, Desk F, Rochester, N. Y.

SALESMAN.—Agent, knowledge of home water pumps, to represent Philadelphia Distributor exclusively. Must have car and about $100.00 for demonstrating equipment. Line leads furnished immediately. Apply Fred W. Secker, House Bldg., Philadelphia, Pa.

WANTED.—Middle-aged man who knows farm life, to travel among farmers in the country. Steady work. Write Ohio Whipple, West Salem, Ohio.

TOBACCO

NATURAL LEAF TOBACCO.—Best grade, guaranteed. Chewing, 5 pounds, $1.00; 12, $2.00. Smoking, 10, $1.50, pipe free. Cigars, 50, $1.50. Pay when received. Valley Farmers, Murray, Kentucky.

GUARANTEED HOMESPUN TOBACCO.—Chewing, 5 pounds, $1.50; 10, $2.50. Smoking, 10, $1.75. Pipe free. Pay Postman. United Farmers, Hardwell, Kentucky.

BIG SAMPLE TOBACCO for 10c and 5 names of users. Kentucky Tobacco Company, West Paducah, Kentucky.

FOR THE HOME

100 ASSORTED dishes packed as first quality consisting of cups, saucers, plates, bowls, oatmeals, platters, etc. All useful. Slightly imperfect. $5.50, prepaid. Send money to us for immediate shipment. Home China Co., Millis, Mass.

LONG'S PURE HONEY.—Direct from producer, 5-lb. pail clover or buckwheat, $1.15 postpaid. Wholesale prices on request. Satisfaction guaranteed. W. F. Long, Millville, Pa.

PATCHWORK.—7 pounds Percales, Ginghams, $1.00. 4 pounds Rag Strips, $1.00; silk and cotton. Pay postman plus postage. Large package silks, 25c, postpaid. National Textile Co., 601 Main St., Cambridge, Mass.

MUSIC LOVERS.—New Popular, also World's Best Music, 10c per copy. Catalogue and two copies free for names of ten piano players. Wesaner Music Co., Buffalo, N. Y.

HONEY.—(Amber) 5 lbs., $1.00; 10 lbs., $1.90, postpaid. 100 lbs, $13.00 here. Noel J. Loucks, Springboro, Pa.

BULK COMB AND EXTRACTED, white 5-lb. pail, $1.25; amber, $1.10, postpaid. Ed. Mitchell, Castalia, Ohio.

MISCELLANEOUS

KILL CATTLE LICE.—"Werner Louse Powder Gets Results." Hundreds satisfied users write: "Need more Werner Louse Powder. Send six pounds as there is nothing like it."—John Hibner, Cattaraugus, N. Y. "Used many kinds of Louse Powder but Werner's has them all beat."—George Walker, Marathon, N. Y. Absolute satisfaction or double money back. Large 2-lb. can one dollar postpaid. Order today. George Ex Werner, Harrierville, N. Y. Succeeding Werner Brothers.

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GRAFTING WAX.—Strictly high grade. Hand Wax 50c per lb., 2 lbs. for 95c; 5 lbs. for $2.20. Brush Wax, 5c per pound less. Prepaid. Satisfaction extra. Michigan State College Formulas. Send for circular. Dealers wanted. M. H. Hunt & Son, Dept. F, Lansing, Mich.

WHY BLAME THE BULL when your cow does not breed? Use Cow Catch 1 hour before service. Results or your money back; 85 cents for one cow. $2.90 for five cows, postpaid. Woodstock Farm, Route 2, Box 59-C, Renton, Washington.

BOYS AND GIRLS.—Send 10c for one copy of best selected British weekly stories and magazines. List of 53 different magazines mailed with every order. Popular Agency, Box 178, Station E, Montreal, Canada.

ROOFING PAPER.—3-ply, $1.85 per roll, 100 square feet. Prepaid. Asphalt shingles, roof coating, paint. Send for price list. Winiker Bros., Millis, Mass.

WATER PUMPS WATER night and day with Rife's Hydraulic Ram. No attention, no expense. Write for free catalog. Sold only by H. T. Olsen, 15 Park Row, New York.

CRANK your cold, stiff tractor 100% easier with one of our Extension Cranks. Doubles your leverage. Fits Fordson and all tractors that crank likewise. Guaranteed. $1.75 postpaid. H. W. Mfg. Co., Oskaloosa, Iowa.

FOR SALE.—Portable Smoke Houses, 3 and 5 hog sizes. Made from Galvanized Iron, sold on guarantee. Empire Mfg. Co., Box 1, Washington, Iowa.

FIND HONEY.—If you wish to be an expert bee hunter, write to Will Grover, Bristol, Vermont.

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MAKE BIG PROFITS with Chinchilla Rabbits. Real money makers. Write for facts. 849 Conrad's Ranch, Denver, Colo.

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CEMENT ROAD FARM—96 acres with splendid buildings, 7 cattle, 2 horses, 4 sheets, poultry. Tractor, feed grinder, complete farm machinery, hay, grain and feed, 4-foot coal vein, splendid location, good-sized market, hard road frontage, fine 10-room house, 50 ft. basement barn, lot good outbuildings. Handy summer resort boarding, splendid markets, Highway town in sight, rich level land, fine hot fruit, some timber, good owner sacrifices all only $7,000. Rolgers & Sparks, 102 E. Diamond St., Butler, Pa.

SEVERAL DAIRY FARMS FOR SALE in Erie County, Penna., for a trifle more than the mortgages originally held against same. From 100 to 200 acres in each. Good buildings. Near improved highways. These farms are bargains as they must be sold this spring. Terms only one-fifth cash required, balance in long time mortgages. Thos. W. Bradford, Agent, 512 Masonic Temple, Erie, Pa.

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142 ACRE FARM, good condition, well drained and watered, 100 acres cleared. Nine room house and all farm buildings. Will sacrifice if sold at once. Full particulars on request. Orden L. Hefner, Ainsworth, Pa.

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EXTRA GOOD FARM and retail Dairy Business, city limits large town. Westmoreland County, Pa. Write particulars, Daniel J. Aiuck, Jeannette, Pa.

VALLEY VIEW FARM, 107 acres, Bradford County. Good buildings. Only $2,500 C. C. Compman, Harrisburg, Pa.

MISCELLANEOUS LANDS

FOR SALE.—New Jersey Truck Farm at bargain price. Description: Situated in Cumberland County, N. J., on Cohansey River, on a hard road, all railroad facilities, 28 acres, 24 under overhead irrigation, 14 acres asparagus for 4 years old, Washington variety, 5 acres Black-berries. Cold frames all fully planted. House modernized, electric light, bath, A-1 condition. Outbuildings, all good. Livestock, farming implements, Chevrolet truck. Tools, implements in perfect condition. Possession can be given for farming March 1st without spending a dollar except necessary farming expenses. Address Box 107, Penna. Farmer, Pittsburgh, Pa.

IN THE SAN JOAQUIN VALLEY of California general farming is a paying business, feeding millions of people in towns and cities. Alfalfa combined with dairying and poultry will build a good income. A small one-family farm, with little hired labor, insures success. You can work outdoors all the year. Newcomers welcome. The Santa Fe Railway has no land to sell, but offers a free service in helping you get right location. Write for illustrated San Joaquin Valley Folder and get—our farm paper—"The Earth" free for six months. C. L. Seagraves, General Colonization Agent, Santa Fe Railway, 818 Railway Exchange, Chicago

DEL-MAR-VA—Good SQUARE MILES FINEST Agricultural Opportunities. Within three to ten hours by motor truck over splendid concrete highways to New York, Philadelphia, Baltimore and Washington markets. Pennsylvania Railroad System permeates entire Peninsula. Mild equable climate. Very little snow and freezing. Farms, town and waterfront homes, low priced. Good schools, low taxes. Handsome descriptive booklet free. Address 1651 Del-Mar-Va Building, Salisbury, Md.

STOCK AND GRAIN FARM.—252 acres, laying beautiful, growing fine crops. Colonial brick residence, also seven-room residence, necessary outbuildings. Splendid location. Sacrifice price. Machinery included. Good terms. C. H. Reynolds, Box 234, Fredericksburg, Va.

SIXTY ACRES.—Fertile. Nearly new house, Twenty acres timber. Good barns, near school. J. T. Phillips, Delmar, Delaware.

WANT—MISCELLANEOUS

OLD MONEY WANTED.—Do you know that Coin Collectors pay up to $100.00 for certain U. S. Cents? And high premiums for all rare coins? We buy all kinds. Send 4c for Large Coin Folder. May mean much profit to you. Numismatic Co., Dept 726, Ft. Worth, Tex.

WANTED.—Raw Furs, Rabbits. Especially good Muskrats, $1.75. Also want live rabbits, Muskrats, Minks, Raccoons, Foxes. Sterns Fur Co., New Brunswick, New Jersey.

FARM WANTED.—Will trade my income property in Pittsburgh, for a farm near city. Write giving particulars to P. O. Box 439, Pittsburgh, Pa.

WANTED.—Old books, letters, stamps, etc. Box 212, Bridgewater, Va.

SITUATION

POSITIONS WANTED by Farm School Graduates, 20 years of age, having had three years practical and theoretical training on the large School farms. Some of these graduates are trained as dairymen; herdsmen; tractor operators; vegetable gardeners; orchardists; poultrymen; greenhousemen; landscape men; and general farm management. Only interested in good farms. Ready for employment April 1st. Communicate with C. L. Goodling, Dean, Farm School, Penna.

[illegible] NEED HELP? [illegible]. We have Jewish young men, able-bodied, some with, but mostly without experience, who want farm work. If you need a good, steady man, write for an order blank. Ours is not a commercial agency. We make no charge. The Jewish Agricultural Society, Inc., Box C, 301 E. 14th Street, New York City.

SITUATION by general farmer, age 40, married, two children. Good manager, excellent character, highest reference. Address Box 108, Penn'a Farmer, Pittsburgh, Pa.

CATTLE WANTED

WANTED.—To buy Registered Guernsey heifer calves, heifers and cows, priced reasonably. Hugh Sanford, Mocksville, North Carolina.



"What profession is your boy Josh going to select?"

"I'm going to educate him to be lawyer," replied Farmer Cantwell. "He's naturally argumentative an' bent on mixin' into other people's troubles, an' he might jes' as well get paid for his time." Washington Evening Star.

• • •

Kitty, aged 4, had been naughty and her father had had to administer vigorous corrective lotion, going to business. He was conspicuously out of favor. On his return from business in the evening, Kitty called up across with frigid politeness: "Mother, your husband's home."

• • •

Pat and Mike were working on a new building. Pat was laying bricks and Mike was carrying the hod. Mike had just come up to the fourth floor when the dinner whistle blew. His lunch was on the ground.

"I hate to walk down after it," he said.

"Take hold of this rope," said Pat, "and I'll let you down."

Pat let him down left way and then let go of the rope. Mike landed in the mortar bed not much hurt but terribly frightened.

"And why did ye drop the rope?" he demanded.

"I thought it was going to break," said Pat, "and I had presence of mind enough to let go."

• • •

Why is a caterpillar like a pancake? Because it's the grub that makes the butterfly.

• • •

Jack: "What kind of a fellow is Binkley?"

Bill: "Well, he is one of those fellows who always grab the stool when there is a piano to be moved." Oregon Lemon Punch.

• • •

Charles M. Floyd, when he was Governor of New Hampshire, had one of the members of his staff, and there was an unseemly scramble for the office, even while the man's body was awaiting burial. One candidate went so far as to call upon the executive.

"Governor," he asked, "have you any objection to me taking the deceased's place?"

"No," replied the Governor; "I have no objection if the undertaker is willing."

• • •

A Practical Answer

"If I cut a bootstrap in two," asked the teacher, "then cut the halves in two, what do I get?"

"Quarters," returned the boy.

"Good. And then again?"

"Eighths."

"Correct. Again?"

"Sixteenths."

"Exactly. And what then?"

"Thirty-seconds."

"And once more?"

"Hamburger," cried the boy impatiently.

• • •

The Only Way

A Scotchman living on the outskirts of Chicago became engaged to a girl who got so fat that he wanted to break off the engagement. But the girl couldn't get the ring off, so he had to marry her.

• • •

"Your trouble," said the optimistic friend, "may be a blessing in disguise."

"Well," sighed the afflicted one, "I must say it is the cleverest disguise I ever saw."

• • •

With and Without

"Give me a glass of plain soda water without flavor."

"Without what flavor?"

"Oh, I'll take it without vanilla."

"You'll have to take it without chocolate. We ain't got vanilla."

• • •

Several Englishmen and one lone Scotchman were lunching at a certain club in New York. One of the group suddenly asked the Scot:

"James, do you know why the Scotch have such a wonderful sense of humor?"

No, replied James, pleased at the tribute. "Why?"

"Because," answered the other, "it is a gift."

• • •

A candidate for the position of the world's meanest man has appeared in the person of the editor of a small newspaper, who published the following item in his gossip column:

"Miss ——, a young lady of twenty summers, is now on a visit to her twin brother, aged thirty-one."



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Special Fall Prices on high class breeding [illegible] Geese, Ducks and Guineas, write your wants for mating list. Pioneer Stock Farm, Telford, Pa.

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REGISTERED DORSET and SHROPSHIRE [illegible] bred for March lambs. Good ones. Two [illegible] Collie pups. MYRON H. LOFTER, Belleville, Pa.

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OUR 1929 CATALOG JUST FROM PRESS [illegible] pages showing Largest Line of Poultry [illegible] in the world. Over 250 items! Write today for your copy. Free. Brower Mfg. Co., Dept. [illegible], Illinois.

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PEAFOWL, Pheasants, Bantams, Pigeons, [illegible] Rabbits. Free Circular. John Hass, Redfield, Iowa

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ALFALFA.—First and second cuttings, extra [illegible] hay. Deal direct with a farmer and save money. Write for prices. The Cross Farm, Fayetteville, N. Y.

HAY.—All kinds, alfalfa, clover, timothy, mixed. Delivered prices. Harry D. Gates Co., Syracuse, Michigan

ALFALFA HAY. Car lots for sale. Chas. Wing, Box 22, Mechanicsburg, Ohio.

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BE AN AUCTIONEER. Earn $25-$100 [illegible]. Send for large illustrated Catalogue, [illegible] to receive Home Study Course free. Reisch Auction School and Business College, Box [illegible], Decatur, Ind.

LEARN AUCTIONEERING AT HOME. [illegible] student successful. School, Box 707, Boone, Iowa

$10 AUCTION COURSE $1. 200 auction secrets $1. Methods $1. American Auction College, Kansas City

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[illegible] TO EIGHT WEEKS OLD. [illegible] chicks are breeded under [illegible] of poultry experts, and are hatched in [illegible] with absolute control of heat, moisture and [illegible]. Our 1929 chicks have already been tested for [illegible] and are from [illegible] that have been [illegible] for years. Write for free [illegible] in Capons, for Weekly Chicks. Why not [illegible] Buy Blood-tested Chicks [illegible] Poultry Farms, Box 30, Reynoldsville, Penna.

BIG PROFITS from quality chicks. We [illegible] rightly, at only [illegible] per 100 and up. Chicks from pedigreed males [illegible] from [illegible] per cent. Pullorum passed. Write today for [illegible] and Quality and Breeding. Barred Rocks, [illegible] Reds and R. I. Reds, $11 per 100; 5 different [illegible] Heavy Assorted, $11 per 100; 5 different [illegible] Shipped three weeks in advance. Catalog free. Fairview Heights Hatchery, Blairsville, Pa.

[illegible] that rare quality, is bred into our [illegible], carrying blood of Tom-to-Laying [illegible]. Every chick produced on our farm is [illegible] by Keim Farms. Write today for [illegible] Keim Farms, Box [illegible], Womelsdorf, Pa.

[illegible] CHICKS—Strong and Sturdy. R. I. Reds, Leghorns, Barred Rocks, Wyandottes. Healthy and of [illegible] quality. Carefully selected, Blood tested and culled. Prompt and [illegible] egg [illegible]. Reasonably priced. Prompt [illegible]. Guaranteed. Write for catalog and [illegible] order discount. Mt. Airy Poultry Farm, [illegible], Pa. R. M. Airy, Md. Phone 57

[illegible]'S HI QUALITY CHICKS [illegible] from free range, healthy, high-egg [illegible] stock. Chicks are big, strong, husky and [illegible] they chicks that live and grow into [illegible] Every guaranteed. Special discounts on [illegible] booked early. Write today for free [illegible]. Hoffman's Poultry Farms, Box [illegible], Penna.

WHITE LEGHORN EGGS AND CHICKS. Big [illegible] if ordered now for spring shipment. [illegible] to 300 to 320 egg males. Egg bred 29 [illegible] Whoever at 20 egg contests. Shipped [illegible] Catalog and interesting bulletin free. Thousand [illegible] hens, cockerels at low prices. Circular [illegible]. Leghorn Specialist for free [illegible]. George B. Ferris, 980 Union, Grand Rapids, Mich.

[illegible] SUPER QUALITY CHICKS [illegible] range, money making [illegible]. Barred Rocks, White Wyandottes, White, Barred Rocks and Brown Leghorns. Booklet Free. Low Prices. Write today. Bucher Poultry Farm, Hatchery, Dept. B, [illegible], Ohio.

CHICKS—Single Comb White Leghorns, Barred Rocks and Reds. Hi-Liver [illegible] Strain S. C. White Leghorns. Pullorum passed. [illegible] 100% live delivery. Special [illegible] Circular and Price List. Clover Farms, Box [illegible], Millersville, Pa.

EARLY SPRING BROILER CHICKS. Butcher [illegible] per pair extra [illegible] pure bred [illegible] Rocks, Reds, Wyandottes, Leghorns, Orpingtons [illegible] Write today for [illegible] folder free, showing best varieties [illegible] Circular and Price List. Superior Hatchery, Box [illegible], Tyrone, Pa.

BLUE RIBBON HATCHED BARRED ROCKS. Reds and White Leghorns are State Certified and Pullorum Passed. Strong, lusty, healthy chicks from [illegible] that are noted for their egg production. Write today for [illegible] Prices. Blue Ribbon Poultry Farms, Box [illegible], Mount Joy, Pa.

[illegible] Electrically hatched pure-bred Barred Rocks, Reds, [illegible] Business Tancred White Leghorns. Breeders rigidly culled and specially mated for highest vitality. Because they produce better all-around results at lower prices, [illegible] Barred Rocks. Circular free. Bethany Hatchery, Bethany, Pa.

TANCRED TRAPNESTED STRAIN S. C. White Leghorn Chicks and Hatching Eggs from [illegible] State Certified Officially Blood Tested [illegible] from trapnested [illegible] Eggs from our own [illegible] Free booklet. North Penn Poultry Farm, Hellertown, Pa.

BABY CHICKS—Rocks, [illegible] from [illegible] Barred Rocks, White Rocks, Rhode Island Reds, White Wyandottes, Special prices on orders booked now. Our Custom hatching a specialty. Rockers Poultry Hatchery, Box [illegible], Rockers, Pa.

BABY CHICKS from 100% Pure Tancred strain Great Barred State Certified. Blood tested [illegible] and three-year-old hens and pedigreed sires from 200-egg matings for five generations on [illegible]. Also breeding cockerels from same [illegible] Guaranteed quality and [illegible] Pure. Clearspring, Md.

ELBERT CHICKS. DUCKLINGS. Noted for [illegible] production. Healthy Let Elberton chicks [illegible] and ducklings prove their superiority. Satisfaction [illegible] Write for new low prices and [illegible]. Bank references. Rainbow Hatcheries, New Washington, Ohio.

PUREBRED DAY OLD CHICKS. Strictly [illegible] White Leghorns, Rocks from blood-tested [illegible] egg high producing [illegible] Pennsylvania State Supervision your guarantee. Ask for [illegible] Poultry." Jos. H. Myers Farm and Hatchery, Box C, Milan, Pa.

THE FAMOUS EGGSHAKER STRAIN. Tancred Leghorns. Average winter income, $12.50 [illegible] Chicks from free [illegible] Catalog. A. Beth Brothers, Electric Hatcheries, Coudersville, Pa.

BABY CHICKS. Pure Barron English White Leghorns. We import Large Bodied Birds direct from our Egg Breeding Farm. Big husky chicks hatched from our Egg Bred Leghorns insure success and free catalog prices, before buying. White Ivy Leghorn Farm, Box N, New Washington, Ohio.

EXTRA QUALITY 4 breeds Leghorns, Reds, Rocks, Wyandottes. Our 100-acre Breeding Farm, system of management, equipment and expert [illegible] mean just a more profitable chick. All breeds State tested. Hall Brothers, Box 61, West Grove, Penna.

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CHICKS 7c to 9c. Rocks or Reds, $14.00; Leghorns, $12.00 hens mixed $12.00 light. 100% Delivery Guaranteed. Breeding stock. Catalog free. Quality Farms, R. F. D. 7, Lawrenceville, Pa. Box C, Allentown, Pa.

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CHICKS. High quality Barred Rocks, Reds, White Rocks, Buff Orpingtons, White Leghorns. 12c each. Prepaid. Parcel post. Special prices on 500 and 1,000 lots. Postage free on 500 and 1,000 lots. Order direct from this ad. Nicholls Hatchery, Box [illegible], Nicholls, Ga.

CHICKS. From vigorous farm flocks. White, Brown Leghorns. $12.00 Barred, White Rocks, Reds. $14.00. Buff Orpingtons, White Wyandottes, $15.00. Mixed, $10.00. Black Minorcas, $20.00. Mixed, $10.00. Live Delivery Guarantee. Order direct. Berger Poultry Farms, Box [illegible], Zionsville, Pa.

MARTIN'S CHICKS. Barred, White, Buff Rocks, Reds, Buff Orpingtons, White Wyandottes, White Leghorns. Assorted, $11 per 100. Postpaid. Martin's Hatchery, Mt. Victory, Ohio.

PENNSYLVANIA STATE SUPERVISED Chicks. Barred Rocks, White Wyandottes, White Leghorns. All Leghorn Blocks headed by R. O. P. Cockerels. Low prices. Catalog free. Prices. Lancaster Way Hatchery, Chambersburg, Pa.

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WHITE LEGHORN CHIX. Accurately bred for high egg production. Large, husky, farm-range chicks. Free booklet. Brenneck Farms, Box [illegible], Lititz, Pa.

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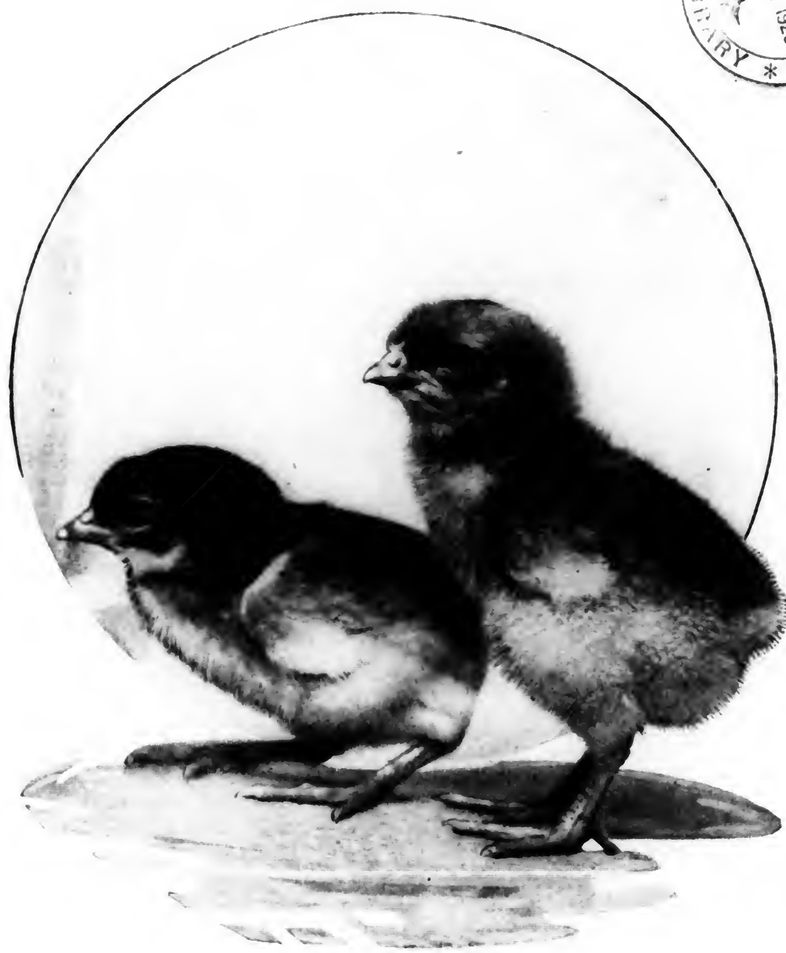
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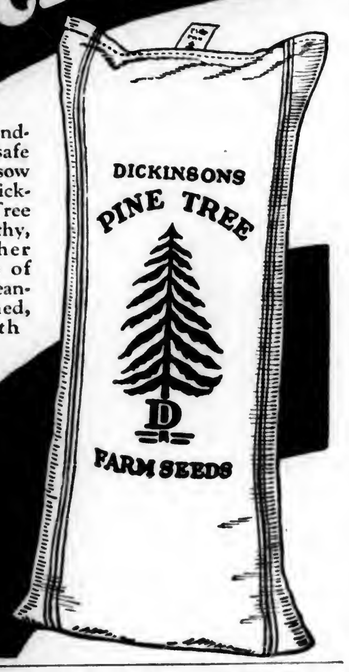


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Farm Facts and Fancies

By ALVA AGEE

MARK SULLIVAN in his interesting book entitled "Our Times," tells us that the first legal article about trusts appeared in the Harvard Law Review in 1887, and the word was so new that the author put it in quotation marks. Of course there were trusts, monopolies, rings of the time of Joseph in Egypt and Pharaoh and Mr. Rockefeller had not started some combination or combinations in American industries but not to the date but industrial monopolies as we know them today are only forty years. One of our readers remembers the political excitement that raged around the domination of the trusts for ten years after the Sherman Anti-Trust law was passed in 1890. Those were days of Democratic victory when President Roosevelt was elected on a platform of opposition to trusts, but somehow what we call "trust busting" but sometimes what we call "trust busting" but what we can afford for that evening's supper is good. One subscriber asks whether there is any way of getting a court decision on the validity of the law without heavy expense. Probably not and the law most likely would stand.

Avoiding the Farm

[illegible] farmers of Arizona [illegible] farming has not been [illegible] some years. [illegible] to avoid the [illegible] to endure the [illegible] and the [illegible] White Way, which [illegible] reasons for [illegible] life.

[illegible] right when he says that the attractions of the city draw [illegible] from the farms, but it is [illegible] fundamental trouble found in the [illegible] farming has not been [illegible] profits. My observation [illegible] that where farming paid well as it has paid in the time I traveled [illegible] the point where we were considering the advantages of [illegible] rural life. [illegible] would not sell for [illegible] out of assessment [illegible] street improvement a few years ago.

All this is noted only in the interest of clear thinking. Certainly the public was right in demanding the destruction of transportation trusts when no plan for governmental control of rates had been worked out. The plan people were very helpless in the last quarter of the last century. Now the Interstate Commerce Commission regulates rates so that the returns to stockholders of railroads are relatively low. It works out differently in the case of some utilities that are not under its control.

I grant that combination doubtless has cheapened the production and the price of many commodities, and there is real and sharp competition between some great corporations that provide our supplies. Automobiles are an outstanding example. But always the pendulum swings too widely, and I believe that we need to come back part way to our position when we wanted free play for competition and a chance for the small capitalist. We are too trustful.

Tax Evils

A subscriber writes: "I notice you have touched at times on the tax question. Touch harder. It is almost the biggest one today, not only for the farmer but for all classes of people. I own a piece of unimproved town property. Its assessed value is one hundred and nine dollars. The street assessment cost me one hundred and sixty-seven dollars. How can that be right? One man lost his home and a large number have been compelled to mortgage their homes because crooked-thinking town officials took advantage of a vicious law and compelled property owners to pay for all the costs of the improvement of this street adjoining their properties."

Towns and cities, just like many individuals, want things that they are not able to afford. They force street [illegible] property owners who are [illegible] back until [illegible] We should [illegible] we can afford to have until we are able to get [illegible] improvements. That applies to public buildings and public roads and salaries as much as it does to a car, a suit of clothes or a hat. A [illegible] told me of some [illegible] would not sell for [illegible] out of assessment [illegible] street improvement a few years ago.

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Towns and cities, just like many individuals, want things that they are not able to afford. They force street improvements and then find that they cannot pay for them. Then they issue bonds and put the burden on the future. Some of the bonds are issued for public buildings that are not needed and are built for show. Some are issued for public parks that are not needed. Some are issued for paving streets that do not need paving. Some are issued for sewers that are not needed. Some are issued for water systems that are not needed. Some are issued for lighting systems that are not needed. Some are issued for fire departments that are not needed. Some are issued for police departments that are not needed. Some are issued for schools that are not needed. Some are issued for hospitals that are not needed. Some are issued for libraries that are not needed. Some are issued for museums that are not needed. Some are issued for theaters that are not needed. 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THE importance of southeastern Pennsylvania as a winter wheat producing area is emphasized, according to the State Department of Agriculture, by the fact that the average acre yield in these counties was 21.1 bushels last year, 6.1 bushels more than the average acre yield for the entire state, 5.6 bushels more than the United States average, and 4.6 bushels more than the average in the leading wheat producing state—Kansas.

The state and federal estimates also indicate that the 1928 average acre yield in these so-called "bread basket" counties exceeded the average acre yield of winter wheat of every state east of the Rocky Mountains. These counties produced more than one-third of the entire Pennsylvania crop last year.

Some Road Clippings

A subscriber sent a couple of road clippings and a letter that is "absent without leave" from my desk. I am sorry it lost itself. Among the clippings is a mild criticism of what I have been saying about the road drag. This I was glad to see because if anyone is sufficiently interested to criticize there may be some one else interested enough to try the drag. Remember that the road must be crowned and the sides drained and te drainage must be paid for and not left to the patriotic services of an individual. It all is a legitimate state wide expense because it is on the public interest that all land and its products have access to markets.

Package Bees

By EDWIN J. ANDERSON

AN industry of considerable size and recent development has grown up in the beekeeping field. It is the raising and sale of package bees. This industry has developed largely in the South because of the early honey flows and the extent to which brood rearing develops during March and April. The package bees are sold mostly in the northern parts of the United States and Canada to be used in making a start in beekeeping or to replace colonies that have died during the winter and to increase the number of colonies in the spring. Package bees are [illegible] since they are [illegible] diseases and [illegible] and vigorous queens. Full colonies bought locally [illegible] also make a good beginning [illegible]

Queen in Separate Cage

A queen is sent with [illegible] when so specified. She is confined in a separate cage [illegible] in the package will [illegible] to her and kill her. When the bees are put into the hive this cage is hung between the two center frames about three inches from the top of the frames.

The queen cage contains an opening at each end; one leads directly to the outer and attendant bees, the other into the chamber of candy. Both of these openings are closed with a piece of tin or heavy cardboard. Just before the cage is placed between the frames the tin or cardboard over the opening to the chamber of candy is removed. The bees will then clean away the candy to the queen and release themselves within a few days. In this way the queen is introduced slowly and takes on the odor of the hive so that she is seldom killed.

An Early Start Is Best

Package bees should be ordered during January, February or March with the date of delivery specified for any day desired between April 15th and May 10th, depending on the section of Pennsylvania to which they are going. The earlier the bees are started the greater will be their chances for success, since about eight or twelve weeks are required for them to develop [illegible] normal colony strength.

After the bees arrive they should be put into the hive containing drawn combs known to be free from disease or on frames containing full sheets of foundation. An empty super should be placed above the one containing the frames and the bees shaken out of the cage onto the frames. They will work down between the frames slowly. A few will cluster around the queen cage and keep the queen warm.

The bees should then be fed a lukewarm syrup made of one-half sugar and one-half water by measure. This syrup is generally fed in an inverted feeder place near the center of the hive but not directly above the queen.

Attention Needed

If the bees are put into a modern factory-made hive the feeder can be placed upside down over the opening in the inner cover; otherwise it can be placed on two small sticks directly over the frames. If the latter is done the space around the feeder should be covered with cloth or paper to prevent the escape of heat. The lid of the hive can then be put on the empty super to keep the feeder and frames dry.

The feeder should be refilled as soon as it becomes empty for several weeks or until nectar is gathered in reliable quantities from the spring blossoms. The bees should not take more than three or four days to empty the feeder.

After the bees have been placed in the hive and fed they should not be bothered for the first inspection until the fifth or sixth day. If they are disturbed earlier they may become excited and kill the queen.

In Farmer's Comparative Test "AA QUALITY" Fertilizer Produces 27 BU. MORE POTATOES *per* Acre


Above is Mr. C. W. Williams (left), of Nazareth, Northampton Co., Pa., who obtained 27 bu. more potatoes per acre with "AA QUALITY" Fertilizer than from another make used side by side in the same field.

WHEN one make of fertilizer produces a bigger and better yield than *another make of precisely the same chemical analysis*, side by side in the same soil and under precisely the same conditions, you have a real test of crop-producing power. Such a test was made last season by Mr. C. W. Williams, of Nazareth, Northampton Co., Pa. Mr. Williams gives the results in this letter:

> Last spring your salesman and dealer in my section induced me to try some "AA QUALITY" Fertilizer in comparison with the make I have been using for several years. My intention was to make a trial, using Michigan Russets, but as the Hiruca No. 9 was stored in the cellar in front of the Russetts, I had to change my plans and use the Hiruca No. 9. Both plots were planted at the same time and the same grades and amounts of fertilizer were applied. Throughout the season both plots were given the same cultivation and spraying.
>
> When I dug the fields last week, the yield of potatoes on the plot fertilized with "AA QUALITY" was 208 bu. per acre, while the yield on the plot where the other make of fertilizer had been used was 181 bushels per acre—a difference of 27 bu. per acre.
>
> Nov. 8, 1928. C. W. WILLIAMS.

In a season like last, when potato prices are out of line, it takes a big yield of top-quality potatoes to come out ahead. That is why the crop of Mr. Earl A. Jackson, of Akersville, Fulton Co., Pa., is of unusual interest. His yield was 511½ bu. per acre, the yield being verified by the Fulton and Franklin County Agents. And practically all of Mr. Jackson's potatoes were Number One quality. Mr. Jackson writes:

> I used your AGRICO for Potatoes ("AA QUALITY") this year with excellent results. The goods were in fine mechanical condition and the service received from your dealer was most satisfactory. I am very glad to recommend your goods to any one who wants the best results from the use of fertilizer.
>
> Oct. 20, 1928. EARL A. JACKSON.

Larger yields of better-quality crops—and bigger profits—make "AA QUALITY" Fertilizers by all odds the cheapest you can possibly buy.

See the nearest "AA QUALITY" dealer at once or write us for quotations.

> I used your goods on my silage corn and the yield this year was 40 tons per acre, 15 tons per acre above average here.
>
> Nov. 3, 1928. HENRY BACHMAN.

50% more potatoes. . . . Mr. Charles A. Wilson, of Stewartstown, York Co., Pa., says:

> My potato crop was planted in cornstalk ground this year and I harvested an average of 300 bu. per acre, compared to a 200-bu. per acre average in this section. Your "AA QUALITY" goods are always in splendid mechanical condition and I am well pleased with the results and certainly recommend the goods to all my neighbors.
>
> Oct. 15, 1928. CHAS. A. WILSON.

538 bu. from a test acre. . . . Mr. K. F. Bankert, Felton, R. F. D. No. 1, York Co., Pa., writes:

> My test acre of potatoes, verified by the County Agent, made 538 bu. I had sidling ground, and had to plant my rows 34 inches apart so I could cultivate them. This crop was grown with your AGRICO for Potatoes ("AA QUALITY"). My average yield was 400 bu. per acre. I want to congratulate you on your AGRICO goods. I am more than convinced that they contain the right plant food for potatoes. The mechanical condition is perfect.
>
> Oct. 17, 1928. K. F. BANKERT.

Our "Agricultural Service Bureau," under the direction of Dr. H. J. Wheeler, formerly Director of the Rhode Island Agricultural Experiment Station, will be glad to answer inquiries about crops, soil or fertilizers. Send for our Booklets. Please state the crops in which you are interested.

What other Growers say:

***40 tons of ensilage per acre with "AA QUALITY."* . . . Mr. Henry Bachman, Butler, Pa., writes:**

> For 30 years I have used "AA QUALITY" Fertilizers almost exclusively and invariably get satisfactory results. This year, not having ordered sufficient "AA QUALITY," I bought some goods of another make. I soon saw a difference—they would not go through the drill evenly like "AA QUALITY" does, and at no time did the crop fertilized with these goods equal that where "AA QUALITY" was used.

"AA QUALITY" FERTILIZERS

Manufactured only by

The American Agricultural Chemical Company
Executive Offices:
420 Lexington Avenue, New York

Certified Seed Potatoes

NORTHERN MICHIGAN RUSSETS — PRINCE EDWARD ISLAND COBBLERS AND MOUNTAINS—NEW YORK RUSSETS AND RURALS

High-yielding strains—officially inspected and certified. Let us quote prices on your requirements of potatoes and other farm seeds.

K. C. LIVERMORE, BOX P. HONEOYE FALLS, N. Y.

Quaker Hill Farm

SUPERPHOSPHATE

To those an excess of Superphosphate, both 20% and 16% grades, we can offer extra special low prices in car lots on net terms. Can include in shipment Nitrate of Soda, Sulphate of Ammonia, Muriate of Potash and popular analysis of mixed goods at same relative low prices. Write us now.

THE NITRATE FERTILIZER CO.
10 E. Town Street, Columbus, Ohio

TIGHT BINDING TEXT CUT OFF

Dollar-Gathering Crop

"Sweet Clover"

ITS many uses—as cash crop, hay, pasture, honey, soil-building—and its heavy growth make sweet clover a very important crop. Adapted to a wide range of climate and grown on practically any soil that is not acid, it has a place on every farm.

Sweet clover, however, is not the easiest crop in the world to raise. It has requirements—such as good seed of the right variety. This must be thoroughly cleaned of foul weeds and off varieties. It should be bought from an old-established thoroughly reliable seeds-man, who knows its quality by actual analysis and test. It should be scarified for quick germination. A well-limed soil is essential and the seed must be inoculated with the **right kind** of inoculant.



This year we are offering the best Sweet Clover seed that money will buy. There may be some seed on the market at a little lower price—unhulled, not scarified, not thoroughly free from foul weeds—but we will not handle it. Good white clover seed goes so far in proportion to the value of the crop, it is poor economy to buy cheap seed and take chances with a poor stand.

Try Hoffman's Sweet Clover this year. It will pay you. Write for free samples and ask for Hoffman's New Book on Farm Seeds.

Send today for Hoffman's new Farm Seed Book

A. H. Hoffman, Inc.,
Box 648, Landisville,
Lancaster Co., Penna.

"Hoffman's Seeds Pay"—
Sow them and they'll prove it!

Don't Forget!

That the best way to protect your seed corn from Crows, Pheasants, Blackbirds, Larks, Moles, Gophers, Woodchucks, Squirrels and other corn pulling birds and animal pests, is to use

STANLEY'S CROW REPELLENT

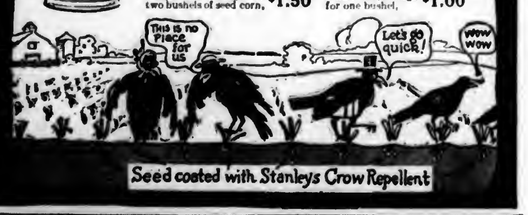


the preparation that farmers have used with success for the past 20 years and which is manufactured only by

THE CEDAR HILL FORMULAE CO.
Box 500-R, New Britain, Connecticut

If you cannot get it from your hardware, seed or drug store, order from us direct. It will be forwarded, postage prepaid, by return mail.

Large Can, enough for two bushels of seed corn, **$1.50** Small Can, enough for one bushel, **$1.00**



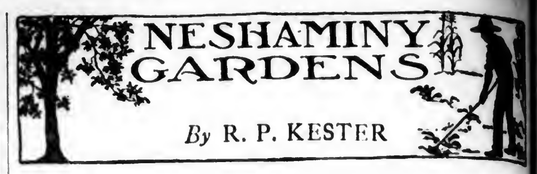
Seed coated with Stanleys Crow Repellent



The Baker Gas Tractor
Two Sizes—22-40 and 25-50

The tractor with the answer. Strong substantial frame. Heavy duty Foote Transmission. Heavy solid axle revolving on roller bearings. Four plate heavy duty clutch. Especially designed drive pulley shaft with three bearings. The harder the tractor pulls the closer it hugs the ground due to special draw bar hitch. Moderately priced. Terms fair. Complete tractor and thresher catalogs free.

THE A. D. BAKER COMPANY
Swanton, Ohio



By R. P. KESTER

THE Weather Man is a great practical joker. Just when he had us thinking that we were going to get around the corner headed for the first mild weather, he sends it early a foot of snow. This is the first we have had in eastern Pennsylvania this winter with the exception of one or two light falls which melted the next day. But like the proverbial all words this heavy snow is literally a God send to thousands of people. Just as Philadelphia was ready to appropriate $50,000 for relief of the unemployed the snow fell, necessitating the employment of 5,000 men as snow shovelers. Now they have a chance to earn their bread money, thus saving their self respect.

• • •

A heavy fall of snow is in the nature of a calamity in a great city. In fact, it is more or less of a nuisance any place in modern times. The great changes in methods of travel and transportation in recent years makes snow a hindrance rather than a blessing, as it was in the old days. When the hauling of logs, lumber and square timber was a major industry in winter time a season heavy with lots of snow was a money-maker. Modern business interests are best served by an absence of snow. But the sympathy of the Weather Man is on the side of the small boy and we are likely to continue having snows as in the olden days.

• • •

Snow has an agricultural value. My grandfather used to say that a bountiful season followed a winter in which there was lots of snow, and science bears out the statement. The tops of grass and grain, and the roots of all plant and tree life are benefited by protection from excessive freezing. Some people believe that the time will come when man will be able to control the weather. That may be, but he is not fit for the job yet.

• • •

Flags are displayed today, and the banks and post offices are closed in alleged honor to the birth of George Washington. History, legend and fiction have made the name of Washington the best known and most honored of all the pioneer men in our national life. Votaries of all beliefs and causes try to dig up arguments for their sides from his records. There is one statement in his own hand writing, not frequently recalled in this industrial age, which men who know little and think less about the importance of agriculture should have stamped upon their consciousness. It is this:

"Agriculture is the most ancient, the most noble and the most important occupation of man."

• • •

My wife and I ate dinner the other Sunday at a farm home where all the cooking is done by electricity. The electric range is the only cook stove in the house, and their experience, which covers nearly two years, makes them fully satisfied with that method. The chicken and vegetables were done to a turn. And what impressed us most was the fact that every member attended church while the dinner cooked. The food was put in a pressure cooker, brought to boiling temperature, then the current was turned to "low" and everything was done at the time wanted. Electricity is actually transforming life. It cooks our meals, pumps the water, irons the clothes, sweeps the house, plays us music, gives us light. The family referred to told us that the cost for electricity for cooking was about one dollar per person per month.

• • •

The price of eggs is going up at a season it usually begins to fall. Nobody seems to know just what is the reason, but poultrymen are jubilant. They have had a season of high production costs, but a relatively low market price so far during the winter. Statistics indicate that the hen population in the U. S. is below normal, and if it were not for a considerable unemployment in the cities, we might feel certain of good prices for at least another year.

• • •

There is considerable talk pro and con about taking the speed limit off automobile traffic, except in cities and towns. Observation on the highways has indicated that the lid has been off for some time. The same logic is being used in this matter that the wets use in regard to the prohibition law, namely, repeal it so that people will not violate it. It is difficult to foretell what the legislature will do about the speed limit, but it would make a good subject for rural debates.

• • •

I learned the other day that the advice to "him who thinketh he standeth" to "take heed lest he fall," is good. I had become rather cocky about my driving of an automobile, never having had an accident in ten years. But I started out the other morning when the roads were covered with a light snow and skidded into the rear end of a truck and caved in the side of my car. I was driving carefully, but soon realized how helpless is a driver when his car turns sideways and moves downgrade toward an immovable object. Moral: Don't drive on slippery roads without chains. It is as dangerous as leading a tame bull.

Friendly Talks

By Edgar L. Vincent

A LITTLE tree I know had what how not with misfortune appeared been warped far out of perpendicular. It was a question whether it ever could be straightened up again. But by driving down stakes and fastening a wire high up toward the top and pulling hard the poor little deformed tree was slowly brought up more nearly to an upright position. I do not think it ever was just as beautiful as it would have been had no accident happened to it. Probably not. But the day did come when the stays could be taken off and the tree did not grow very far back out of perpendicular; and it bore many a bushel of fine fruit.

And haven't you seen much the same thing done in the case of men and women who have been warped and twisted by one thing or another? It was not done by force, such as the stake and the rope gave to the little apple tree; force never wins any victories of that kind.

One of the queer things about us is that we are a lot more patient with trees than we are with men folks. We can get down on our knees by the side of the tree and hunt borers by the hour; but when it comes to helping warped men we lose our patience, and say things we are sorry for afterward.

But that is not the way we should people to treat us. Kind words go so much farther and do us so much more good. And if we would only remember this side of it, maybe it would help us to lift more tenderly at the elbow of the men and women who find ourselves are having a hard, uphill fight of it, and have come to look with suspicion on the world.

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This Farm Relief Plan Really Worked

By WAITMAN DAVID

WHAT is Congress going to do tot the farmer? Every paper I pick up, every magazine, every meeting I attend, even the tain fly doctor has something to say on the subject. I have studied theories and plans. Some I can understand, some I cannot and sometimes I wonder if the fellow who is expounding them understands them. And finally I have come to the conclusion that the worst for we is over and even if Congress continues to expound theories indefinitely I will pull through on top.

I started farming on the home farm in 1921 with $11 cash, fair credit and no equipment worth mentioning save two good horses. The farm was in debt, but it was financed and liquidation provided for outside. We were fortunate in having influential friends among the bankers there. Many were not fortunate in that way then and today on my road to town I see four farms that were once as good as any in the county grown up in locust grubs with buildings out of repair and two of them nests of moonshiners and chicken thieves. Well I can't say for sure about the chicken thieves, but sixty-five of my birds went in that general direction two years ago.

It was not lack of industry or shiftlessness that caused the owners to lose these farms, but inability to finance their debts and make a living, also simply because the market value of their products decreased ont of proportion to the cost of other things. The federal land banks partially provided relief and made it possible for the financing of old debts and the financing of equipment and supply purchases. Perhaps Congress can further provide a means by which abandoned farms can be purchased and equipped, or are there enough farmers in the country wanting some kind of relief now?

Along in February, 1921, I moved on the farm chiefly because we had all our money invested in it and couldn't get more than about forty per cent of it out by selling. My father had always made money, so why couldn't I if I worked hard and watched expenses? So I started to plow.

I managed to let some fields out on the shares and we had corn and oats all over the place. I think most of the farmers in the United States raised corn and oats that year. I ended up with a cash income of $460 for the year.

My wife had had a good deal of old Pennsylvania Dutch training and when fall came the cellar was full. Beans canned and dried, even old knotty, wild crab apples and elderberries were jelly, little marbles of potatoes. Yes, I planted them and worked the corn. She had traded strawberries from a three-year-old patch, relic of my father's prosperous days, for sitting hens, and we had some twenty-five roosters to eat and maybe that many hens. I could not sell the pigs we had raised to pay the threshing bill, so they also went into the cellar. "Get some of that corn shelled and dried and take it to the mill; we need a cow to eat that fodder you can't sell, and some little pigs to eat scraps."

And there is the first lesson I learned in farming—Congress can never get relief for neglect of the cellar. It is nothing new but an old time-honored essential as necessary to the farm I believe as deposits are to the bank.

So we had a full cellar and six hundred dollars of debts. Off to the banks I went, but they couldn't see me. I snorted some. What were banks for if not to lend money to put into legitimate business? One told me "To lend to prosperous business with some income in sight to meet interest and reduce principal, not to tie up depositors' capital indefinitely." And then I started to think about this thing steady income. I got my money from the same bank, not as a business proposition but on the personal security of an influential friend.

The next year was better. I cleaned up all my father's old berry patches, set some new ones and put out less corn and oats and more garden. It was the year of the coal strike and I could get the best of labor trained in the painstaking school of the "Olda Country" for three or four dollars a week and board. But still I was on the wrong track. Lots of fellows were making money out of hay. So I sowed grass with the oats and put out lots of wheat and sowed grass with it. I increased my debts only a couple of hundred dollars and we wintered comfortably on the cellar and I thought pretty well of myself.

Then came the big year of 1923. Lots of berries. Eight hundred dollars net. Hay at thirty-five dollars a ton. Wheat at one sixty a bushel. The old debts were not pushing, thanks to the influential friend. Now was the time to get the equipment. I was not decreasing my debts but I was increasing my security, wasn't I?

Half down and the rest on time suited the machinery men. The tax collector wanted to be re-elected and obligingly waited. What prospects? Sixty acres of hay to cut, fine berry patches, and chickens bringing in a couple of hundred dollars a year. This farming game was easy. I could pay off the equipment men next year and materially decrease the debts. Why in five years I would be equipped, out of debt and on the way to success.

Well to make a sad story short the frost got the berries. I hadn't put out any wheat because it would interfere with the berry picking and hay harvest and I ended up with a barn full of hay unsalable at twelve dollars a ton. It is a good thing I did not catch that chicken thief or there would surely have been a murderer in the Fayette county jail in February, 1925, and he had still better lay pretty low—I am only about half cooled off yet.

And so the would-be Master Farmer was digging coal at night, dodging the tax collector, the machinery collector, the hay baler and any one else who looked like he had a bill. The influential friend stuck. He had to protect himself, but he would have anyway, being of the sticking kind. He helped take care of the worst creditors and the rest waited willingly as well as unwillingly, while an inhuman Congress talked and weighed this theory and that plan.

And the still small voice of that hard-hearted banker kept saying, "To lend money to prosperous businesses with steady income in sight is the policy of bankers."

Gluts on the market had nearly finished me twice. Maybe hay will be good next year and the glut will wear off. But No, Sir, I decided the doctor does not treat a glutted stomach that way. If pills don't work he uses a pump. Under goes that hay. I am going to take that banker's advice and have a minimum monthly income each month in the year of one hundred dollars besides that cellar and the garden. The result of that old Dutch teaching of my wife's is the only thing that has kept us going so far and has not failed.

It took three years to work out the plan and build it up, but last year we went over the total of the minimum income set, bumper months making up for failures. And the plan is flexible enough that a glut here and there cannot set us back much.

The first month of our fiscal year is June. For the income here we keep two six-thousand plant patches of strawberries under cultivation. We set a new patch each April. The first year there is no crop. The second year is the big crop and the third year with some cultivation a fair crop can be expected. There is the frost danger, but that is seldom complete. The second crop is insurance against loss of the labor. Then a bumper crop on that size patch may run as high as seven to eight hundred dollars, which is fair odds in gambling with the frost. On a year of absolute failure we are prepared to utilize the time allotted to handling berries by putting out buckwheat. In seven years we have had one failure, but never thought of buckwheat or late cabbage then.

Now don't all you farmers follow me on strawberries and bring on a glut, or I will have to switch to peas for June money. And if you still follow me to peas I will have to rig up a heated chicken house and try hatching January and February chickens for June money. Last year we broke even with the frost and netted two hundred and thirty dollars on the strawberries.

For July we have raspberries. This necessitates setting a thousand-plant patch each March or April and takes two years to make a crop. We inter-row the raspberries the first year with sweet corn, potatoes, cabbage, tomatoes or small garden produce for the cellar and thus collect for our labor in part the first year when there is no crop. Some might say green beans for July. Suit yourself, I may switch any time if it looks advisable.

For August money we have cultivated blackberries and raise them on the same principle as the raspberries.

September and October we (Continued on page 35)



A Glass House for Seed Potatoes

Potatoes are an important crop nearly everywhere in Europe. Miss Brinton, author of the current series of foreign travel articles (Page 10), took this picture on a big cooperative farm in Zeeland, Holland, where seed potatoes were a specialty. Small sizes were selected, thoroughly dried and placed on wooden trays one layer deep in this glass house. Ventilation was carefully watched. Heat was provided to prevent freezing in winter. Extra seed potatoes were also buried in straw and earth rows back under the trees. In mid-August potatoes were all dug and stored.

TIGHT BINDING TEXT CUT OFF

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A DIFFERENT CASE

THE briny tears are not coursing down our damask cheek in sympathy with Pepe Ortiz, leading bull fighter of Mexico, who was recently gored by one of his prospective victims. We don't have any sympathy with anybody who deliberately angers a bull and gets hurt in consequence of his folly. In professional bull-fighting our sympathy goes to the bull every time, for the bull doesn't know any better and the man should.

A BILL TO SUPPORT

THE farmers and farmers' organizations of Pennsylvania should consider Senate Bill 592, the pure-streams bill which has come out of several unsuccessful attempts to legislate on the pollution of waters. It declares that the discharge of noxious and deleterious substances into streams is not a reasonable or natural use of them, is injurious to public health, is contrary to public policy and is a public and common nuisance. It provides that such a nuisance may be abated same as any other, by recourse to the courts. This brief measure gives each community the right and the power to protect its own water supply, it insures every interest its day in court, it prevents hasty or arbitrary action by a commission which might interfere with industry or disturb business. Is there any reason for the perpetuation of anything that is proved to be a common nuisance?

REDEVELOPMENT

DURING the past forty years a certain eastern county, much given to mining and manufacturing, has lost 1,200 farms. Not all of them are absolutely abandoned but most of them are inactive instead of being operated by owners and their families. The average gross income of the farms now being operated in this county is $2,000 a year. That income for these 1,200 farms is equivalent to the wages paid by an industry employing 1,600 men 300 days a year at $5 per day. Any chamber of commerce in that county would not only welcome such an industry but would spend considerable money to get it. Has it ever occurred to such organizations that they can do as much for their community by helping to redevelop agriculture as by getting a new industrial plant to locate there? Probably not; but is it not a fact that 1,200 farms in full operation, with 1,200 families to produce wealth and consume merchandise, would be of even greater commercial benefit to such a county than a larger number of employes of any other industry? Herein is one reason why commercial organizations should take an interest in agriculture.

FROM MISSOURI

IN MAKING up his cabinet President Hoover has chosen Arthur M. Hyde, formerly Governor of Missouri, to be Secretary of Agriculture. Mr. Hyde is not well known in agricultural circles and is unknown to us. So we wired a friend in Missouri for information and this is what he telegraphed back: "Hyde professionally a lawyer but his administration very sympathetic to agriculture. Sponsored best rural school bill, all things considered, ever proposed in Missouri. Is aggressive and capable and should prove valuable in legislation and economies. Should make excellent administrator and Secretary. Greatest value probably lies in administrative ability. Probably knows little technical agriculture but was reared in farm community and is farm owner. Is fair, approachable, considerate. Appointment great surprise out here."

Let us hope that Secretary Hyde knows Agriculture better than Agriculture knows him; and that his official service may be creditable to him and valuable to our country's greatest industry.

A MILK WAR?

THE Ohio Farmers' Cooperative Milk Association, the organization of producers in the territory tributary to Cleveland, last week began the retail distribution of milk in that city. How much this step means to its own members and to other organizations of producers which are affected by Cleveland prices remains to be seen. Neither the Cleveland organization nor any other lives unto itself. The policies of any large organization must affect all organizations and all producers in the region of sympathetic price relations. In this case the Dairymen's Cooperative Sales Company, the cooperative agency operating in Pittsburgh but drawing milk largely from Ohio, will be affected, and so will several minor organizations.

Only one thing can be said definitely about the Cleveland situation and the possible effects of the organization's retail enterprise—nobody knows. Nobody knows what the average retail price of milk has been, for it has ranged from 14c down to 8c per quart. Nobody can tell whether the producers can retail milk at a profit in that market. Nobody knows what may occur if a real price war ensues. Nobody can prophesy how long the little distributors can fight or how far producers will allow their organization to go. Nobody can foresee what may come out of a situation heretofore without a parallel in the milk business. Anybody who goes into that situation comes out feeling like the poet's sailor, whose "head was turned—and so he chewed his pigtail till he died."

However, we may say that if the price just published, or any that may follow, is an artificial price it cannot be maintained. For no organization or combination of organizations can long maintain a price that is either above or below the level justified by conditions of production and consumption. At worst a milk-price war is a transient thing, and some good as well as some evil may come out of it.

There is one thing more which should be said for the benefit of all members of every cooperative organization. This is a time to strengthen producers' organizations, not a time to weaken them. Never before was the need of producers for solid marketing organizations so great as it is now. For never before was the buying of milk so centralized as it is now, and centralization in buying necessitates centralization in selling if the producer is to get an even break. Those who resist this plain fact, by so acting as to weaken their organizations' influence or reduce its membership, are helping through outright opposition or indifference to the buyers, by creating competitive advantages regardless of the interests of their fellow-dairymen. Every marketing agency is going constantly to the limit to serve its members. They should support their organizations to the end that their marketing may be not only unanimous but equitable to all dairymen.

AN AMERICAN STANDARD

IN SPEECHES, in public statements, in hearings before committees of Congress, everywhere we look, are frequent references to that undefined "American standard of living." There can be no objection to a high standard of living. A desire to attain it is commendable, and a desire to provide opportunities for all our people to attain it. But are we not unconsciously instilling the idea that everybody is naturally entitled to enjoy a high standard of living regardless of his own efforts to attain it? It seems so when we practice extravagance or neglect economy or excuse idleness or condone shirking on the ground that a high standard of living justifies such things. We need more of the old doctrine that those who will not work shall not eat, which in modern terms might be expressed as those who will not work and sacrifice to attain a high standard of living cannot expect to enjoy it. They cannot expect to enjoy it by legislation, by special favor of any kind or by any other process than their own efforts. Along with this we need more independence of thought in relation to our standard of living, both as individuals and as communities. We need to learn to live as we can best live regardless of what the other fellow's ideas are. We need to learn that our community's plans for a new school building or a new courthouse or any other institution should be based on something more than what other communities have or can afford. This is old-fogy stuff of course, but we have found by some experience and considerable observation that it is better to be old-fashioned and solvent than "progressive" and busted.

OUT OF BUSINESS

OUR government owns and operates a line of barges on the Mississippi river. The object of this enterprise was to demonstrate the economy of water transportation. But one thing leads to another under government ownership, and now we find before Congress a bill to provide government elevators and warehouses in connection with the barge lines. If this were realized no doubt government mills or other institutions would be proposed in connection with the elevators. There is only one safe and sound principle, which is for the government to get out of business and stay out.

SMALL FARMS POPULAR

LARGE-SCALE farming operations may offer especial opportunity for efficient production, but the small farm is still popular. A report from southern New Jersey states that the asking price for small farms there has increased $5 to $10 an acre this winter due to the brisk demand. Most of the inquiries come from other states, the Central West being well represented among the customers. Chief demand is for farms of 50 acres or less. The one-man farm close to market has advantages which are best recognized by those who, while favored by other things, miss the two essentials of a market and a solution of the labor problem.

New Jersey Farm Comment

By G. W. HARRIS

A RECENT report from the Department of Agriculture shows that Patterson, N. J., a city not generally considered a desirable shipping point, in 1927 and added 645 cars of white potatoes and only 50 cars came from New Jersey farms. New York and Maine furnished 512 cars out of the total 645 at a time when the Central and South Jersey growers were trying to find a market for their crop. This situation in the New Jersey markets is interesting when we consider the low prices and slow movement of the enormous 1928 potato crop.

* * *

IT was not a bright picture of the future of the South Jersey fruit and vegetable industry as portrayed by Dr. W. J. Spillman, senior economist for the U. S. Department of Agriculture, to 300 South Jersey farmers at a meeting in Moorestown, February 26. On the whole, the apple outlook was not encouraging to the growers. Dr Spillman predicted that heavy production and low prices will continue for some time and advised that heavy planting be confined to those needed for replacement purposes. Planting of trees as well as expansion of the vegetable industry, should not exceed three per cent of the present planting.

That there is a "gross over production of peaches" at the present time was brought out by Dr Spillman. Within the next three or four years he felt that it might possibly be profitable again to plant peaches.

On the following evening Dr Spillman, speaking before a group of dairymen at Flemington, said that, except for brief periods, less than a year, he "never again expected to see low prices for dairy products in this country."

* * *

STANLEY DOUGLASS of Ringoes led the Flemington Cow-Testing Association for February with a herd average of 32.1 pounds of butterfat.

* * *

UNDER an amendment to the European corn borer quarantine regulations issued February 27 by the Secretary of Agriculture, certain new territory, mainly that found infested with this insect during the past season, is added to the regulated area, effective March 1, 1929. At the same time, the requirement of certification is discontinued with respect to packages of shelled corn weighing two pounds or less.

No change is made in the New Jersey area quarantined. The requirements for the one-generation area provide for the inspection and certification of shelled corn (except in packages of two pounds or less) and cleaned seed of broomcorn and of sorghums and Sudan grass only, as the strain of the borer found in that region does not attack flowers and vegetables.

The shipment of ear corn, cornstalks and other parts and debris of corn, broomcorn, sorghum and Sudan grass plants from the regulated areas to or through points outside thereof is prohibited.

The actual spread of the borer during the past year, except in the New England states, has been less than during previous seasons. In Indiana, however, it has found its way west to the shore of Lake Michigan and that fact, added to its spread in the upper peninsula of the state of Michigan, is the cause of the extension of the quarantine to cover that entire state.

* * *

A HEAVY outbreak of rosy and green apple aphis in New Jersey this spring is forecast by the Experiment Station. This report is based on the large numbers of aphis eggs to be found on trees and the relatively few ladybirds. Keeping this in mind, growers should exert every effort to keep this insect under control and not expect last year's control measures to meet the situation this year.

Stabilized lubricating oil emulsion, or one of the standard miscible oils, plus 50 per cent tree nicotine; or concentrated lime-sulphur and 40 per cent nicotine in the sulphate form applied during the delayed dormant period is recommended by the Experiment Station for the control of green and rosy aphis.

In those orchards where apple scab was serious last year heavy infection can be expected again this year. Unless sprays are applied at the right stage of scab spore development no amount of spraying will overcome the disease.

"Keep in touch with your county agricultural agent relative to scab spore development," is the advice of the Station.

* * *

CALCIUM cyanide dust proved effective in the "war on rats" on the Van Volkenburgh farm at Forest Grove, N. J. The dust was pumped into the burrows by means of a dust gun. After the demonstration the stable floor was taken up and 25 dead rats were revealed. This is a cheap and easy method of exterminating rats and other rodents around the farm and should be in more general use.



A CROWING HEN

This hen, owned by D. P. Cary, Hunterdon county, N. J., actually crows and struts around like a young cockerel. During her pullet year she laid well but developed male characteristics during her molt late in the fall. At the time this picture was taken she still had two wing feathers to drop.

AT the regular monthly meeting of the Hunterdon County Poultry Association four new members of the egg-laying contest committee were appointed. The new members are: for two years, J. S. Gray, Stockton, and Percy Niece, Raven Rock; for one year, James Weisel, Frenchtown, and E. P. Nief, Flemington. This contest committee consists of nine members. The other five are Clifford Snyder, Pittstown, one year, and John Van Doren, Flemington, two years; appointed by the County Board of Agriculture, Professor W. C. Thompson and Leslie M. Black, New Brunswick, and E. A. Gauntt, county agent.

* * *

W. L. PHIPPS, Wilmington, won the Holstein bull calf given by Winterthur Farms, Winterthur, Delaware, in the dairy cattle judging contest held in connection with the meeting of the Delaware Holstein-Friesian Association at that place on February 26. He placed the ring correctly and made the closest estimate of their production.

In reviewing some of the work of the Iowa and Illinois Experiment Stations, F. F. Lininger, of Pennsylvania State College, pointed out to the Holstein breeders that there is a definite relationship between the differential and base price paid for milk whether low or high-test milk is the more profitable to the producer. "Where the differential is less than one-fiftieth of the base price, every evidence points to low-test milk as the more profitable. If it is a larger portion of the base price, it would seem to pay to produce high-test milk," he said.

Short-time records in the hands of many breeders have had a damaging influence, was the opinion of T. E. Elder, director of the Holstein-Friesian Association of America. With the tremendous decrease in seven-day tests and increase in long-time tests during the past ten years there has been a gradual return to emphasis on type.

"There are 27,000 scrub bulls of no known ancestry production in Pennsylvania dairy herds today," said S. I. Bromwell, Pennsylvania dairy extension specialist, in speaking of bull associations. The seventy-five associations in Pennsylvania comprise one-third of all the bull associations in the country and in these Pennsylvania associations are 300 outstanding sires.

Entertainment at the meeting was provided by the Philadelphia Inter-State Dairy Council and the University of Delaware quartette.

* * *

REPORTS have reached the United States Department of Agriculture that some dealers in berry boxes are endeavoring to secure sales by telling prospective customers that boxes sold by them hold less than other berry boxes. Growers are warned to pay no attention to such claims. If actually true, it means that the boxes are below the standard in capacity, in which case persons using the boxes might find themselves in violation of the United States Standard Container Act of 1916.

Department of Agriculture officials declare that there is very little difference in capacities of the berry boxes turned out by different manufacturers. Samples of the output of each factory are tested by the Department at intervals and but little variation is found. Differences in the dimensions used by individual manufacturers, however, sometimes make one box appear to be smaller than another. One box, for example, may have a slightly smaller top and yet have a slightly larger capacity than a box with a larger top.

* * *

INCREASES in the maximum indemnity that may be paid by the federal government for grade and pure-bred cattle condemned because of tuberculosis are announced by the Bureau of Animal Industry, United States Department of Agriculture. The maximum federal share in indemnity payments for grade cattle is increased from $25 to $35, and the amount for pure-bred cattle has been raised from $50 to $70. The new scale became effective February 19, 1929, through the passage by Congress of the agricultural appropriation bill for the fiscal year 1930.

The other provisions in connection with the payment of federal indemnity for tuberculous cattle are the same as heretofore, namely, that it shall not be more than one-third of the difference between the appraised value of the animal and the salvage value, and that the federal payment shall not exceed the amount to be paid by the cooperating state, county or municipality.

TO assist in their work of growing fruit and berries the horticulturists of New Jersey brought in over four billion Italian honey bees during 1928. These came from Alabama, one of the southern states which makes a business of selling live bees for shipment in packages of two and three pounds. A two-pound package contains 10,000 bees. Fifteen thousand bees weigh three pounds.

The business of using bees in orchards, cranberry bogs and blueberry plantations has grown to such an extent that the supply of bees available in New Jersey for pollination purposes has made it necessary to import them, according to Elmer G. Carr, Pennington, secretary of the New Jersey Beekeepers' Association.

For the use of bees as pollinators the orchardist pays $6 to $10 for each hive, depending on the distance and the labor attendant on placing the bees where they are needed. This amount, to some persons, will seem like an exorbitant price to charge for the use of a hive of bees for two weeks. However, when the bees are moved into the orchards and again when they are taken out they suffer damage which in some cases renders them of little or no value as honey producers for that season, and in all cases greatly reduces their value for this purpose.

The work of Ray Hutson, chairman of the Research Committee, New Jersey Beekeepers' Association, has shown that one hive of bees should be used for each acre of fruit trees. However, few if any orchardists use the full amount but do use one hive to about two acres.

J. G. P.

Coming Events

Bergen county.—Annual banquet of the Bergen County Board of Agriculture, Alexander Hamilton Hotel, Paterson, on March 20.

Mercer county.—Annual banquet of the Mercer County Board of Agriculture, Hillwood Inn, Trenton, on March 7.

Morris county—Farmers' meeting at Netcong Inn, Netcong, on March 20. Speaker, Hon. Rush Lewis of New York State.

Somerset county.—"Future of the Poultry Industry," by W. F. Knowles, farm management specialist, at Court House, Somerset, on March 13.

Sussex county.—"How to Raise Calves without Milk," by Carl Bender, at Sussex High School on March 7 and at Court House, Newton, on March 8.

"Farm Relief—How the Farmer Can Help Himself," by H. J. Baker, Director of Extension, at Court House, Newton, on March 14 and at Sussex High School on March 15.

"Wise Use of Electricity on the Farm and in the Home," by W. I. Kreuger, Specialist in Rural Electrification, at Sussex High School on March 21 and Court House, Newton, on March 22.

Warren county—Dairy meeting, Polhemus Hall, Johnsonburg, on March 8. Speaker, E. J. Perry, dairy extension specialist.

Poultry meeting, Polhemus Hall, Johnsonburg, on March 15. Speaker, L. M. Black, poultry specialist.

Annual Spring Style Show, Belvidere High School, on March 8. Under direction of Mrs. Catharine H. Griebel, former clothing specialist at the New Jersey Agricultural College, and Miss Calista Kelley, Warren County Home Demonstration Agent.

TIGHT BINDING TEXT CUT OFF

Our Soil Fertility Problem

By B. A. HEEDER

A FEW years ago a farmer from another county came into this section and bought a run-down farm. One field especially was in such shape that it had even quit growing weeds. The only vegetation growing on it was a grass known by various names, the most common one of which is "poverty grass."

You had to find some old inhabitant who remembered when this field did grow a crop, for this farm was a good bit like some good cows, passed around from tenant to poor farmer so much that it never had much of a chance to show what it would do until this outsider came in and bought it.

This man used the same recipe on the whole farm with practically the same results, but I want to tell of this one field in particular. The first thing he did was to build a big lime kiln. After giving the field a good coat of manure and plowing it, he applied over two tons per acre of this lump lime in the usual way lump lime in this section is applied, viz., hauled out and divided into about two-thirty bushel piles. These were left out until after the first good rain slaked them, when they were broadcast with a pointed shovel.

Two hundred and fifty pounds per acre of a complete fertilizer was used in the corn with the result that the first year the yield was 75 bushels of ears per acre. The second year 200 pounds superphosphate was used on the oats to make a 45-bushel yield. After the oats were off the ground was plowed early and then lightly top-dressed with manure. This was harrowed in and planted to wheat and an application of 300 pounds of 2-12-4 fertilizer. In three years from poverty grass this field yielded 30 bushels of wheat per acre.

There are thousands of acres in Pennsylvania like this field, especially on the Volusia and DeKalb soils. They have been abused so long that nature has asserted herself and locked up the soil until some one who will treat her right comes along and uses the key to unlock them again. It is not often that state records are made on these soils, but high yields can be made if they are handled right. Proof of this is shown every year in the 400-Bushel Potato Club.

I am in one of those Volusia communities, where to get good yields proper handling is constantly needed. The highest yields I know of in this community over several years is 160 bushels of ear corn per acre. This was made by a boy in a corn club. Ninety bushels of oats has been grown a few times. In one or two years 40 bushels of wheat has been grown per acre. Four tons of hay per acre in two cuttings has been the high hay yields.

I have never hit any of these high yields, but we do keep up our farm to an average of 100 bushels of ear corn, 60 bushels of oats and two tons of hay per acre for the first crop. If we can get the first crop of clover off when the crown shoots are starting we have had as high as one and one-half tons per acre of second crop.

We always keep enough livestock to use up all the roughage grown on the farm. If we have a surplus one year we increase the young stock enough to use it up the next year.

In a dozen years I have sold only four or five tons of hay, but made up for this in other years when we were a little overstocked and had to buy some hay. We not only grow all the grain our stock will eat (except protein concentrates needed in milk production) but sell $200 or $300 worth every year. This is made up for in 2,500 to 3,000 pounds of 32 to 48 per cent protein concentrates we buy every month for use in the dairy ration. A couple of years when our livestock were few in numbers we threshed clover and timothy for seed rather than sell the hay.

We apply eight loads of manure to new seedings of clover and ten loads again the next year to this sod we plow for corn. Our rotations have always called for clover at least once in four years. With the manure we seldom buy nitrogen or potash fertilizer, unless it is for corn.

Our corn, oats and hay that we use in the rotation now totals seventy-four acres. Every year we buy about five tons of fertilizers. Two hundred pounds of either superphosphate or a mixed fertilizer (this depends on the field) is planted with the corn in the fertilizer hopper of the planter. Three years we tried 200 pounds of superphosphate applied before corn planting with the grain drill and 200 pounds of a complete fertilizer in the corn planter, but never got enough extra yield to justify continuing the practice. I know this is contrary to the experience of some others. Two hundred pounds of superphosphate is drilled with the oats. No fertilizer on the meadows.

We have soils seem to have an insatiable appetite for lime. In the last thirteen years we have burned about 120 tons of lime in kilns and we have a fifty-ton pile ready to fire now and apply in the spring. It is so much work in quarrying, burning and applying this form that I have decided to use ground limestone hereafter. We can buy it for $3 to $3.50 per ton, from a fellow who started a crusher less than two miles from our farm.

In addition to this lime we burned we have bought lump lime, hydrated lime and ground limestone and applied it. We have found an easy way of applying ground limestone is by [illegible] use it and leave it on the wagon. Weigh [illegible] shovelfuls (we use a [illegible] for getting it [illegible] agent) to get [illegible] As we haul out [illegible] the new seeding [illegible] the pasture we put [illegible] of the load of [illegible] this rate we want [illegible] per acre and let [illegible] This makes a much [illegible] and does almost as good a [illegible] would do.

Pasture. We have a [illegible] currently getting [illegible] lime and fertilizer has been applied. When we [illegible] the pasture would not support [illegible] stock through the summer. Many times [illegible] were in such bad shape that crops [illegible] were more common than grass. [illegible] sour were [illegible] with weeds [illegible]

We have been trying [illegible] pasture as we would [illegible] lime and [illegible] the mower [illegible] hard on the [illegible] doing any [illegible] weeds have also [illegible] of cattle [illegible] summer.

What Is Farm Timber Worth?

LACK of familiarity with the business of selling timber usually puts the owner of a small woodland at a disadvantage, and in many sections material from the woodlot is sold with practically no idea of its real value. In order to prevent loss it is necessary that the farmer or his buyer know the methods of estimating the contents of the trees. A few days spent in cruising the woodland will more than repay for the time and trouble.

Here in New York and Pennsylvania the principal timber sold is hard maple, cherry, oak, beech, birch, basswood, soft maple, elm, chestnut and hemlock. The beech, soft maple and often oak and birch are put into railroad ties eight and a half feet long and varying in size from 6 by 7 to 7 by 9 inches through. Elm, hickory and chestnut are also often sawn into ties. Hard maple is usually sawn from 1 to 3 inches in thickness for manufacturing into automobile bodies, women's shoe heels and other manufactured wood products. Basswood is sawn four or five quarter inch or inch and a quarter. Hemlock is sized for use in the building trade.

The first thing to consider, when preparing to estimate the contents of the timberland, is the log scale. The Doyle rule is perhaps the most widely used, but is said to underestimate the contents of small logs.

To find the number of board feet in a log, using the Doyle rule, substract four from the diameter of the log and square the remainder. Multiply the product by the length of the log in feet and divide by sixteen. For example, a log 24 inches inside the bark and twelve feet long contains three hundred board feet.

However, the best rule for sellers is perhaps Scribner's Decimal C. This gives a better showing when scaling small logs. Care should be taken when selecting the scale stick, as there are some forty or fifty different rules. The scale sticks are not high priced and can be obtained at almost any hardware store.

Logs that are cut to length can be conveniently measured with a measuring stick eight feet long. About three inches is usually added to the nominal length of the log to allow for trimming at the mill. When scaling, the average diameter inside the bark is measured. Diameters are rounded off to the nearest inch, that is 7½ would be considered as 7 and 7½ would be considered as 8. Logs are measured at the small end.

As soon as each log is scaled it should be marked with crayon, so there will be no danger of scaling it again. In case one wishes to scale systematically, the logs are numbered and a proper entry made in the scale book for the log number, length, diameter and scale in board feet. Only one kind of timber should be entered on each page of the scale book.

When estimating standing timber, unless the woodland is large, it is best to measure each tree separately. The usual procedure is to estimate the number of logs, their length and diameter, and by consulting the log rule find their board contents.

A notebook or sheet of paper should be ruled off in squares of a convenient size. A stiff covered book is best for the purpose, as it is easier to write in.

The estimator looks over the first tree and decides the number of logs that can be cut from it. Suppose that the first tree is sound and forks at about fifty feet above the ground. At that point the branches are too small or too crooked for use as saw logs. Allowing for the forks, the merchantable length of the tree is 48 feet, or three sixteen foot logs. The estimator then decides that the diameter inside the bark, at the top of the first sixteen foot log is 16 inches. Sixteen feet farther up the tree the diameter appears to be 14 inches, or two inches less, while at the top it appears to be 11 inches. These figures are entered in the proper spaces in the scale book, and later on the number of board feet in each log and also in the entire tree is determined by the Doyle rule.

When each tree is estimated it should be marked so that there is no danger of its being measured again. This can be done with a small blaze or a chalk mark. No tree should be estimated which is too small to be sawn into lumber.

In case the woodlot is so large, or the time available is too short, it may not be practicable to measure each tree separately, and a partial estimate can be made. One quarter of the area can be gone over and this tract considered as a fair estimate of the entire lot. The tract estimated should be a fair average of the timber, and not the thickest, as this leads to a high estimate.

A. C. Wilson.



This Small Mill Returns Dividends



Time Spent in Estimating Lumber Pays



The Lawns Should Have Early Attention

By DR. E. M. GRESS
Pennsylvania State Botanist

EVERY lawn needs attention in the early spring after its struggle with the damage brought about by the vicissitudes of our winter weather. The alternate freezing and thawing causes some of the grass to be raised out of the soil. Much of this will die and leave bare spots unless it is assisted in re-establishing itself. Rolling the lawn after the frost is out and while the soil is still soft will replace much of the uprooted grass.

The soil in those spots in which the grass has been killed should be loosened up with a garden rake or with the sharp-pointed end of a garden hoe or some other suitable implement. On these spots a good grade of lawn seed should be sowed. It may be raked again so as to cover the seeds with a light layer of soil. After the sowing and covering of the seeds, the soil may again be made firm and smooth by rolling or by stamping with an implement made for the purpose or even by tramping.

The terraces should be given special attention. Our winter weather along with trespassing by the sightless people and even by the straying dogs packs the ground so well often leaves large holes on the terraces where the sod has been destroyed. Some of these spots may be seen on nearly every terrace in the spring. The terraces as well as the level parts of the lawn should be rolled. If they are too steep for the roller a stamping implement may be made by inserting a handle in a block of wood. With such an implement the soil may be made firm and smooth.

Grass seed should be used freely on the bare spots as directed above. Some of the larger depressions on the terrace may be repaired more effectively by filling them with pieces of sod taken from other parts of the lawn or from some field or vacant lot which is not too weedy.

All of this repair work should be done early in the spring, as soon as the frost is out of the ground, so that the young grass coming from the seed will have time to develop a good strong root system that will withstand the hot, dry weather which invariably follows in the middle or latter part of the summer. Young grass with a poor root system is very easily killed by the dry summer weather unless it is watered with constant care.

Good Seed

The selection of good seed is a very important factor in securing a nice lawn. The seed should not only be free from weed seeds but it should be seed of a kind of grass suitable for making a smooth, even turf. Some grasses such as timothy, orchard grass and sheep's fescue grow in bunches. While such grasses may have some value in holding the soils of a steep terrace, they should not be included in a mixture to be sowed on the level parts of the lawn.

A lawn grass mixture that can be bought at the rate of eight ounces for ten cents must be looked on with suspicion. Do not risk such mixtures. Buy lawn seeds from a reliable seedsman and get the very best even if the price is fifty or even seventy-five cents a pound.

Best of all buy the separate grasses and mix them before sowing. The following seeds in the proportions given by weight and well mixed before sowing are suitable for most soils in a temperate climate.

Kentucky bluegrass four parts, redtop two parts, red fescue or Chewings fescue one part, white clover one part (or less).

The mixture should be sowed thick at the rate of about one pound to two hundred square feet of surface.

Seed for Shady Places

If there are damp shady spots in the lawn where it is difficult to get grass to grow, add considerable quantity of roughstalked meadow grass. This is a species of bluegrass which grows in moist shady places in the wild state and of course will be suitable for such spots in the lawn. If the shady places are dry, increase the amount of Chewings fescue and add also a good quantity of Canada bluegrass.

Next to the number of inquiries about the kind of grass seed to use for a lawn are the inquiries as to the kind of fertilizers to use. Perhaps the latter are more difficult to answer because opinions differ more in the use of fertilizers than on the kind of seed to use.

If one wishes a good Kentucky bluegrass sod the soil should not be acid. Therefore, to counteract the acidity and render the soil neutral or alkaline, lime should be applied. The best form in which to use lime is the pulverized slaked lime which can be spread evenly and is quicker to act than is the pulverized limestone.

On the other hand a soil made alkaline by the use of lime is more conducive to the growth of weeds. Therefore, if one wishes to have a lawn free from weeds, as every one does, do not use lime at all. This of course will be hard on the Kentucky bluegrass, but will be good for the redtop, which will become the predominant grass in an acid lawn, and of course not all weeds will be eliminated by rendering the soil acid.

Among the fertilizers mostly used for lawns are the following: bonemeal; a good grade of mixed fertilizer which contains potash, phosphoric acid and nitrate, sterilized sheep manure; ammonium sulphate and sodium nitrate. These are all good and differ in nitrate; sterilized sheep manure; ammonium sulphies, with directions as to the proper time and amount to apply. Whatever fertilizer is used it should be used freely.



Intelligent Care Early in the Season Is the Price of a Good Lawn

Usually the lawn will not need watering during the spring and early summer. If a drouth should occur the young grass in particular should be carefully watered. The water should be applied slowly and in a fine spray so as not to beat the young tender grass down to the soil and cover it with a layer of mud. When water is applied the ground should be well watered to the depth of four or five inches at one watering period. This deep watering will cause the grass to become deep rooted. If the soil is given only a shallow watering the roots will not penetrate to the dry soil beneath and the grass will therefore become shallow rooted and will of course be easily killed by a continued drouth.

The question is often asked whether it is injurious to water the lawn while the sun is shining. If the grass is young and tender and the humidity of the atmosphere is very high there may be some damage. In general, there is no apparent damage. However, there is less waste of water by evaporation and no possible danger of injury if the watering is done in the morning or late afternoon and evening when the sun is not so hot.

That Inferiority Complex

THE following theory as to what the matter is with agriculture appeared in a recent issue of a periodical enjoying national circulation. It is remarkable for simplicity: "Farming has suffered from an inferiority complex, from a habitual disgruntled condition and from a determination to be against something." Possibly these allegations may apply to some individuals here and there over the country or to a few whole communities.

But somehow and in spite of the alleged "inferiority complex," the American farmer has builded the soundest industry in the nation. He has increased production in the face of decreases in man power and acreage. He has mechanized his job and today produces more per hour than any other agricultural worker in the world.

Although held to be suffering from a "habitual disgruntled condition" the American farmer for some unassigned reason has stuck in more than adequate numbers to his farm, his hoe, his home. Maybe he sticks just from pure cussedness. Just possibly he manages to meet his bills as a rule, has enough to eat and wear, enjoys in increasing numbers the many luxuries that are coming to be regarded as necessities, and rather likes his job and his independence.

A Comfortable Position

Possibly this "determination to be against something" could be a terrible thing. It is to be hoped that nothing arises to attract and concentrate the full force of that "determination". Probably more farmers, especially on Sunday afternoons, are found to be against the stable door than against anything else. It is a comfortable position from which to watch the antics of a litter of young pigs scurrying around the barnyard.

Helping the farmer does not consist in nominating him the wholesale to the states of minds quoted. The farm population presents a human cross section as does any other population. Numbers of individuals fail and others rise in all groups. Any one who has met regularly with city business mens' clubs and with farmers' organizations will agree on the impossibility of comparing without injustice the energy, intelligence or other attributes of these two groups of genuine American gentlemen. Alegations of inferiority and contrariness on either side do not further the better understanding and closer relationships that are to be desired by both. Moreover, both groups should recognize that perhaps the greatest dangers now threatening agriculture are legislative meddling and superimposed leadership.

G. S. W.

To Get Rid of the Surplus

THE greatest question before the nations of the world today is how to provide work for all the laboring people of the world. Solve that problem and you also solve the problem of surplus, for if everybody were supplied with all they could use there would be no surplus.

Not only ought our national and state governments devise means to create labor, but every man of business ought to plan to the same end.

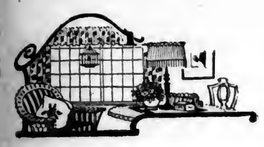
And above that our governments ought to set aside more money to help our worthy poor to get more food, clothing and household goods. It is a self-evident fact that in order to get rid of our surplus we must create means by which the people who need that surplus can get it.

Millions of people could be employed in building roads, for if one farmer has a right to a good road, then all farmers have a right to one. A good road not only adds to the value of a farm through which it passes, but it also detracts from the value of the farm that is off a good road.

Provide plenty of labor at a living wage, and you will solve nearly all labor problems, as well as the farm problem.

Charles Young.

TIGHT BINDING TEXT CUT OFF



The Farm Home





In Zeeland the windmills were used for making flour. Canvas sails are spread on the arms to catch the wind. I climbed up into this mill and found the friendliest cat and kittens to play with. Without any common language a young man and I had a very interesting talk. He wore wooden shoes, because they cost only 40 cents and leather ones cost about $20.

Some European Meals

By ELLEN S. BRINTON

THE best cooking and food I found was in Holland. The breakfasts were the most marvelous mixtures, of sliced cheese, cold meats, hard-boiled eggs, and cakes. Bread was a pile of delicious white slices. For dinner there were always three desserts.

The usual Continental breakfast is coffee and rolls. This sounds limited but actually with plenty of rolls, butter and orange marmalade, I fared very well. In England there is toast instead of rolls. It was always cold, apparently having been made day before yesterday, but so long as it is toast the English are happy. Butter is served only at breakfast. At first I felt I could not eat without butter but after finding that special orders meant getting a slab of nearly a quarter pound and paying an extravagant price for it I learned to eat like the natives. Authorities interested in increasing use of dairy products in Europe feel that the greatest help would be to popularize the use of butter at the other meals besides breakfast.

French bread is sold by the meter—and the people carry it home like so many broomsticks. Inside it is porous like Swiss cheese. The hard crust is most desired and the long slender shape gives the most crust per loaf. In our pension in Paris we had the usual breakfast of bread and coffee and the maid would lay a whole loaf down the center of the table with a huge knife beside it. I always felt I was eating a section of an eel when I cut off a slice.

We accept napkins so much as a matter of course that I was surprised to find that English restaurants served them only on request and for a special charge of two cents. Not even were napkins (serviettes is the proper term) served at tea time—even in private homes, regardless how sticky the cakes or buns might be.

I learned that Americans could be **picked out every place** by their peculiar manner of eating with the fork in the right hand. The English and European form is to use the fork in the left hand with a knife or spoon in the right as an aid or "pusher".

Here is a typical continental dinner: **Hors-d'oevre** (pronounced hoar dofe)

This varied. It might be a platter from which one selected several samples—such as cold fish, pickles, celery salad. On one French dining car we were served successively on the same plate with one sardine, one small slice of cold ham, one small slice of melon

Two Meat Courses

Always with a boiled potato accompanying each course.

Sweet Dessert

In England this would be steamed pudding or a tart, but on the continent it was invariably a mold of cream and gelatine with a fruit sauce over it. I ate this in Bavaria. I wonder if that is the origin of the name Bavarian Cream?

Cheese

Sometimes this was a piece of native cheese with a cracker, but more often the waiter would come with a platter of six kinds and give me a choice and serve enough for a family. We drink our milk. Europeans eat it in cheese.

Fruit

A tray of pears, grapes and plums would be passed.

Coffee.

This was part of the menu, but was always charged for extra.

A meal such as this would cost about a dollar in a dining car, but in small restaurants I had many excellent three-course meals for about 28 cents. Mostly ten per cent was added to the bill for service and then tips were not expected but in Vienna and Hungary the old tipping system is still in vogue—the head waiter, the table waiter and the wine or water boy all expecting a small fee.

With potatoes appearing twice every dinner and filling such an important place in the diet one would expect that the users would find various ways of cooking them. But I had plain boiled potatoes regularly until French fried potatoes appeared in Paris. Just once I was served real mashed potatoes and an English woman beside me heard the exclamation of surprise.

"And do you too know how to serve potatoes in different ways?" she asked. "Some American friends are coming over to show us other ways of cooking them besides boiling, and we are so interested."



Flower Market, Dresden

Flowers seemed more plentiful than vegetables, and whole squares would be devoted to their sale in many cities. Every home had blooming flowers in quantity. Flowers would grow and bloom in window-boxes along narrow city streets in a way never seen in America. The cool moist climate was probably responsible.

When the Library Opened

IN our log cabin on a heavily mortgaged farm we had enough books to fill an entire shelf over the front door, but most of them were school books carefully saved. When we got into the sturdy new farm house that is still doing good service, we arrived at the dignity of a book case, an old cupboard-like affair set on a drop-leaf table. The leaf of the table, raised, made a fair writing table, but if any one was writing and another wanted a book everything had to be cleared off to permit the doors to swing back. This was given us by my grandmother and was much prized. I might say we still have it. In this we accumulated more books, for our Christmas and birthday gifts were invariably books. Sometimes it must have been a great temptation to our parents to buy clothes instead, for we often needed them, but we were all readers and to our parents books were as important as clothes. We even in those days had some old bound volumes of Harper's Monthly and other carefully saved magazines of that day.

Some of the stories we had read hundreds of times, but still liked to go over them. Occasionally a teacher in the district school had a Kidd's Elocution which he permitted us to read, and sometimes children moving in from other counties had school books that were different, and we literally ate these up in our eagerness for something fresh and new. Also we had the Harper's Young People, a periodical that we all mourned when it went out of existence. Later a friend in town loaned the Youth's Companion week by week and we were rich in literature with that small supply.



Paris—Carrying Home a Yard-Long. I wanted a picture of the loaf but the little French woman modestly tried to hide it and I could not speak enough of the language to explain my purpose.

A New Fairyland

Many years before when our town was in swaddling clothes the great Horace Mann had lectured in the place trying to influence the citizens to start a public library but the project failed. Again and again somebody would try to revive it, but not until I was a teacher did the county seat finally succeed in opening a room above a grocery with a few books and call it a library. As my first school was taught, or better I was in the schoolhouse with the children, at fifteen I was still childish enough to think that fairyland was opening before our gaze. For the vast sum of one dollar country people could take out books, after being properly recommended by some responsible person. Smile if you will, but a dollar was a dollar in those days and not to be lightly fooled away. And so hard-headed and practical were our neighbors that we were looked on as freaks for wasting that amount. Wasn't the county weekly enough for any family? Why, some of the people about us complained that they never found time to read even that.

Well, the first library had perhaps three or four hundred books, some of them donated and some bought with the proceeds of an entertainment. It was next to impossible to get the book you wanted without weeks of waiting and scheming to be there when it came in, but it was a beginning. After the first novelty were off people began to drop away and the readers had a chance to find something to their liking. I shall never forget when the opening lines of "The Lady of the Lake" came before my vision. We read and reread "Backlog Studies" and "My Summer in a Garden" by Charles Dudley Warner and the books of that period.

Book Memories

The announcement of a new list of books for the library was read with greater interest than a miser reads the bond market. Those never-to-be-forgotten summer days we sat sewing under the maple trees in the "front yard" with one member of the circle reading aloud the fine, clean, sweet books of William Dean Howells and other really great Americans are rich memories. We became acquainted with Hawthorne, George William Curtis, Bancroft, Longfellow, Lowell, Emerson and Richard Henry Dana. Of course we liked the lighter romances too, for we were young and impressionable, but the things that have survived are the good ones. Tennyson's poetry is as fresh without the book as with it, and I learned many of the wonderful lines in "In Memoriam" that still go through my mind when illness, or loneliness, or absence from a book makes the thoughts turn inward.

Today we have a wonderful, clean, fine, light library with thousands of books, but judging from the few, the very few, young folks who regularly use the room and take out books to read, young folks have other interests nowadays. Maybe the movies and the lessons by radio and all the other means of gaining knowledge are better and more thrilling, but give me a good book, a quiet hour, and loneliness vanishes. The opening of the library marked a new epoch in my life, and is still one of the places I love to enjoy and use to my mind's satisfaction.

A Reader.

Our Big Problem

By HEPSY NEFF

MORE and more of thinking people, not of our own land only but of the world at large, are busily facing the problems of child welfare. The terrible cost of disease and crime has convinced medical science of the unsound mind in a sound body, and not only the remedy but the prevention is infinitely cheaper than cure. Even money alone, to say nothing of sympathy and suffering beyond estimate. Perhaps we began to learn the value of preventive as against curative measures when our Department of Agriculture established its Bureau of Animal Industry to help make stock growing a more profitable business. The material for such a Bureau had been accumulating in the hands of what we are beginning to call Master Farmers and from such experiences a body of expert advice began to grow, as still grow me in fact.

With increasing successes in animal industries arose the question of like successes in the growing of humans, beginning with the child and its parents. Then, if a Bureau of Animal Industry why not a Children's Bureau at Washington and sustained by the government? Opposition arose at once. "Why Sir," shouted a congressman member of Congress, "Would I keep me once our children to the level of calves and pigs?" But the calves and pigs had been served first and the work was a success. What more natural than that the possibility of producing superior boys and girls should come to the front; or rather superior boys and girls along with superior calves and pigs came to the front and a prized off blue ribbons as easily as though it were an everyday affair.

National Interest

Best of all, the work is daily growing in interest and results. The Children's Bureau has put out and continues to put out helpful bulletins which are read by thinking parents and used with growing success. As always, a really good thing steadily gathers to itself new means of growth. Leading men and women have come together in great organizations for the betterment of childhood. Perhaps the oldest of these is The American Child Health Association, now wielding such an influence that May first has been established as National Child Health Day. On this day wide-awake communities that have been giving the children in their schools all kinds of health tests such as weighing, testing of eyesight, testing of hearing and such medical examinations as will determine whether a child is handicapped in growth and progress by a defect or disease always have a squad of blue ribbon children to show. Again, the results are surprising. Often these examinations with their corrective measures have changed the whole trend of a child's life. Defective eyesight and defective hearing has been corrected and the child is a new being.

A School Course

Few indeed are the states in which this work has not yet begun. Statistics covering every state are not available, but in many counties the work has been established as a regular part of the school course, backed by the county medical associations. Even more gains are in sight. Washington, D. C., now has a research center in which a staff of trained experts are daily studying the children of a nursery school for children, or rather babies from one to six years old. Here the child is provided the most perfect natural conditions, perfect freedom under trained workers and not only the best foundations for character are laid but the beginnings of mental twists and habits are corrected. Again the results of all these studies are gathered in bulletin form for the help of parents who are not within reach of nursery schools, now a part of all educational centers.

Perhaps all these bulletins, like the bulletins of the Children's Bureau, may be had for the asking. Perhaps some of our readers have yet to learn of the work and history of the Children's Bureau and the extent of its publications. A two cent stamp will bring this information, together with a complete list of the bulletins put out by the Children's Bureau. Address Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., ask for copy of "The Children's Bureau," a late publication. From the list of these bulletins given a mother or teacher may select those which best meet her need. Then a post card addressed to the U. S. Department of Labor, Children's Bureau, Washington, D. C., will bring it.

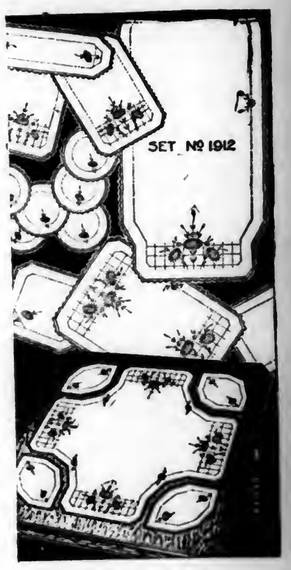
National Poppies

LAST year I had a bed of the loveliest poppies. They are easily grown and will thrive under ordinary conditions. They have very large bloom, being white tinged and fringed with a lovely shade of red. Where the red and white meet is a tinge of blue, hence the reason we often call them the National poppy. These poppies bloom profusely. Amandus Lehman.

For the Woman Who Sews







DINING ROOM SET

This set is stamped on finest quality tan crash and gives a change from the usual color of such material as used in the dining room. It consists of a scarf 18 by 50 inches, a 36-inch centerpiece, a complete pillow with back, an 18-inch centerpiece, and a 12 by 34-inch scarf. The price of this complete set is only $1.40 postpaid to any address. Ask for Set No. 1915. Embroidery Department, Penn'a Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Goose Feather Ornament

ARTIFICIAL flowers add the needed touch of color to many a drab frock or cloak. A novel kind is easily made with feathers, preferably white goose feathers.

All you need is colored ink and fine wire—plus the feathers and a bit of wholesome creative imagination. To make a chic anemone buttonhole flower, take five medium-sized feathers. Round off the tops with a sharp scissors, and trim a little off the bottom making a good stem.

Dip these five "petals" in the color or dye used and while they are dyeing, select a few real fluffy feathers for the center. Bind this group together with fine wire. To this center you then fasten—one at a time—the five petals, binding them fast with wire.

To make a few leaves, trim the edges of several feathers so they appear serrated and natural—then dye them in green ink.

* * *

That old raincoat stored away in the attic will make a durable apron for the laundry—or perhaps for jelly days. Cut it over your favorite slip-over pattern, and bind the edges with gay bias tape. The small pieces left over make ideal doilies to use under house plants. If the kitchen chair needs upholstering, just try pieces of the old raincoat for that, too.

Mrs. C. D. Lording.

Prize Sewing-Room Hint

SINCE I have never had a sewing table, I have a substitute that does fine work. I use a piece of wallboard cut a convenient size for my personal space and use. It is very light, easily moved and so very handy.

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Mrs. C. D. Longyear.

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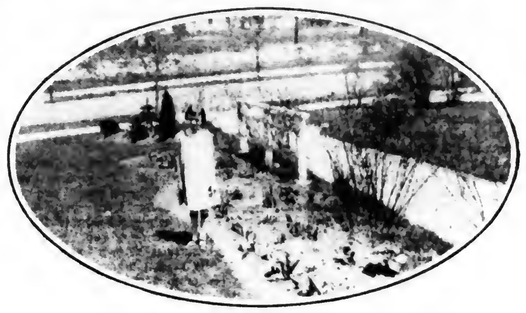
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Flower Bed in Early Spring as Tulips Begin to Come Up

To Start Annual Flowers

By L. L. RUMMELL

ANNUALS comprise the greater portion of the flowers we will start this spring. A few varieties of the common perennials can be started in the spring and bloom the same year. We should all plan our gardens to have shrubs and perennials occupy most of the area, but there will always be spaces where annuals must be put in, and there will be times when little bloom would be evident were it not for these annuals.

They are short lived, blooming only a single season, and sometimes only a month at best. Still we want them in profusion, and for cut flowers in the home they serve their greatest usefulness.

These annuals readily divide themselves into two groups, those which can be started outdoors and those which need an early start indoors or in a hotbed. The following "rule-of-thumb," that is, drop their seed in the fall, and in the spring it comes up at its own accord: calliopsis, portulaca, poppy, calendula, cosmos, larkspur, nigella, sweet alyssum, centaurea cineraria (dusty miller), California poppy, pansy, candytuft, ageratum, gaillardia, marigold, petunia and zinnia. If the bed is prepared in the fall, the seeds of these annual plants can be sown outdoors then.

Then there are more tender sorts that must not be exposed outdoors till all danger of frost has passed. Here we have asters, annual chrysanthemum, nasturtium, salvia, salpiglossis, stocks, verbena. We ought to include also African Marigold, scabiosa, sweet sultan, straw flowers, Job's tears, lobelia, phlox drummondi and a few others.

Don't Spoil the Lawn

Many of the first class really are better if treated as one of the second group, that is, started indoors before frost danger is past. In this brief space we cannot treat all the annuals, and I am going to mention only the old standbys. In my own garden my major annuals are snapdragons, asters, petunias, salpiglossis and zinnias started in a hotbed. Outdoors this past season I had calendula in quantity, portulaca, sweet alyssum, four o'clocks, ageratum, bachelor's buttons, calliopsis, African marigold, cosmos, poppy and larkspur. If I were to cut down on this list I would eliminate first cosmos, four o'clocks, bachelor's button, salpiglossis and calliopsis. Asters may eliminate themselves in a few more years through disease and insects.

Outdoors now in March or April I would seed as soon as the soil can safely be stirred such varieties as California poppy, shirley poppy, sweet alyssum, calendulas, portulaca and larkspur. Make this soil fine and loose and fertilize it liberally. Seed these in clumps or bunches, informally, massing colors, rather than mixing. Make the mass large enough to fill the eye. Put the tall growing sorts like lark-



A Hotbed Lengthens the Season by Several Weeks

spur, [illegible] in the ground first, then height [illegible] snapdragons and calendulas, and [illegible] grounds, things in front, such as [illegible] or petunias or asters.

The place for these flowers [illegible] in a border to the walk or [illegible] bed set out on the lawn. By [illegible] a line back from front of [illegible] and in the rear [illegible] keep it open [illegible] an unbroken green velvet sward. [illegible] ers. I see no place [illegible] than [illegible] Put shrubs [illegible] at corners of the [illegible] [illegible] [illegible] [illegible] soil, shrubbery or [illegible] [illegible] [illegible] up along the walk.

Hotbed Rules

March is the [illegible] bed. This [illegible] on next [illegible] out the seed [illegible] among vegetable growers. It is [illegible]

[illegible] Farmer to give [illegible] First, this [illegible] easy to control. I dug out [illegible] and covered [illegible] boards, making [illegible] or twice in [illegible] very slow to germinate [illegible] not start as [illegible] come on fast [illegible] After [illegible] start growing, [illegible] a week or so [illegible] growing about a [illegible] soda or sulphate [illegible] gallon of water, [illegible] sprinkling of [illegible] fertilizer on [illegible] needed though [illegible] fertilizers [illegible] strong and do not [illegible] or burning will [illegible]

[illegible] three rules to [illegible] a hotbed. Ventilate, [illegible] kept moist and [illegible] There is not [illegible] heating manure, [illegible] sun shining [illegible] out quickly [illegible] Water only in the [illegible] the temperature [illegible] sunny day raise [illegible] for ventilation. [illegible] inside and keep the temperature about 60 to 70 degrees. At night it will drop to 40. A covering of an old blanket to cover [illegible] bed on cold nights. Don't forget [illegible] night or the [illegible] may be frosted.

[illegible] 1928 says we [illegible] the time March 5, with snapdragons, asters and petunias the slowest [illegible] and radishes [illegible] by March 31 [illegible] and zinnias were planted [illegible] in the hotbeds [illegible] and transplanted April 17 just [illegible] them better root system. They were still in the hotbed, [illegible] that date really was a cold [illegible]

[illegible] May 14 all flower plants were transplanted outdoors. (This will vary north and south from central Pennsylvania according to the date of the last killing frost.)

The first of June zinnias were in bloom, [illegible] flowered sorts. Yellow annuals, except colored flowers were a [illegible] in these rows till October. Snapdragons were in bloom the middle of June. The last petunias came out just 10 days after transplanting. [illegible] lengthens the growing season six to eight weeks. Think of two months extra of glorious flowers, from the middle of May till frost! It is in that added enjoyment of having the first blooms in the garden, ahead of your friends' gardens, that the hotbed has its recompense.

A fair substitute if you grow but a few flowers is to have some flats or boxes indoors, set them by a kitchen window and start them in this way. A piece of paper may be laid over the seeds till they germinate, or a pane of glass is good to keep in moisture and hasten germination. If you do this heat your soil in an oven for an hour to sterilize it, and kill disease organisms, insects and weed seeds.



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Cultivation of Berries

By GILBERT S. WATTS

UNLESS March [illegible] will produce [illegible] earlier age than [illegible] depth and fertility [illegible] early as possible [illegible] in rows four [illegible] Spread the roots [illegible] Do not leave them [illegible]

• • •

Allowing a depth of eight or [illegible] not plant in [illegible] At first cover the [illegible] with perhaps two inches [illegible] fill the trenches [illegible] soil at each [illegible] Among the second lettuce, [illegible] peas, beans, [illegible] spinach or onions may be [illegible] between the asparagus rows early [illegible] the first year but hand labor will [illegible] by such intensified methods

• • •

WHAT crop may we grow [illegible] or add to our list that will [illegible] the cash income in 1929? [illegible] is the only thing that counts in [illegible] bills. It takes just so much [illegible] a check can. Only when that is [illegible] account for cutting ahead [illegible] Lima, sow strawberries, raspberries [illegible] blackberries could be grown and [illegible] to advantage. Carrots and [illegible] each are enjoying increased popularity [illegible] crops of celery, lima beans, [illegible] sprouts, inches, surely something [illegible] which there is reasonable expectation [illegible] selling. The requests of customers [illegible] last year are a valuable guide and [illegible] I've included things which we did not [illegible] always have. Possibly profitable [illegible] for new crops may be developed [illegible] scanning the index of a seed catalog [illegible] some evening—but we must not [illegible] desire run away with reason.

Shallow-Set Asparagus

Last spring I set out an asparagus [illegible] bed of two-year-old plants. I feel I [illegible] have them too near the surface. Can [illegible] I remedy this by hilling up around [illegible] them as well. I is compelled to reset [illegible] the bed? Will the plants be fit for [illegible] cutting this year? In case I must [illegible] the job should it be done this [illegible] spring or should I wait until fall? M. B.

It is unfortunate that the asparagus [illegible] which you planted last year is [illegible] too close to the surface, but I [illegible] stand to would lose more than [illegible] would gain by trying to reset [illegible] plants at a greater depth. It is [illegible] difficult to move anything but [illegible] spindling grass and secure satisfactory [illegible]

I believe it would be better to [illegible] all shoots as soon out of the [illegible] plantation over a period of a few [illegible] In the meantime set another plant [illegible] Tomatoes used in tillage [illegible] shallow set asparagus will sometimes [illegible] produce several satisfactory [illegible] However the labor of cultivation [illegible] the labor of keeping weeds down [illegible] be increased.

Tomatoes Crack

Planted Marglobe tomatoes for [illegible] crop but because they crack [illegible] on stem end. Ground was sandy [illegible] and was in strawberries in '26 and '27. Hugh Wilson.

I HARDLY believe your tomatoes [illegible] cracked as a result of any deficiency [illegible] fertilizer. There were a [illegible] many cracked tomatoes last summer due to the great variations in soil moisture between wet periods and dry periods. It may be that Marglobe cracks more than some other varieties and possibly it does this to a greater extent on some soils than on others. In my own experience Marglobe has proved very satisfactory but I know some growers prefer Greater Baltimore, Matchless or Stone.

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Horticulture

By S. W. FLETCHER

Victory Raspberries

I have a half acre of Victory raspberries which gave a large crop in 1927 and made a wonderful growth of canes. In 1928 owing to the mosaic they gave little more than one-half what they should have done and made a poor cane growth. While some of the new wood is fine, fully one-half is poor and rather spindling. C. W.

PROBABLY it would not pay to keep this raspberry patch for another crop. Get a new patch, using only disease-free plants (see your county agent) and set it at some distance from the old field not less than 500 feet. The mosaic is spread largely by plant lice. Burn all the old plants on the ground where they grew.

Spraying Raspberries

I have a patch of raspberries full of anthracnose. How do you think it would work to cut all the canes both old and new to the ground and allow new ones to come up and keep spraying those and the stubs? Mrs. V. A.

IT would help some, but would not control the disease. Spraying with lime-sulphur, winter strength (1.03 sp. gr.) as the winter buds are bursting in spring and with lime-sulphur, summer strength (1.008 sp. gr.) about a week before blossoming, will also help if the disease has gained a foothold. A far better plan however, would be to set a new planting on fresh soil, using disease-free plants. Consult your county agent for sources of disease-free plants.

Raspberries should be rotated; rarely should the patch be kept after the third crop.

Rabbits and Fruit Trees

Kindly advise me what to do with small fruit trees, peach and apple, that rabbits have peeled the bark off, and what to do with the ones they have not yet bothered? E. J.

PAINT the injured portions with liquid grafting wax before they dry out. A good melted wax can be made from

Resin (crushed) 6 lbs.
Beeswax (cut fine) 1 lb.
Linseed oil 1 pint.

Melt the resin and beeswax together and stir in the linseed oil.

If the injury is low on the trunk, banking it with soil is effective. Should the trunk be completely girdled, this treatment may not save it. Such trees should be pruned back severely, and manured or nitrated heavily.

Rabbit injury may be prevented, in part, by wrapping the trunks with two or three thicknesses of newspaper, securely tied above and below. This is done in the fall, and the paper is removed in early spring. If the snow lies deep, so that the rabbits can work high up on the tree, above the protective wrap, there is no recourse except trapping and hunting. We had this experience this year, and caught twelve rabbits in box traps, set in a young peach orchard.

Various evil-smelling washes, applied to the trees, are sometimes recommended to prevent rabbit injury. They do not give uniformly good results. One of the most far-smelling is:

Fresh cow dung, one peck.
Quick lime, one-half peck.
Flowers of sulphur, one-half pound.
Lampblack, one-fourth pound.

Mix the whole into a thick paint with urine and soap suds. I do not use this sorry mess myself, but some people do.

Rabbits may be killed with vegetables, such as carrots, poisoned with strychnine. The best way, by far, however, is to have a good rabbit dog, a shotgun, and a little leisure in the hunting season, after the fruit crop is harvested.



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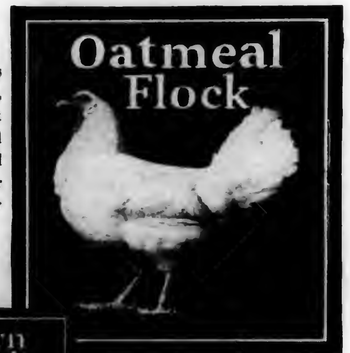
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CHICK STARTER

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BUY QUAKER FEEDS IN STRIPED SACKS

The Chick's Nursery Days

By R. L. SCHARRING-HAUSEN

ONE of the most important [illegible] of the year for the poultryman at hand, for most of us are [illegible] start the baby chicks which will [illegible] us our pullet flocks in the fall. And some of us who want early layers [illegible] already have chicks in the brooders. Proper care and management of these chicks will keep down mortality and disease, and give us strong, healthy pullets for our laying flocks next fall, while carelessness and improper management will result just as surely in heavy losses, disease, worms, and a poor bunch of pullets which in their turn will be poor producers and easy prey to the diseases and troubles which mature flocks are subject to. While chicks may be raised successfully by various methods of feeding and management, there are certain fundamental rules which all of us must follow, and these are the points I want to write about in this little article.

I believe I went over the subject of brooder houses pretty thoroughly earlier in the season, and aside from repeating that a good 10-by-12 colony house with a coal-burning brooder stove is probably the best equipment for raising chicks unless a large number are to be handled, that subject can be dismissed.

Cleanliness First

Some time ago I read an article written by one of the foremost poultry breeders in the country, who maintained that most of our poultry troubles come from a disregard of sanitation, in other words, from plain dirt and filth. This man has raised a large number of birds on a limited area year after year over a long period without any serious disease, and there is no doubt that there is a great deal of truth in his contention. Campaigns for better sanitation have also given good results in "Grow Healthy Chicks" programs put on in various states. Clean houses and clean range seem to be of utmost importance in brooding and rearing chicks.

In getting the brooder house ready the first thing to do is to sweep down the side walls and ceiling and scrape the floor clean. The dirt should be taken away and not merely thrown out the door. Then the floor should be scrubbed with a hot, strong solution of lye. The next thing to do is to spray the whole interior with one of the poultry disinfectants on the market and then whitewash the walls and ceiling. Painting the floor with carbolineum or waste motor oil is another good thing to do. After these operations are complete, the house is in good sanitary condition to receive the chicks.

The Heating System

The brooder stove then can be set up, making sure that the thermostats are in good shape, as it is necessary to replace these from time to time. Then litter the floor lightly with cut straw or peat moss. I prefer the moss to anything else as it is very absorbent and keeps the floor dry for a long time and contains nothing to harm the chicks. Several days before the chicks are expected the stove should be fired up and adjusted so that the temperature stays at about 100 just under the edge of the canopy. The house itself should be rather cool and well ventilated, without drafts, as a high temperature in the house is bad for the chicks.

For drinking fountains nothing is better than a one-gallon stoneware fount, of which at least two should be provided for every house. For hoppers, a piece of clean board with plaster lath nailed around the ends and edges to form low sides is very satisfactory when the chicks are small. It is very important that plenty of hopper space be provided, so that all the chicks will get enough to eat and grow evenly. An inch of space per chick is [illegible] each, and this does not mean [illegible] two 25-chick size galvanized hoppers for a flock of 300 chicks, as [illegible] often seen.

Before the chicks are placed in the brooder house, the stove should be encircled by a ring of inch mesh poultry netting a foot or more wide, at a distance of two feet from the edge of the lamp. This will keep the chicks near the stove for the first few days until they learn the source of heat, after which the wire can be removed. When this is done, all corners in the house should be rounded off so as to prevent the chicks from crowding into them. Wallboard or inch mesh poultry wire does very nicely for this purpose.

The First Feed

For best results, chicks should receive no food until they are 60 to 72 hours old, or until the yolk is absorbed. Best practice seems to be to keep the chicks in the incubators or in the shipping boxes until they are ready for their feed. If left in the machine, it should be darkened so that the chicks will be quiet, and if left in the boxes they should be set in a darkened room at comfortable temperature.

One of the best ways to start chicks is to give each one a drink of sour milk or dilute condensed buttermilk the first thing. Each chick's beak can be dipped in the liquid, or if many are to be handled, the founts can be filled with it for the first drink. Liquid milk is not the easiest thing to feed to chicks for a variety of reasons, and after the first day I prefer to give them water to drink, supplying the milk in dried form in the mash.

Under no circumstances should the chicks be given grit or sand before they are fed. This was at one time a common practice, but it was found that the chicks often filled up on this indigestible material with fatal results. A much better plan is to sprinkle a little grit on the feed.

There are several ways of starting to feed chicks. Some feed all grain, some all mash. A good plan is to feed chick grain three times a day and mash twice a day for the first few days. Both are fed on the little flat hoppers, giving what will be cleaned up in twenty minutes. After a few days of this, the chicks can have free access to mash, and also be given a little green feed such as lettuce, sprouted oat tops or whatever is available, cut fine.

For Older Chicks

As the chicks grow, the temperature of the brooder can be gradually reduced, as long as the chicks remain comfortable. It will be necessary to supply other hoppers for mash, built on the same plan but with higher sides, and probably to lay a piece of inch-mesh wire over the feed to prevent the growing birds from scratching it out. Growing chicks also drink enormous quantities of water, and must be kept supplied with plenty at all times. It is very important to teach them to roost as soon as they will by providing low perches for them to get on. Once the little fellows get on the perch nights not only is danger from crowding and smothering past, but they will become hardier and develop better. Cleanliness at all times is important and the houses must be cleaned out at least once a week or oftener if they become damp.

Editor's Note:—Mr. Scharring-Hausen is ready as usual to answer any questions that may come up, and to furnish names and addresses of manufacturers of equipment, litter, etc., which readers are unable to obtain from their dealers. There is also the Pennsylvania Farmer bulletin on the Care and Management of Baby Chicks for free distribution to those who will write for it to the Poultry Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

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3, 5 and 10 yard Cuttings—At Half Price—GUARANTEED



Extra power chickens need pay for this Flex-O-Glass Scratch Shed in a few days. *Ideal for enclosing poultry, bees, rooms, porches, anywhere.* *Flex-O-Glass hatheds grow plants quicker and much stronger.* *Easily nailed on hen, chicken coop, hog house and garage windows.*

Here's your chance to buy genuine Flex-O-Glass, the best, strongest, most durable Ultra-Violet Ray filter made, for half its regular price. Here's your chance to put Flex-O-Glass in your poultry house windows, hot beds or cold frames, in your home, garage or farm—at a big saving. The Flex-O-Glass offered at 29c a yard is fresh and new, fully guaranteed in every way. The only difference between this and the Flex-O-Glass sold at twice the price, is the length. Comes only in 3, 5 and 10-yard lengths which are the left overs from larger cuttings from our standard rolls. The supply is limited. Order today!

Lets In Healthful Ultra-Violet Rays

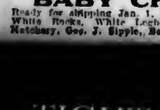
Keeps baby chicks warm and healthy indoors. Protects rubbers (weak legs), diseases and deaths. Gives home plus sunshine full of egg-making Ultra Violet Rays all winter long, while hens are bad. Makes plants grow much stronger and faster when used in place of glass on hot beds. Transforms porch into a warm, dry, sunlit health-room in which to work, read, rest—or ideal children's winter playroom. Saves fuel and doctor bills. **Approved by thousands of users and all leading authorities.** Just cut with shears and nail on ordinary window frames. Lasts for years.

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Don't wait! Don't hesitate! Our stock of these 3, 5 and 10-yard lengths at 29c a yard is limited. Order now while the supply lasts. Enclose check or money order for number of yards wanted. We pay the postage on 10 yards or more. If your order reaches less than 10 yards add 5c per yard for postage. Your money back if not satisfied. 24 hour service. Use Book Free coupon if you prefer. Remember—comes with your order. Cut out and mail coupon today.

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1151 N. Cicero Ave., Dept. 665, Chicago Ill.

Mail This Guarantee Coupon Now
FLEX-O-GLASS MFG. CO., Dept. 665,
1151 N. Cicero Ave., Chicago, Ill.
Find enclosed $..... for which send me yards of Flex-O-Glass 36 inches wide by postpaid parcel post. If I am not absolutely satisfied after using the Flex-O-Glass I'll have I may return it and you will refund it in full, without question.
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Every bird in our breeding flock is banded and a record kept. Our flocks are inspected by experts trained and authorized by Ohio Poultry Improvement Association. Find out about our guarantee plan. 16 breeds. We have limited number Chicks from Ohio R. O. P. pedigreed stock. Write today.

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	100	500	1,000
Leghorns and Anconas	$13.00	$62.00	$120.00
Barred and White Rocks	14.00	66.00	130.00
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References: Richland Nat'l Bank. Book today on chicks that pay. You may order direct from this Ad or will mail literature. We ship C.O.D. or upon receipt of $2 will send P. Post-paid with 100% live delivery guarantee. EARLE F. LAYSER, Prop., Richland Poultry Farm & Hatchery, P. O. Box 1, Richland, Pa.



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High Egg Laying Flocks

11 years reliability. Satisfied customers our specialty. Prices Reasonable. Write for catalog and price list.

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Flocks inspected by officials from the Penna. Dept. of Agri. Our 19th year—established 1910. Get our low prices on Reds, Rocks, Leghorns and Minorcas. Member I. B. C. A. Catalogue free. THE KEYSTONE HATCHERY. (The Old Reliable Plant). Richfield, Pa.

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From Large Type Barron English S. C. White Leghorns. Pens weigh up to 7 pounds. Extra Quality Chicks from free range selected stock and week after Feb. 11th at $16 per 100, $77 per 500, $150 per 1000. 100% Live Arrival Guaranteed. 10% books order. Catalog Free.

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have vim and vigor—hatched by men with 18 years experience, from culled flocks. Prepaid and 100 per cent guaranteed. S. C. White and Brown Leghorns, Rocks, 12c. Reds and Minorcas, 14c. Mixed Broilers, 9c each; $80 per 1,000. Circular free. Our slogan Service after Delivery. THE PENNA. HATCHERY, Liverpool, Pa.

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Tancred Str. Wh. Legh'ns	$12 per 100	
White Leghorns	11 per 100	
Barred Rocks	14 per 100	
R. C. Reds	14 per 100	
Heavy Mixed	12 per 100	
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500 lots 5c less—1,000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for free circular.

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This quality is bred in the chick through rigid culling and breeding. Guaranteed satisfaction. 13 varieties. Light breeds, 12c. Heavies, 14c. White Wyandottes, 15c. Send for our instructive catalogue. MILTON POULTRY FARM, Hatchery, Dept. 7, Milton, Pa.

BABY CHICKS

Ready for shipping Jan. 1, 1929. Barred Rocks, White Rocks, White Leghorns. Parkway Hatchery, Geo. J. Bipple, Box 25, Swinefird, Pa.

BABY CHICKS Order direct from this ad and save time.

Free Range bred

	25	50	100	500	1000
White and Brown Leghorn	$3.25	$6.25	$12	$58.75	$115
Anconas & Black Leghorn	3.25	6.25	12	58.75	115
White and Barred Rocks	3.75	6.75	13	68.75	135
Rhode Island Reds	3.75	6.75	13	68.75	135
Heavy mixed broilers	3.25	6.25	12	58.75	115
Light mixed broilers	2.25	4.75	8	36.75	75

Full count and quality guaranteed. Catalog free. For Greater Profit Hatchery chicks. Utah Poultry Farm & Hatchery, Box 14, Port Treverton, Penn'a

Hillside Quality Chicks
Will Ship C. O. D.

S. C. W. Leghorn, Wyckoff and Tancred Strain, $12.00 per 100; $57.00 per 500 lots, $110.00 per 1,000 lots. Rocks and Reds $14.00 per 100, 100% live delivery. Postpaid. All free range stock. T. J. Ehrensoller, Prop., United Phone. Box 11, McAlisterville, Pa.

Clear Spring Quality Chicks

	100	500	1000
S. C. White Leghorns	$11.00	$52.50	$100
Barron and Wyckoff Leghorns	12.00	57.50	110
Barred Rocks and R. I. Reds	14.00	67.50	130
Light Mixed $9.00	Heavy Mixed		$12.00

For March and April, 100% live delivery. Postpaid. New circular free, giving full details of all breeds.

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	25	50	100
Tancred Strain S. C. White Leghorns	$3.50	$6.50	$12
Prof. Lay Strain Brown Leghorns	3.50	6.50	12
Parks Strain Barred Rocks	4.00	7.50	14
S. C. Rhode Island Reds	4.00	7.50	14
Mixed or Broilers	2.50	5.00	9

Special prices on 500 and 1,000 lots, all heavy laying free range flocks. Free circular and price list.

COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

CHICKS Pure bred, Blood tested, free range breeders. Leghorns, Anconas, 12c. Rocks, Reds, 14c. Wyandottes, Orpingtons, Minorcas, 15c. Black Giants, 20c. 100% live delivery. Valuable Chick Manual Free.

SEIDELTON FARMS, Washingtonville, Pa.



Nest Box Notes

IN the report of chicks I am keeping which regularly lay two or more eggs every week, which lay less frequently and have also discovered some which lay seldom or not at all. The same conditions are reflected in the general laying flocks which are not being supported. Such records bring home the fact to the successful poultryman that he must constantly watch his flocks and cull out the loafers. In most of the birds is doubly profitable. It not only reduces the feed bill but also brings in extra cash.

• • •

A considerable number of readers have written in to ask for a copy of the bulletin describing the construction of the straw shelter described in Round or Houses for 1929, and I trust that all who did so received the copy they asked for. This little shelter, while ideal for the late spring and early summer, is valueless for baby chicks or during cold weather, as all those who received the bulletin will understand.

• • •

Birds from now on will be laying heavily and are liable to get thin. To prevent this they should be well fed on grain in addition to the laying mash, feeding as much grain as they will eat clean and still keep up production. Many good poultrymen give a fattening feed at noon consisting of one part corn meal, one part oat flour and one part condensed buttermilk, or moisten the dry ingredients with skim-milk, feeding three pounds of the mixture as a wet mash at noon to every hundred birds.

• • •

Sometimes I wonder if I harp a little too much on keeping up body weight in layers. It is pretty important to do this, however, especially with Leghorns. Good care now means more summer and fall eggs. R. L. S.

When to Candle Eggs

How long must geese, ducks and turkey eggs lie under the hen before they are candled? Mrs. A. R.

ORDINARY white-shelled hen eggs can be tested from the third day but are usually gone over about the eighth day, when the condition of the germ is plain to see. As geese, duck and turkey eggs take a little longer to incubate, it may take a little longer before they can be tested out, especially with goose eggs on account of the thick shell. I have always found a good pocket flashlight to be very handy in testing eggs, using it after dark. R. L. S.

Pullets Moult

I wish you would tell me the cause of my chickens moulting. On September 1st I housed 50 White Rocks and 200 White Leghorns in three separate houses. Fed a good commercial feed entirely, have plenty of roost space, also prescribed floor space. Were wormed, also delousted twice when put in. Now some are entirely bare. Dropping boards are screened and cleaned every other day. Have plenty of greens also mangel beets. Rocks were hatched March 10th, Leghorns April 2nd. J. M.

EARLY hatched pullets may or may not go into a fall or winter moult; there is no certainty about it one way or the other. Any change in feed or management may cause them to moult, or if they have been laying heavily and get a little thin that may start the feathers to falling. I had some March 1st Leghorns housed in August and one pen molted and the others did not, in spite of similar treatment. If you are able to put lights on early hatched birds when they are housed it will help to keep them from molting.

R. L. S.

Make Dimes Grow into DOLLARS

MAIL COUPON FOR FREE BOOK



A CHICK worth about a dime may develop into a broiler worth over a dollar or into a pullet which will make you a number of dollars. But one thing is sure. The chick can't grow into money unless it has enough calcium in its diet.

Essential to Success

PEARL GRIT No. 1 supplies calcium in the proper form for baby chicks. The particles are the right size. The chemical composition is right. The physical structure is right. Put Pearl GRIT before the chicks in plain shallow boxes just as soon as they're ready to begin picking. Give them free access to it constantly. Then note the results! It builds firm, strong bones—averts leg weakness or rickets. Besides, it's an aid to digestion and a natural tonic.

ACT AT ONCE and avoid LOSS

Get PEARL GRIT from your feed dealer. If he doesn't handle it, we'll see that you are supplied.

The important subject of calcium in poultry is fully discussed in our new book. We want you to read it. The facts will mean money to you. *Mail the coupon today.*

Pearl Grit Corporation,
3319 Wayne St., Piqua, Ohio

Send me your free book, "The Poultry Raiser's Pay Envelope," and give me the names of dealers who handle PEARL GRIT.

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Tell us your dealer's name and address



LEOLA BROODER HOUSE

WITH a Leola you can be sure of raising 90 to 98 percent of your chicks to maturity. The Leola is round, which makes it easy to clean and eliminates dark corners where chicks crowd together and get killed. Built of wood, it is light in weight and will hold an even temperature. Buy a LEOLA for profitable chick-raising.

Write for literature and folder about the LEOLA BROODER HOUSE—it gives complete details.

H. M. STAUFFER & SON, Box A, Leola, Pa.

We Need New Laid
White and Brown Eggs
direct from the farm. You get value due of course. Our business is our guarantee to you.

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CHICKS Tancred Strain, W. Leghorns, this breeders are selected for size, type and production. Will ship C. O. D. Circular. Meadow View Poultry Farm, Mohnton, Pa.

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When writing Advertisers please mention The Pennsylvania Farmer.

Post-Mortem Necessary

We are having trouble with our chickens. They are in good condition—fat and laying well but they sicken and die in a day or two. Their combs become dark, much as if they had been frozen. They mope around for a day or two and die. They were raised on free range but have been on a floor since late fall. G. H. G., Penn'a.

IT is impossible to determine the cause of the mortality in your flock without making a post-mortem examination.

A disease known as bronchitis affects poultry in a manner similar to that described by you. The birds are apparently normal one day and the next are either dead or very sick.

I would suggest that you send a specimen or two direct to the Bureau of Animal Industry, Harrisburg, Pa., for examination. This department will write you concerning their findings.

H. C. K.

House for 500 Chicks

How large would you build a house that you were going to brood 500 to 600 Red chicks in, up until they were about eight or ten weeks old?

Is this a good time of the year to use tobacco dust to rid the hens of worms? R. W., Beaver county, Pa.

A BROODER house 10x12 feet is generally recommended for up to 300 chicks, which works out roughly to about two chicks per square foot of floor space. When chicks are to be transferred after eight weeks it is possible to crowd them somewhat more if special care is taken to keep houses clean and provide ample hopper space and a sufficient number of drinking fountains. You might get by under these circumstances with a house 14x16 feet, although I would suggest that you build a house 12x20 and divide it into two pens with a stove in each, as the extra space would give you better results, and over a term of years the advantages would outweigh the slight extra cost.

Tobacco dust can be given at any time at the rate of two pounds per 100 of mash, feeding the tobacco mash for a week or two at intervals. R. L. S.

Feed for Young Ducks

Can you give me some information in regard to what feed young ducks should be started on? Should they have a place to swim in while they are very young? Mrs. Clara C. Roberts.

THERE are many rations which give good results when fed to ducklings. It is important that they receive no feed until they are at least 36 hours old. For the next few days, they should be fed at least five times daily.

A very satisfactory feed may be made by using equal parts by measure of rolled oats and bread crumbs with three per cent of sharp sand. This should be moistened with water and fed in a crumbly state. After four or five days, this feed may be changed to equal parts of bread, rolled oats, bran and corn meal with the same amount of sand as previously fed.

After the ducklings are a week old the feed may consist of three parts of bran and one part each of low-grade flour and corn meal, five per cent meat scrap, ten per cent green food and three per cent sand. From the end of the first week until the ducklings are three weeks old they should be fed this feed four times daily and then after this, three times each day. The amount of meat scraps in the ration should be increased after the second week until the ducklings are a month of age when they should be fed approximately ten per cent of meat scrap in the ration.

It is not necessary that ducklings have a place to swim during the growing period. The most successful duck raisers do not have ponds available in which the ducklings may swim. They do have, however, pans in which the ducks may waddle if they so desire.

H. C. K.

ESHELMAN'S



making Chick PROFITS GROW

PROPER FEED and cleanliness—the two great factors in profitable chick raising. You control both.

Start your chicks right, with *Eshelman's Buttermilk Chick Starter*, scientifically prepared for their delicate digestive organs.

This specially prepared Starter in conjunction with *Eshelman's Chick Feed* (grain mixture) assures you maximum profits at minimum costs.

Buy them from your ESHELMAN DEALER —he sells them fresh!

Do You Know—

How to tell a fertile egg? The proper care of chicks? The proper heat to keep a brooder? How to estimate a flock? What and how to feed chicks between the 5th and 11th day?

These and hundreds of other questions are explained in easy language in our new illustrated poultry book—"How to Raise Poultry Profitably." Send for your copy today, it's free for the asking.



ESHELMAN'S
JOHN W. ESHELMAN & SONS
LANCASTER, PA.
FEEDS

FREE

"How to Raise Poultry Profitably"
John W. Eshelman & Sons (P4), Lancaster, Pa.

GENTLEMEN: Please send me, free, a copy of your new 25c poultry book.

Name .....
Address .....
Your Dealer's Name .....

TIGHT BINDING TEXT CUT OFF

The Leg Band Test will convince you too!



"Your claims for bigger bone development sounded good to me," one poultryman told us, "but from looks alone, I failed to realize how well Larro Chick Starter bore out that claim."

Finally, a large hatch of chicks were taken off, and pedigree bands put on their legs. Part of these chicks were put on Larro; the rest on the feed formerly used.



Two Leghorn chicks at six weeks—note the difference in bone development

"Imagine my surprise," he continued, "when I found I had to change the bands on the Larro chicks more than a week before they started to get tight on the legs of the other chicks."

You try it!

Put leg bands on two pens of chicks. Feed one pen on Larro Chick Starter (directions on each bag). Feed the other pen on any other feed you wish.

Here's what you'll find. Larro grows bone so much better you'll have to remove the leg bands anywhere from 5 to 12 days before they start getting too tight on the other chicks.

BONE—the skeletal structure which houses all the vital organs: the foundation for sustained, profitable production. *BONE*—constituting the frame, the size of which determines the future capacity for conversion of feed into eggs; the very basis of future ability to stand up under working conditions. *BONE*—the material which can be developed only during the growing period, and then only by a feed which maintains maximum health and physical condition. *BONE*—what Larro Chick Starter and Larro Growing Mash are particularly noted for.

You'll have better birds if you feed them Larro Feeds.



THE LARROWE MILLING COMPANY
DETROIT, MICHIGAN

Larro

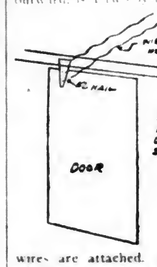
Chick Starter	Egg Mash
Chick Grains	Scratch Grains
Growing Mash	Dairy Feed
Growing Grains	Hog Feed

A Trap for Chicken Thieves

FARMERS in Tuscarawas county, Ohio, have set traps to catch chicken thieves that molest their premises, and when a robbery is attempted the owner is awakened by the ringing of a small door bell by his bed.

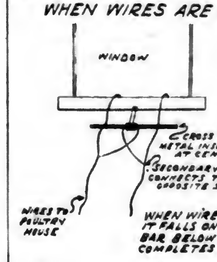
H. H. Baker showed me a simple device he had set up through his poultry house at Sugar Creek, and it cost him only $2.82. It is arranged just like a door bell. There are two dry cells, a common door bell and sufficient wire to extend from house to poultry house. The door bell is right by the bed in the upstairs room that looks out on the rear yard and poultry house. When any door is opened at the poultry house this little bell rings.

The two small wires run from the upstairs bedroom out to the gable of the poultry house and down to the door. Above the door, which opens outward, is cut a V-shaped notch to which the



wires are attached. The end of one wire is attached to a common small strap hinge, which is nailed to this two-by-four. During the day the hinge is turned up, so that it will not ring the bell needlessly and run down the cells. In the evening when the poultry house is closed the hinge is turned down. When the door is closed this hinge falls on the head of a nail driven into the top of the door. Now when the door is opened it pulls the nail away and the hinge falls down another half-inch or so until it rests against the exposed end of the second wire. That closes the circuit and the bell starts to ring. Mr. Baker grabs "old trusty" by his side and makes steps toward his poultry.

But suppose the thief finds out about this alarm, and before he opens that door he cuts the wires. Abner Miller, another farmer there, told me how he and his son had worked out a scheme to alarm them when the wires were cut. They have the same sort of a device wired up in the poultry house with a door bell at the house. Just outside the



bedroom window a cross piece of metal is placed about two inches beneath the two wires, supported to the window sill and insulated with a block of wood in the center. Each of the two wires has a little piece of wire connecting with the opposite end of this crossbar. Now when one or both wires are cut anywhere in the yard or poultry house, the wire will fall down on this crossbar, form a circuit and ring the bell. The insulation on the wires must be scraped off of course above the crossbar.

Mr. Baker also has in mind a scheme to run a string or thread across the windows in front of his poultry house, attached to a hinge, so that when the string is broken the bell will ring.

L. L. R.



METAL BROODER HOUSE

Strp your chick losses by brooding your baby chicks under proper housing conditions. Only metal can give you the exact conditions you need—but there is a big difference in Metal Brooder Houses. Invented first by the Dickelman Manufacturing Company and proved by it, it is only natural that the Dickelman Metal Brooder House contains many exclusive features such as corrugated walls, better ventilation and more light—reducing chick mortality and increasing poultry profits. Get our free catalog that shows the difference. No obligation at all.

Over $1000.00 Profit in One Season.

L. M. Vrient, Shreve, Ohio, paid for his houses, chicks and feed and had $1000.00 profit from chicks raised in four Dickelman Houses in one season. Houses are built in 240-chick size, circular type or in long type suitable for continuous brooding systems. They are shipped "knocked-down." Man and boy can erect it quickly. Houses are available in either corrugated or plain walls. **It's Cheaper to Own Than a Wooden One.** Write for FREE booklet on Modern Poultry Housing. Patent No. 1,589,92.

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YOUNG'S Portable Poultry Houses 8 x 8 ft. Dry Front House $49

"How Can You Do It?"

Was the most frequent question of visitors at our exhibits in Boston and New York Poultry Shows. Folks marveled that we could give so much for so little. They agreed that Young's Houses were "Better and Cheaper Than Home-Made."

Write today for our big free Illustrated Catalog of Poultry Houses, Pigeon Houses, Rabbit Hutches and Dog Kennels.

E. C. YOUNG CO., 98 Depot Street, Randolph, Mass.



Just Paint it on the Roosts!

—Before the chicks come. Only a small paint brush and a can of "Black Leaf 40" are needed. While chickens roost, fumes are released and penetrate the feathers; kills all lice. Also effective in electrical brooding of chicks. Ask your dealer or write us.

Tobacco By-Products & Chemical Corp., Inc., Louisville, Ky.

Black Leaf 40
Kills Poultry Lice

Metal Brooder House
100 Chick Size $30



Larger sizes at correspondingly LOW PRICES. Equipped with all Modern and Practical Features necessary to GUARANTEE success in raising Baby Chicks. Send for an SPECIAL PRICES and Booklet FREE. Investigate TODAY.

The Thomas & Armstrong Co., Dept. 13 London, Ohio
The Save Coal Office COFFEE-LIKE Metal Hubs

Pullets Wanted

Tell me how many and what grade of White Leghorn 14-week-old pullets you can have ready for me by next July or August. Heavy varieties bought.

D. Thomas, Box 206, Tyrone, Pa.

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EASTERN DISTRIBUTORS. CARLOADS WEEKLY. ALWAYS FRESH. WE QUOTE DELIVERED. OMWAKE BROS., GREENCASTLE, PA.

Chicks, Barron Eng. White Leghorns

Common Leghorns, Barred Rocks, Light & Heavy Mixed, as low as 8c each. 100% guaranteed. "New Circular Free." Prepaid.

TWIN HATCHERY, McAlisterville, Pa.

Baby CHICKS (Smith Hatched) Rocks, Reds, Wyandottes, Leghorns, and all leading breeds. Quality and satisfaction guaranteed. Circular free. Early order discount.

BROOKVILLE HATCHERY, Brookville, Pa.

Chicks

S.C.W. & Br. Leghorns	$11.00 per 100
S. C. Barred Rocks	13.00 per 100
S.C.W. Leg. Tan. Str.	12.00 per 100
Assorted chicks	9.00 per 100

Special price on large lots. 100% live delivery. P. O. paid. Order from adv. or circular free. Chester Valley Hatchery, R.2, McAlisterville, Pa.

BROODER COAL

CLEAN CHESTNUT ANTHRACITE
ALEX BLACK COAL CO.,
3126 Liberty Ave., Pittsburgh, Penn'a

Mr. George A. Heil, Washington, Ill., nationally known stock breeder and exhibitor of prize Hackney, Welsh and Shetland ponies, writes:

"I have used Goodyear Tires for more than fifteen years. Both passenger car and truck tires. Goodyear All Weather and Goodyear Pathfinders, and under all conditions they have performed to my complete satisfaction. Several times I have tested the performance of other makes which came as standard equipment on new cars. None of them seemed to have the Goodyear hardihood or give the consistent wear I had come to expect from Goodyear. So my replacements have always been Goodyears and always will be. They are the world's greatest tires."



"Outstanding *quality*—yes; and *low price,* too!"

—that's what Goodyear engineers sought, and FOUND, *in this great new* PATHFINDER

Superior tire *quality* is a basic Goodyear principle—the whole world knows that.

But to yoke such quality with *low price*—that was a task well worthy of the best talent of the greatest rubber manufacturer!

Goodyear faced that challenge, and now Goodyear has successfully answered it—in the new Goodyear Pathfinder tire.

Any illustration we might print of this tire could do small justice to its massive and rugged construction, its deep-cut thick tread, its handsome strength.

Read, instead, the features which make the new Goodyear Pathfinder an *outstanding* tire in quality and value; and then remember that despite this quality and value it sells at a really *moderate* price.

1. A *balanced* tire, with all parts equally durable.

2. The powerful carcass is made of genuine Supertwist cord, with its matchless vitality and resistance to fatigue.

3. The heavy tread is wide, designed for slow even wear, and it delivers exceptional traction and non-skid protection.

4. Tread materials embody the same tested principles of rubber toughening as distinguish the famed Goodyear All-Weather Tread.

5. Materials, workmanship, and inspection are to the strict Goodyear standard.

6. Available in both High Pressure and Balloon sizes.

Goodyear considers this new Pathfinder an economic triumph, and is proud to mark it with its name and seal.

Try it—and your home-town Goodyear Dealer's service—and see how much farther your tire money goes than ever before!

GOODYEAR

THE GREATEST NAME IN RUBBER

Copyright 1929, by The Goodyear Tire & Rubber Co., Inc.

TIGHT BINDING TEXT CUT OFF

for Economical Transportation

CHEVROLET



Six Cylinder Smoothness

Better than 20 miles to the Gallon!

From the very day of its announcement, The Outstanding Chevrolet of Chevrolet History has met with enthusiastic approval in every section of the country—for it combines, to a greater degree than any other car in the world, beauty—performance—economy—and low price.

Its big six-cylinder valve-in-head motor provides that ample reserve of power so necessary for driving over heavy roads and steep hills. It operates with delightful six-cylinder smoothness and freedom from "lugging"—due to the finer inherent balance of its six-cylinder design. It handles with that effortless ease and safety which can result only from a full ball-bearing steering mechanism and non-locking quiet four-wheel brakes—with separate emergency brakes. Its operating efficiency is so pronounced that it delivers better than 20 miles to the gallon of gasoline! And its marvelous new bodies by Fisher offer outstanding beauty, delightful comfort and rugged hardwood and steel construction—a combination not offered in any other low-priced car.

The Roadster	$525	The Convertible Landau	$725
The Phaeton	$525	Sedan Delivery	$595
The Coupe	$595	Light Delivery Chassis	$400
The Sedan	$675	1½ Ton Chassis	$545
The Sport Cabriolet	$695	1½ Ton Chassis with Cab	$650

The COACH $595

All prices f. o. b. factory, Flint, Michigan

Here, in short, is an automobile whose power, strength, endurance and economy meet every driving requirement—*and whose remarkable six-cylinder smoothness has never before been available in the price range of the four!*

Visit your Chevrolet dealer today and see this remarkable car. Go over it carefully—from the new six-cylinder valve-in-head engine to the marvelous new bodies by Fisher. Every detail will strengthen your conviction that here is the world's greatest value in an automobile today!

CHEVROLET MOTOR CO., DETROIT, MICH.
Division of General Motors Corporation

A SIX IN THE PRICE RANGE OF THE FOUR!

Feet—$11,000 to $75,000 a pair!

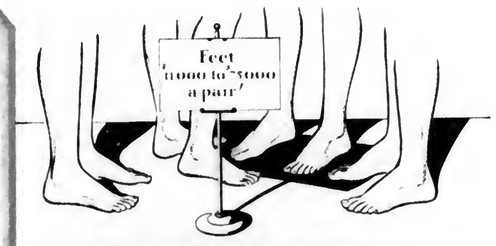
Your feet are more than mere transportation equipment to carry you around your farm. Everybody knows how priceless they are from that standpoint, but their *cash value* is often overlooked.

If you had one of the standard accident insurance policies, you would find that it set a cash value on your feet, ranging from $7,500 to $15,000. And recent court decisions in cases of disabled feet, have awarded up to $75,000 a pair.

That's how important your feet are to experts. And that is why "U. S." Blue Ribbon Boots and Overshoes have been so carefully designed. We appreciate the high cash value of your feet and have built new comfort and longer wear into our entire line.

These wonderful foot protectors are moulded to fit perfectly, so your feet don't feel nearly so tired at the end of the day. "U. S." Blue Ribbon to sweat keeps your feet warm and dry. And the e socks assure you longer wear because they are made of the fine t Blue Ribbon rubber. Careful, skilled workmanship goes into every piece of Blue Ribbon merchandise, and the final step is an amazing series of tests in the Blue Ribbon Testing Laboratories. Be sure to read about these tests. They are far more severe than your every day service requirements.

United States Rubber Company



Blue "U.S." Ribbon



This explains the longer wear

The "U. S." Blue Ribbon Testing Laboratories a machine presses the sole against ... rubbing, utterly ... every inch! Like ... a boot against a ... rubbing, added ... when a wise boot ... to "break in" a ... pair after pair ... pet boots. ... Ribbon Rubbers. ... pet boots. ... No wonder smart ... wear the "U. S." Blue Ribbon Rubbers ... these ... outwear 4 boots out-

The 500-Farmer Test

... Blue Ribbon ... wear must pass ... laboratory tests. On ... 500 ... farmers help us ... Blue Ribbon ...



... the hard grind ... footwear service ... wear cross-mated boots ... "U. S." ... Ribbon Boots ... one foot and a com- ... boot on the other. By watching ... results we make certain that Blue ... Boots "stand up there."

Make this test yourself

... a "U. S." Blue Ribbon Boot. Then ... and watch it snap back! It's as live ... elastic as a rubber band! You can ... a strip cut from the upper more than ... times its own length! Where constant ... flexing cracks inferior footwear, *this rubber stands up!*



"U. S." Footwear for the Whole Family

1 "U. S." Blue Ribbon Boots are heavily reinforced against wear by from 4 to 11 layers of Blue Ribbon rubber. Gray soles and red or black uppers.

2 The "U. S." Blue Ribbon Walrus—all rubber arctic—is the most useful shoe on the farm. Slips right over leather shoes. Kicks off in a jiffy. Washes clean like a boot. Gray soles, red uppers. 4 or 5 buckles.

3 "U. S." Blue Ribbon Giant Bootee. White upper, black extension outsole. 6 or 4 eyelets. Exceptionally well reinforced, shaped to the foot. Other bootees with red or black uppers and red, gray or black soles.

4 Gaytees is the trade marked name of a line of new tailored overshoes made only by the United States Rubber Company. Beautifully designed. New styles, new patterns, new fabrics. Smart as a Paris slipper. Also a complete line of overshoes with Kwik-glide fasteners. Of course, for women's use around the farm, nothing will ever beat the trim "U. S." cloth top, buckle galosh.

5 "U. S." Blue Ribbon boots, in three lengths—knee, medium, hip. Gray soles and red or black uppers.

6 "U. S." Portland galosh—sturdy and good-looking, long wearing gray or red sole, finest quality cashmerette upper. Fleece lining for warmth. 4 and 5 buckles.

7 "U. S." Blue Ribbon Reb Roy—high lace boot. A light weight, gray soled, red or black upper, high lace all rubber boot. Plain vamp, corrugated toe. Made snug at ankle and snow excluding. 2 heights, 10" and 15".

8 "U. S." Rubbers are made in storm, high-cut, footholds—for heavy service or dress.

9 Keds are the most popular canvas rubber-soled shoes in America. They give barefoot freedom — encouraging the feet to healthful exercise—yet afford the protection you want.

Blue "U.S." Ribbon

FREE BOOK! *The Care of Farmers' Feet*

Every farmer who wants comfortable, healthy feet should get this free book. Written by Dr. Joseph Lelyveld, Podiatrist, Executive Director of the National Association for Foot Health of footwear and foot problems as bunions, corns, ingrown nails, chilblains, callouses, fallen arches, how to care for itching feet, and many precautions that lead to health and comfort for your feet.

It also tells how to greatly increase the life of your rubber footwear by following a few simple rules. Write for "The Care of Farmers' Feet." United States Rubber Company, Dept. 103, 1790 Broadway, N. Y.

"U.S." BLUE RIBBON heavy footwear



TIGHT BINDING TEXT CUT OFF

"Cheap" Paint *like cheap seed is* False Economy



IF a smooth-looking "slicker" offered you seed corn or seed oats, or seed wheat *at a ridiculously low price*—

—and told you *it would save you money* and increase your crops—would you believe him? Of course not. You know that the only kind of seed worth planting is *the best seed.*

That same thing is true of paint. "Cheap" paint, selling at a low price per gallon, *seems* to be economical. But it isn't.

It is "cheap" only because it is *made* "cheap." It can't be made of fine materials and sell at a low price. The makers would soon go out of business. And poor materials can't do a good job.

What is Paint Economy?

To be economical a paint must have great covering powers—wonderful durability—and long-lasting colors.

Only superfine materials which are costly—a scientifically "balanced" formula—and skillful manufacturing can produce these three qualities.

Fine old SWP House Paint is made that way. It may cost *slightly* more in the can—*BUT*—it costs less *on the wall.*

For every 11 gallons of "cheap" paint, only 7 gallons of SWP are required. That's a difference of 4 gallons. Figure it up and you'll find that SWP House Paint costs about the same as "cheap" paint *by the job.*

Then consider durability. SWP insures you good service on the wall for many years without repainting. "Cheap" paint soon begins to chip—peel—chalk—fade. Inside of only five years you will pay out two to five times your original cost for *repainting.* Fine old SWP saves that heavy expense for you.



The ballyhoo of the "unknown" canvasser is usually "cheap"

The "Master Touch"

You may hear arguments as to formulas—meant to lead you astray.

But remember this: The SWP balanced formula has been openly printed for years. Yet the characteristic qualities of SWP have never been duplicated.

A good formula is useless without fine materials. Fine materials are useless without a good formula. And even a good formula and fine materials will not produce a paint to equal SWP without the "Master Touch" of Sherwin-Williams scientific experts. All *three* are needed.

When you see a "cheap" paint attempting to copy our formula—remember that "off-grade" materials can be used with any formula. Don't be misled. And remember, too, that the vital element in SWP, the "Master Touch" of great paint scientists who make it, is an ingredient that can never be successfully copied. It is the property of Sherwin-Williams.

Use the best paint and save money

Before you paint your house or buildings again see "Paint Headquarters"—the local Sherwin-Williams dealer. Get his material estimate on SWP. Compare it with what "cheap" paint will cost you.



The amazing "bargain" offer is generally "cheap" paint

What is true of house paint is true of barn paint. What is true of any paint product for exterior or interior use. "Cheap" stuff is always the most expensive.

If you do not know your nearest Sherwin-Williams dealer, write us. We will send his name and a copy of the famous Sherwin-Williams Farm Painting Guide. It will save mistakes in painting

THE SHERWIN-WILLIAMS CO.
Largest Paint and Varnish Makers in the World
Cleveland, Ohio



Trade Mark Registered

S-W Paint Products are sold under this famous trade-mark in every civilized part of the world

SHERWIN-WILLIAMS

PAINTS ENAMELS
VARNISHES INSECTICIDES



What Our Readers Say

n Encounter with a Bull

I WANT to report a tussle with a mean bull which goes to show a bull cannot be trusted regardless of

Ira Fleck, a young farmer of Mifflin county, Pa., was in the act of tying a snarling bull when the little fellow went on him, crowding him in the end of the stable. Mr. Fleck was saved from serious injury by taking the animal by the horns and calling for help. His mother hearing him went to his rescue with a pitchfork and the bull turned and attacked her. She escaped by closing the stable door and calling several neighbors. Mr. Fleck in the meantime climbed to a place of safety where he remained until the neighbors came and subdued the animal. The bull has since gone to the Lands of the butcher.

Reader

Treat 'Em Rough

I SEE by the Pennsylvania Farmer that another man has been hurt by a bull. As I read of such accidents I will tell you of my experience with bulls.

I use a good blacksnake whip, or a hickory withe, on them while young, lay it on them good and hard. They will soon be afraid of you. If one time is not enough repeat the dose.

Some one may say that isn't humane, but I am not buried yet on account of vicious bull. I believe if every man who keeps one which runs out would do it this way there would not be a death where there are twenty-five, and that would amount to something. Old men should keep away from bulls.

Treat the bull rough at all times. Save your life is gone you can't buy it.

I bought a Jersey bull from a neighbor. The man rode a horse to drive him out of the field. When I got him where he showed fight, then I knew how the man used a horse. I put the bull in the cattle barn and got a good stout standard and a four-tine fork to stay and when I quit I could jump over him and he would try to get in the barn. I made him understand I was boss and had no more trouble with him.

Some folks may think this is hot air and foolish but if they treat them this way it may save their life sometime. Why don't folks watch their bulls?

Theodore Smith

Gasoline Tax

I AM somewhat of a newcomer to the state of Pennsylvania and am also a new reader of the Pennsylvania Farmer, but can truthfully say that we enjoy reading your paper very much and believe that much good can be derived by reading each page carefully. Having moved from the state of Ohio in September, 1926, and after securing our first auto license in Pennsylvania for the year 1927 I have good reason to be especially interested in the articles you have printed on the proposed gasoline tax increase and driver's license fee.

It is not my desire to be classed as a knocker but surely Pennsylvania now has gone the limit in every form of tax and undoubtedly will be taken sometime to its fact. To make a long story short, how will the farmers go—are to pay any more? A large percentage are working at a loss now. Of course we realize that the ar-

tists in charge who are making our laws are financially able to meet any increase, but can the farmers?

To illustrate that it now costs 150 to 200 per cent more to drive a car in Pennsylvania than in our neighboring state Ohio, here are correct figures of what it cost myself and wife to drive two cars in 1927, our first year in Pennsylvania:

	Penn'a	Ohio
Reg. fee, each car	$10.00	$20.00 $4.00
New tube	2.00	4.00 .25 .50
Beginner's exam (write)	2.50	
Beginner's exam (road)	2.50	5.00 None
Drivers license 1927		
—self and wife	2.00	2.00 None
Justice fees		1.00 None
Total		$31.00

Plus two trips to Greensburg 14 miles each way and two trips to Apollo 30 miles each way.

No driver's license required in Ohio. In making application for plates for 1927 we also made application for driver's license, for which we received 1926 cards that expired Feb. 28, 1927, and then we were mailed applications for 1927 driver's license at an additional cost of $1 each.

At present it costs $22 to drive these cars. The same cars can be driven in Ohio for $8. I think the driver's fee an injustice to owners of cars. Surely when you buy license for your car you should be entitled to drive it, but it is all right for the driver who does not own a car. The question is, what can we do to prohibit further increase?

L. I. Branthoover

The Tax Question

I WAS much pleased with Mr. R. H. Stuffey's article "Some Acute Angles on the Tax Question." Some of us are obtuse on this subject, it is true. It seems that what the farmer needs in Pennsylvania is not "farm relief" but a "square deal."

Mr. Stuffey's points on taxation are good. Those on the school question especially good. When will school superintendents and school politicians learn that the school system of Pennsylvania is just as strong as the support the people will give it and no stronger. If they really love the school system as they pretend to do, let them beware and take care.

It would seem reasonable that when a village acquired a population of 1,500 or 2,000 in a township it should be required to form a borough and support its own schools, streets, etc. This would fix its taxation on its own property and not saddle a lot of the expense on the township. Then they might elect an assessor who had some idea of how much the place was worth at the time. As it is many such plants are not assessed at one-fourth their value, while the farm is assessed at three-fourths its value and sometimes more than its value.

Let me give an example of relative and actual taxes in real life. I saw this. One township was taxed heavily to build a large schoolhouse in a village in the township. The farmers were selling potatoes in the village at a fair price. The superintendent sent south and bought a carload of potatoes and undersold the farmers, but did not return the excess taxation to the farmers. Why didn't he build his own schoolhouse?

I think Mr. Stuffey and I taught the same school, on different years of course. We know the school situation at the present time.

James L. Jones.
Indiana Co., Pa.





Kill 4 birds with 1 stone - Sunoco Spray

Thousands of orchardists are enjoying perfect control by just one (1) late spraying

Talk about killing two birds with one stone—SUNOCO kills four. A thorough application of SUNOCO at the proper time controls scale, red mite, aphis and apple red bug all at once. Think what that means! The saving of time, the saying of money.

—Read these FACTS about SUNOCO SPRAY

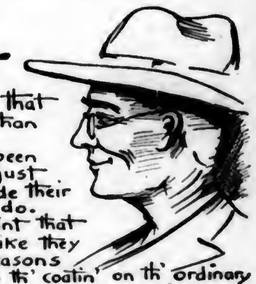
Orchardists throughout all the orchard states have used SUNOCO and have proved the truth of these statements.

1. Economical—because it costs less to buy—because it covers more tree surface—because it eliminates cost of later sprays—because it requires less time and time is money. 2. Ready to use. Mixes readily with water no matter how cold or how hard. Before mixing it will not freeze—can be stored anywhere. Injures neither hands nor clothing—it's like a clean soap. It forms a permanent, non-separating emulsion that is always uniform in quality. A distilled petroleum product. Does not clog spray machinery but instead lubricates it. 3. Kills more scale, aphis, red mite and apple red bug than other preparations and at lower cost. Is not harmful to trees under any conditions.

You owe it to your business to find out all about SUNOCO if you are not already using it. Remember this—that behind SUNOCO stands this company with its Entomological Department headed by Prof. J. G. Sanders, formerly State Entomologist of Wisconsin and Pennsylvania and expert in United States Department of Agriculture. His advice is free to SUNOCO users and orchardists in general. Write today for complete information—USE COUPON.

SUNOCO
SELF EMULSIFYING SPRAY

Send me (FREE) valuable booklet and bulletin
Name
Address
Mail to Dept. PF-4 SUNOCO SPRAY 1801 Packer Bldg. Phila.



NEIGHBOR DAVE SAYS-

"They's some complaint that th' young folks is worse than they was in our day.
They aint no new sins been invented, so I reckon they just don't take th' trouble t' hide their meanness like we used t' do.
An' they's a lot o' complaint that th' fences today don't last like they used to. They's a lot o' reasons why, but th' main reason is th' coatin' on th' ordinary fence. Aint hardly enough t' hide th' wire from th' weather. An' they're made too fast.
LEADCLAD fence has seven times as much coatin' as th' ordinary fence, an' th' coatin' is PURE LEAD.
That's why they last so much longer, an' that's why they save you money. Just drop me a card, an' get the new catalog. Address it to NEIGHBOR DAVE, at th' LEADCLAD WIRE CO., MOUNDSVILLE, W. VA.
P.S.—Write tonight.

Girls! This is HONEY BUNCH



The Lifelike Suck-a-Thumb Doll

GIRLS! Honey Bunch is the Newest, Sweetest, Doll in Aunt Molly's whole doll family. She has soft rubber arms and hands. Just like a baby's. She sleeps and cries and you can put her to sleep sucking Her Thumb. Her head is unbreakable and she is over a foot tall and dressed just like a real baby, with a flannel diaper.

Write Me Today!

Honey Bunch will not cost you a penny—she is given away in return for just a little favor. But HURRY. Be the first girl in your neighborhood to have the lifelike "Suck-a-Thumb Baby." Write this very minute. Just say "Please tell me how I can have Honey Bunch without a cent of cost to me." Be sure and Write Today.

AUNT MOLLY, Dept. 3123, Spencer, Ind.

KINKADE GARDEN TRACTOR and Power Lawnmower
A Practical, Proven Power Cultivator for Gardeners, Suburbanites, Truckers, Florists, Nurserymen, Fruit Growers.
American Farm Machine Co.
1003 3rd Av. S. E., Minneapolis, Minn.
Catalog Free

Lime and Fertilizer Spreader
That will do good work. Made to attach to any farm cart or wagon $15.00
J. S. GREENLEAF, Anson, Maine

TIGHT BINDING TEXT CUT OFF

MASSEY-HARRIS

Manure Spreader



A Practical Spreader

Check the implements you require. Cut out and mail with the coupon. We will send you complete facts.

- ☐ Plows
- ☐ Harrows
- ☐ Planters
- ☐ Rakes
- ☐ Cultivators
- ☐ Drills
- ☐ Mowers
- ☐ Rakes
- ☐ Tedders
- ☐ Hay Loaders
- ☐ Grain and Corn Binders
- ☐ Ensilage Cutters
- ☐ Rotary Hoe
- ☐ Cream Separator
- ☐ Combined Reaper-Threshers.



Wallis "Certified" Tractors—3 plow power, 2 plow weight.

WHEN you buy a Manure Spreader, you want it to spread to suit your needs—

The Massey-Harris Spreader with its double beater, first pulverizes, then spreads, either thick or thin. The spreaders are adjustable to 8-12-16-20 loads per acre. All adjustments are easily and quickly made by the operator.

High drive wheels with traction lugs, large sprockets with heavy duty chain insure light draft.

Automobile Type of Steering Gear—

The frame is never on a twist or bind as the front wheels oscillate freely over rough ground or obstructions in an angle frame.

The sides are heavy, angle steel braced—iron straps around edges to prevent bulging and increasing the draft.

The bottom is independent of the sides. The front is narrower than the rear.

Self-aligning bearings throughout.

High-grade materials. First class workmanship.

The wheels track—narrow tread—wide spread—tight bottom—low down.

Return the coupon for complete facts today.

THE MASSEY-HARRIS CO.

THE MASSEY-HARRIS CO.,
Dept. PF-63 Racine, Wis.
Gentlemen: Please send me complete information about the Massey-Harris Manure Spreader.
Name.....
Address.....



The practical sheep management of a third generation farmer on this ... based on father's and on grandfather's substantial experiences—... open air, abundant exercise.

Farm Practice

By W. D. ZINN

Limestone and Other Questions

I have some sweet clover seed I saved last summer. It is unhulled. Can I inoculate it? I want to sow some this spring.

I got a lime pulverizer last fall and hauled my wheat ground. I am thinking of putting two tons on ten acres of field this spring and the same in the fall for wheat or rye. Will that be all right?

Will it pay to lime corn land? I have the stone right in the field I am going to plow for corn.

Which do you think will be more profitable for feed in southern Greene county, oats or barley? I have never grown barley. I hesitate to write you knowing you are very busy, but I want to thank you for the information you have so kindly given me. B. E. Owen.

BY USING the muddy water treatment I think you can inoculate that sweet clover, but it should be sown and I would put it on thick, for it may not germinate very well since it has not been scarified.

It is a question whether you should apply two tons of lime per acre on your oats and then repeat it for wheat. I found a farmer in Pendleton county, W. Va., last fall who was about to apply three tons of lime on a piece of ground that he was going to seed to alfalfa. The lime would have cost him $21 per acre. I persuaded him to get his county agent to test his soil and when he did the agent told him that he had a neutral soil and that lime would do him no good.

Your county agent is "Dad" Engle and there is no better one in the U. S. He is not only capable but like most county agents wants to help farmers.

Yes, lime will help corn. The Ohio Experiment Station increased the yield of corn by 13 bushels per acre by applying two tons ground limestone per acre. It increased the yield of oats, wheat and timothy hay also.

I have never grown any barley, but Ohio farmers in the northern part of the state tell me that barley is more profitable than oats. The variety is a popular one with them. Sow one and one-half bushels per acre about the time you sow the oats.

Do not hesitate to ask me questions. If you are a subscriber of the Pennsylvania Farmer a part of my time belongs to you. Besides I get more pleasure out of helping you than you get profit from my advice and therefore I am the one to apologize.

• • •

More Sweet Clover

Have bought a small farm adjoining Ripley, W. Va., hill land and there is about 15 acres of rolling ridge land in it which was grown up in brush. Has been farmed and treated badly. I want to get it into meadow. Seven acres of this land I plowed and sowed to soy beans last spring, applied a little over two tons of lime to the acre last fall and sowed to rye intended ... to plow the rye down this ... and sow to cowpeas to cut for ... then sow to meadow this fall. ... put 250 pounds of superphos... seeding to rye. This land is thin ... rye looks well. Please inform ... this is the best way to ... land for meadow. J. F.

AT ONE time we had a ... our country who always ... ed a dose of Epsom salts ... what the sickness was. If ... came to him with the tools ... told him to go home and ... Epsom salts. Some of my ... conclude that I am very ... this doctor.

I am free to confess that ... Dobbies as sweet clover and ... I have talked with farmers in ... Ohio the harder I ride my ... would sow 15 pounds of ... in this rye and harrow it in. ... not have a disk seeder or ... Cut the rye for hay just as ... ing into head or a little ... should be able, in your section, ... a good crop of sweet clover ... season.

There are two courses you ... pursue. One is to turn this ... down about the first of next ... plant to corn or let it grow ... first buds appear for the ... cut it for hay. It will be a ... but stock will eat it well. ... the hay is removed from this ... row the ground well and seed ... grasses you want for meadow ... sow eight pounds of red ... quarts of timothy and three ... alfalfa. You may have land ... will grow good alfalfa and ... try it out.

• • •

The Carbide W...

I am using a carbide light ... want to know if the used carbide ... is taken out in white paste form ... be good to paint trees or ... ings. Z. B. ...

FOR years we have been ... the waste from the ... to the land and it takes the ... lime. Have never used it for ... washing. I doubt whether ... ing would be as white as it ... if the government whitewash ... used. It might be all right for ... the trees, but I would try it on ... tree that I did not especially ... first and see how it works.

To Break a Colt

A GOOD way to break a colt ... begin by putting the halter ... the colt and turning it loose. ... becomes accustomed to the ... on the bridle and turn it loose. ... next step is to put on full harness ... allow the colt to walk around ... in the barnlot for a while. ... lead strap or hitch rein ... lowed to dangle to the ground ... halter or bridle while on ... head.



FARQUHAR
Steam Power

For the jobs where dependable power is required you can depend upon steam to furnish abundant power under all conditions. Does the work of an internal combustion engine of three times rated horse power. The Farquhar is the simplest and most dependable farm engine that has been built since 1856.

Farquhar Boilers are built in different types and sizes best for almost every use—including Portable, Semi-Portable, Scotch, Marine, Fire, Hot Horizontal, Return Tube, Vertical and Special Units for Dairy, Creameries and Milk Plants.

Write for detailed description of Farquhar dependable steam engines and boilers.

A. B. FARQUHAR CO., Limited
Box 446, YORK, PA.

Dempwolf's
Fertilizers
4 - 16 - 10
High Analysis Fertilizer
2 - 8 - 5
SAVE
Half the Freight
Half the Hauling
Half the Storage Space
Half the Labor Handling
No business farmer can afford to overlook these savings
York Chemical Works
York, Pa.
TODAY WRITE US

WORLD'S GREATEST SALVE MADE FROM SHEEP'S WOOL

Phillips' CORONA Wool Fat Ointment Discovered by Ohio Man Has 100 Uses

A new wonder ointment with amazing healing properties is the discovery of Mr. C. G. Phillips of Ohio. Compounded from the oil secretions extracted from the wool of sheep, it gives quick and positive relief from Cuts—Sores—Burns—Scalds—Chaps—Corns, or any flesh wound on man or beast. Even stubborn cases of Eczema—Chapped Hands yield to its soothing and healing powers. For live stock troubles such as Barb Wire Cuts—Sore Shoulders—Collar Boils—Grease Heel—Caked Udders, or any wound, it has no equal.

Mr. Phillips wants every household to try his wonderful healing ointment. He will send a liberal FREE TRIAL package to anyone answering this ad.

GIVEN—GILLETTE Safety Razor



In an extra special offer we will also give every user answering this ad a genuine Gillette Safety Razor which will send FREE, postage paid, with a special Free Sample and Gillette Razor will be sent at once.

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The MARKET PLACE

By W. R. WHITACRE

I HAVE been watching the apple market with considerable interest during the past five years. From my observations it seems to me that some varieties are losing their popularity while others are coming into greater demand. I do not know how widely these tendencies extend but they are apparent in Philadelphia.

The York Imperial an old standby for many years is losing favor. I do not know just why this should be except that with better storage facilities some of the better quality apples are available over a longer period of time and the consumer appears to prefer them to the York.

The Baldwin is not as popular as it used to be. This may be on account of the Baldwin spot that is so common after it has been stored for a while. Personally I am very fond of the Baldwin but I have seen very few offered on this market during the past season. I am sure that this condition does not exist now with the Baldwin everywhere since it is a best seller in a number of markets.

Good Sellers

The Stayman and the old fashioned Winesap are two of the best sellers in Philadelphia. They are attractive keepers well in storage and what is most important eat well. The Rhode Island Greening commanded top quotations for a while especially when there were only a comparatively few on the market but this past season they do not seem to be so much in favor. Taken generally people want a red apple and the Grimes is apparently the only late variety that has been able to overcome this preference.

The Ben Davis and Gano are staging a comeback. I believe they are somewhat like the old Ford car that was joked about so much that it really amounted to free advertising. However, the demand for them is mostly from our foreign markets and a number of growers have told me that they are year in and year out one of their most profitable varieties. I do not believe that they will become popular in this country for with so many really good varieties from which to choose people are unlikely to become attached to the Ben.

The Ben's Good Points

The Ben Davis is a good yielder and is not subject to off years such as most other varieties. It is one of the most attractive apples grown and it is the best keeping apple known. It would be a wonderful thing for apple growers if some one were able to develop a variety of apples with the good points of the Ben and with the flavor of one of the better varieties.

I can remember when the early plantings of Delicious were first made in New Jersey, in fact, I helped plant about ten acres. This is today one of the most popular varieties on the Philadelphia market and when well colored brings top prices. The Delicious is fortunate to have been named the Delicious as I believe its name helps sell it. It is an easy name to remember, an easy variety to distinguish and it lives up to its name.

I have seen some beautiful Golden Delicious and some very common ones. Some unusually high prices were received for some of the early shipments, but I do not believe it will prove as ... of the country. It is too soon to draw any definite conclusions, as it has not received a fair test.

The Paragon and the Rome are two other varieties which sell well, but they do not average as high as the Stayman or the Winesap. I believe that preferences for the various varieties of apples will become more pronounced as time goes on. The city housewife is beginning to ask for the variety of apple that she desires and not just for "eating apples" or "cooking apples."



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TIGHT BINDING TEXT CUT OFF

THE YOUNG PEOPLE



Left to Right: Charles, Jean, Grace and Betty Nolt of Columbia, Lancaster county, Pennsylvania. Their father is one of the Master Farmers of 1928.

Some Insect Secrets

IF some great catastrophe happened that all the insects of the world ceased to exist, we are told that but few plant seeds would be fertilized, and so would be unable to grow. As a result, our beautiful, flowery earth would become a desert in about three years.

Insects seem to have three reasons for the various sounds that they make. One is to frighten their enemies and most of these noises are of a clicking order. Then the hum and buzz of the flies and bees is made as the insects fly. Some sounds are true love songs and are intended to attract the lady's attention and charm her ear.

Grasshoppers of different kinds each have their own way of making noises; some rub the last pair of legs together, holding the feet well off the ground; others rub legs and wing cases together.

When our little friend the black cricket gives us his cheerful chirp, which is usually a love song, it is caused by the roughened edges on his wing cases being raised and brought together, producing the song.

The firefly can turn his light on and off as he pleases and it is not given him just for exhibition purposes. It is his greatest protection against hungry birds. Some folks have thought that the glow of the firefly's light was to attract his mate but that is hardly likely for the rest of the bug creation can find their mates without any such signal. I think the best theory is that he has his light to warn birds and other insect eaters that the firefly is not fit to eat.

The Upside Down Fly

The explanation of how the fly can walk upside-down on a smooth ceiling has not been satisfactorily made as yet. The accepted theory however is the sticky fluid one. The United States Bureau of Entomology says: "The foot of the housefly bears two curved lateral claws and between them a pair of membranous pads. These pads are covered below with innumerable closely set hairs which secrete a small amount of fiscid liquor. This is what enables them to walk upside down on the ceilings."

The Seamstress Ants

In the East, surgeons find the services of a certain ant of inestimable value. As soon as an operation is completed, and it is desired to close the incision, the services of the ants are requisitioned. Their part in the operation is the stitching of the wound caused by the knife. With the aid of a delicate pair of pincers, the surgeon seizes an ant by the neck. The operator closes the incision with the fingers of his left hand. The ant is then brought into contact with the wound.

In his eagerness to escape from the pincers the pugnacious creature closes its jaws, biting through the skin and joining the two edges together. Its mission on earth is now over. For its services the creature is rewarded with decapitation, the head and pincer-like jaws being left firmly clasped over the incision. This procedure is repeated with other ants until the whole length of the wound is completely closed.

The Tarantula Hawk

These are a large species of wasp and are deadly enemies of the huge tarantulas that were so plentiful in the early California days. They were bluish black in color, some having bright red wings, while others had wings of the same color as the body. When the hawk espied a great black tarantula striding across some mesa as if he was monarch of all he surveyed—while all the juicy bugs trembled with fear lest they be devoured then and there—she at once pounced down on the insect monster, drove her sharp stung into his body, then deposited her eggs and left them to hatch and feed upon the still living but helpless body of the tarantula.

Three Things

Three things to govern—Temper, tongue and conduct.

Three things to cultivate—Courage, affection and gentleness.

Three things to commend—Thrift, industry and promptness.

Three things to despise—Cruelty, arrogance and ingratitude.

Three things to wish for—Health, friends and contentment.

Three things to admit—Dignity, gracefulness and intellectual power.

Three things to give—Alms to the needy, comfort to the sad, and appreciation to the worthy.—Onward.

A Long-Short Story

A tall western girl, named Short, long loved a certain big Mr. Little, while Little, little thinking of Short, loved a lass named Long. To make a long story short, Little proposed to Long, and Short longed to be even with Little's shortcomings. So Short, meeting Long, threatened to marry Little before long, which caused Little, in a short time, to marry Long! Query: Did tall Short love big Little less because Little loved Long?

House Manager—"Here it is Monday. Tomorrow will be Tuesday, and the next day Wednesday. The whole week half gone and nothing done yet."

Prizes and New Contests

Next week the prize winners of our first two contests will be announced, and the cartoon and letter winning first prize will be published.

There will be three more prizes for the best cartoons, drawn by farm boys and girls, which reach this office before March 23rd, but the subject this time will be "USE YOUR HEAD". Drawings should be made on white, unruled paper, using black or India ink.

Now that the warmer days are here, some morning a robin or bluebird will waken us with his song. "What I Find Outdoors" will be the subject for the best letter of the week. Keep within the 200-word limit. If you think a photograph will make the story more interesting, send it along, although we cannot promise to return it. Three prizes will also be given for the best letters and honorable mention to the next best.

All letters and cartoons must reach us by March 23rd, and should be mailed to Young People's Page, Pennsylvania Farmer, 7301 Penn Avenue, Pittsburgh, Pa.

Little Folks Corner

This Week's Prize Contest

OUR new puzzle is quite easy and very interesting because it is about you—and me. Two prizes will be given again this week for the correct answers and neatest paper. Send your letter with your name, address and age, to Little Folks' Corner, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Here is the puzzle. I am a singular piece of mechanism as every one admits:—

1—I have a carpenter's toolbox.
2—Two lids.
3—Two musical instruments.
4—Ten articles used by a carpenter.
5—Two lofty trees.
6—Two good fish.
7—A number of shell fish.
8—A fine stag.
9—A number of small animals swift and shy.
10—Two playful animals.
11—A number of weathercocks.
12—Two implements of war.
13—Whips without handles.
14—The sides of a vote.
15—Fine flowers.
16—A fruit.
17—A desert place.

The "Winter Ailments" will be given next week with the prize winners.

A Narrow Escape

DAN was a beautiful yellow and white collie. He was seven years old and the trusted friend of the whole family. The two children were his especial playmates.

Bob was thirteen. He played ball and it was Dan's joy to run after the ball and running back with it, drop it at Bob's feet. Or Bob would throw a stick or an apple. Always Dan went after it and brought it back. And if Bob, who was always a great tease, threw the stick into the water or the apple into a clump of burdock that was full of ripe burs, he usually [illegible] back, for Dan would retrieve from the water and never give himself a great shake was near Bob, so he got wet if he got full of burdock burs, frisk around Bob's legs until some of the sticky things on ings.

Virginia was ten. She hair and red cheeks. Her black too and always dancing her job and her joy to feed

She didn't like crusts too she made the excuse of for Dan. The fat on her was another thing she was give him. But she peeled toes so there would be



Dan

Dan, and she didn't like to pet tatoes very well either. She hulls out of the cows' oats and make mush for him. She brought from school any scraps that other dren had tossed out of their pails.

When she had a special tidbit made Dan "speak" for it. This by giving an eager little bark would swallow it in just a mouth wag his tail and fairly ask for She received many a "kiss" from moist nose if she did not grant face. She often reproved him for lack of manners.

(To be continued.)

Making a Code Difficult to Re

Here are many ways of making secret code. One of these consists using the twenty-six letters of alphabet in a different way so instead of taking them in the manner you use them three, in number of places, farther down. C would become A; D becomes B is C and so on, when three is number decided upon. Or there secret code, known as the where you decide on a number sent A and then B becomes the ber plus one, C the number plus and so on all through the Thus if you fixed on 2 to represent would be 3; D, 4; and E, 5.

A very clever way of making cipher much more difficult to anyone who does not have a to arrange a number of dummy which do not mean anything. You should have rather a large ber of these, a dozen or even so that you do not have to too often. One of these might into the middle of each word you might form a dummy four or five of them. The whom you are sending the sage has a list of these dummy hand and, when he is deciphering message, and comes to one of them, he knows that he pass over them just as if they there at all. By the skillful these dummy signs, especially inquisitive person who is read does not know of their you can make it so that the is extremely difficult to read.

S. Leonard

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1. Miss Marvel Crosson, who piloted her Travel plane to a point more than 20,000 feet above earth at Los Angeles. Whether Miss Crosson reached the existing mark of 20,700 feet held by Louise McPhetridge of Oakland, Cal., will be determined when an official reading of her altimeter made. The instrument, which is graduated to 30,000 feet, showed that she had passed that height.

2. Vibrations of the human voice, pulsations of the heart, acoustical defects in buildings, and flaws in metal may now be detected and photographed on motion picture film by means of the "oscicographoscope", devised and developed by Lieut. E. H. Robinson and Campbell McCullough. Tone vibrations are transmitted to a revolving mirror with the aid of a fine wire and are recorded on motion picture films. In recording the pulsations of the heart or the tones, each vibration makes a mark on the film, the result being a succession of zig-zag lines which are easily analyzed by the scientist.

Photo shows Campbell McCullough with the oscicographoscope in the Western Aconstical Laboratories at Los Angeles, California.

3. An interesting view of the Pacoima Dam at San Fernando, California, which has just been completed at a cost of $2,500,000, and took four years to construct. It was built by Los Angeles county as part of its water conservation program and drains 25 square miles in the Sierra Madre Mountains. It is 600 feet long at the top and 100 feet thick at the bottom. It has a maximum stress of 600 pounds to the square inch.

4. Fort Myers, Florida.—Photo shows the notable group gathered to honor the great inventor, Thomas A. Edison on his 82nd birthday. Left to right: President-elect Hoover, Henry Ford, Thomas Edison and Harvey Firestone, the rubber magnate. Edison, Ford and Firestone are lifelong friends.

5. What an enterprising burglar could do with this outfit! A giant pair of shears which will bite its way through an iron bar an inch thick in a twinkling of the eye. But these formidable tools are in safe hands, being part of the equipment of the Rescue Squad of the Washington Fire Department, who use them to sever bolts and bars when every second counts in reaching persons trapped in burning structures.

6. The oft-rumored engagement of Col. Charles Lindbergh and Miss Anne S. Morrow, daughter of the Ambassador to Mexico and Mrs. Dwight W. Morrow, was confirmed by the young lady's father recently. A family group of Miss Morrow with her sisters and brother, left to right: Misses Elizabeth, Anne, Master Dwight W. Morrow, Jr., and Constance.

TIGHT BINDING TEXT CUT OFF

"THEN either David Brown lies, or else you lie, or else I'm the biggest fool in Meredith County!"

Still Gabriel was not in the least disconcerted. "Yes," he went on, "jes' so. David was tellin' me the right o' way agent told him that you'd sold the right to build a railroad through your property to the Delaware Valley & Eastern Comp'ny for a hundred an' sixty dollars. Says you might jest as well have got a thousan' if you'd stuck fer it."

"It's none of David Brown's business what I got for the right o' way, nor yours, either."

"No; that's right. But David, he says that ain't the wust of it. He says you've sold 'em the right to build the railroad where they run the line; straight plunk through the graveyard. An' David says he don't believe you sensed it when you done it."

This was the last straw. If Abner Pickett was angry before, he was furious now. He rose from his chair and straightened himself to his full height while the hot blood reddened his neck and face, as it always did in his moments of passion. It was bad enough to have committed the unpardonable error of signing away his dearest rights in ignorance or through deception, but that his neighbors should comment on his unspeakable folly was more than he could bear.

"Tell David Brown," he shouted, "to mind his own business!" After a moment he continued, "And you can take your ram's horn and go up and down the road tomorrow mornin' proclaimin' that Abner Pickett has been suddenly bereft of all the common sense he ever had, and invitin' the public to come down here and gaze upon a full-fledged fool—and that's me, if there's any truth in your lyin' an' ridiculous story! Who saw these men that made the night survey, anyhow? Who knows that somebody didn't dream it? What proof is there? What proof, I say?"

"I saw them, grandpap."

In his deep distress and anxiety, the words escaped from Dannie's lips involuntarily.

WHEN Dannie made the unexpected declaration that he had seen the men making the night survey he turned the torrent of his grandfather's wrath momentarily, but did not stay it.

Abner Pickett faced the boy furiously.

"You! You! And where did you see 'em, I'd like to know?" he cried.

"Why—why, I saw a company of engineers go up the road the morning we went down to look at the stakes."

"Humph! So did I. Delaware Valley & Eastern engineers. Begun where they left off the night before. That's as much as you know about it. Look here, Gabriel! I don't believe a word of your yarn; and if any engineer went over that route in the night and says he didn't see the stakes set in the afternoon, he lies!"

"O grandpap! No—no; he wouldn't lie! He couldn't lie! He didn't lie! I know he didn't!"

"I say he does lie, or else he sent a man on ahead to pull the stakes out before he set his own! Like as not he's the biggest rascal the railroad company could hire!"

"O grandpap! Oh no, no!"

Every bitter, biting word flung from the old man's lips cut Dannie to the heart. It was almost as if his own father were being insulted and assailed.

"You don't know him!" the boy exclaimed. "You didn't see him. He's a gentleman. He wouldn't do a mean thing to save his life! Why, grandpap, he's the one who was big-hearted enough to run around your graveyard!"

"Sure! Sure! I forgot that. You're right, Dannie. He's a gentleman." With the remembrance of that gracious act the old man's anger suddenly cooled.

In the momentary silence that followed Gabriel found another opportunity to take up the broken thread of his disclosure.

"Yes," he went on as unconcernedly as if the subject had proved to be the most commonplace in the world to both his listeners, "as ol' Isra'l Pidgin used to say, 'Possession is ten p'ints o' the law when it's a railroad that's got it.' An' them Delaware Valley & Eastern fellers ain't goin' to let tother comp'ny get the start of 'em on any one o' them ten p'ints."

"What do you mean by that, Gabriel?" The old man was getting excited again.

"Why, David Brown says they're comin' on next Monday mornin' to begin buildin' their railroad. Today's Saturday. He says the fust thing they're goin' to do is to cut a grade through the graveyard, and make sure o' that before you back out, or before you law 'em out. David says it'll go about three foot deep through the knoll in the middle, an' make a bank about three foot high toward the wall on the east. David says fifty foot wide'll take in the moniment an' half a dozen more graves and gravestuns, an' likely they'll rip 'em all out o' the way before they've been to work there two hours."

Gabriel had saved his heavy gun till the last, and now that he had fired it successfully he leaned forward in his chair, placed his chin on his hands, and gazed into the wasting fire with a calmness born of joyful expectancy. But there was no response to his statement.

Pickett's Gap

By HOMER GREENE

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Originally Published in The Youth's Companion

Dannie and his grandfather, Abner, are the only Picketts remaining on the old homestead. Dannie's father, Charlie, has quarreled with Abner and has not been seen for years. His mother lies in the Pickett graveyard at the mouth of the Gap, with all those others dear to old Abner. The Delaware Valley and Eastern Railroad engineers have surveyed and placed stakes for the new road through the Gap and the graveyard during Abner's absence. He declares no better deed could be done than to pull their stakes from the ground and fling them in the brook. Dannie takes him at his word and removes the stakes that night. On his way back to the house he is overtaken by engineers of another road and detained by them while another survey is made. They believe they are first in the Gap and the transitman, to whom Dannie is attracted, places his stakes around the graveyard. The boy begins to feel remorseful and afraid of the consequences of the night's work when old Abner signs an agreement with the Delaware Valley and Eastern giving them the right of way, in the belief that the road will not touch his graves. Gabriel is informing him differently.

Dannie was gazing in silent and dreadful apprehension at his grandfather, yet the anticipated outburst of passion from the old man's lips did not come. Instead, he walked slowly out into the kitchen, and reaching up to the west wall above the mantel, took down from its hooks the old but trustworthy double-barreled shotgun, and examined lock, trigger, breech and muzzle as carefully as if he were about to defend his life.

MONDAY was the first day of October—a day in which to live out-of-doors and be thankful for life. The rain had washed the air and left it clear and invigorating; the autumn foliage was in the height of its beauty. But for Dannie there was no pleasure. He was too deeply absorbed in considering the situation which his rash folly had brought about.

If he had not removed that line of stakes the second survey would not have been made; his grandfather would not have been deceived into selling for a song property rights worth many hundreds of dollars; the rival railroad companies would not have begun the battle for the gap, and finally, the county jail would not have been staring him in the face, as it had been doing for the last four days and nights. For, as he appreciated more and more the far-reaching and disastrous consequences of his unpardonable act, he realized how serious his offense had been.

He spent his days in misery and his nights in dread, starting at every footfall, losing his breath at every sudden sound, awaiting with awful expectancy the next development in the situation which had become, for him, a tragedy.

It was with welcome ears, therefore, that he heard his grandfather say he need not go to school that Monday morning. He felt that he would be stifled in the schoolroom, that he must be in the open air, and on the ground ready for any emergency.

After breakfast the old man strapped on his powder-horn and pouch, took down his gun, loaded it, and invited Dannie to accompany him. Aunt Martha watched them from the kitchen window as they went down the path, her eyes filled with tears and her breast with dreadful apprehension. But she knew that it was of no use to try to turn Abner Pickett from a purpose once formed.

As Dannie and his grandfather walked down the road they came upon Gabriel, who stood watching the engineers at their work—the same engineers who had made the survey that fateful afternoon. They had relocated their line and replaced their stakes through the gap and across the graveyard, and were now working between the road and the brook. Abner Pickett paid little heed to them as he passed by.

"Come along!" he said to Gabriel, and walked on down the road.

When they reached the entrance to the yard they opened the gate and went in. A stake had been planted on the knoll in the spot from which Dannie had removed one on the eventful night. It caught Abner Pickett's glance. He strode to it, tore it from its fastening in the soil, and with a mighty sweep of his arm sent it whirling into the brook.

Dannie looked on in wide-eyed amazement. He said not a word. While all three knew the object of the visit to the graveyard was to stop the entry into the lot of the workmen who they expected that morning to begin the grading of the railroad, not one of them mentioned it. Abner Pickett was not in a mood to talk, and the others were not.

Even as they stood there the contractor, the foreman and his gang of laborers came up from the glen in wagons, with their carts, tools and appliances for grading. Between the road and the gap and the east wall of the graveyard they halted and began to unload their implements. The contractor and the foreman made a hasty examination of the stakes that had already been set for grade.

Abner Pickett walked deliberately to the wall and seated himself on it, his gun resting across his knees. Dannie and Gabriel followed and took similar positions at his side.

"We'll have to begin in the graveyard," said McDonough, the contractor, "and cut down the hill and carry it east here for this fill."

"THEN the first thing to do," replied the old man, "is to tear away that wall about those fellows are sitting on it."

"Exactly. There's where the line is. Before men up and let 'em go at it. Come, gentlemen, have to vacate your seats up there; we want stones you are sitting on."

"I'm quite comfortable here," replied the old "Besides, these stones belong to me, and the graveyard and the graves, and I don't you shall touch any of 'em."

McDonough looked up at him in surprise. "Are you Abner Pickett?" he asked.

"That's my name."

"I don't understand what you mean by duct, Mr. Pickett. I have your agreement here, conveying a right of way to this was duly signed, sealed and delivered. I that you have any right whatever to us now."

"There are several things about this I reckon you don't know," replied the old instance, you don't know that that agr got from me by deception and fraud, and the paper it's written on. I repeat that I hold possession of this lot."

McDonough continued to protest. "I any misunderstanding between you and pany, Mr. Pickett. If they've done you they're good for it. I've taken this section and I've got to begin there in that gra you might as well clear the way for us. to proceed."

"And I intend you sha'n't!" The old hand significantly on the barrel of his spoke.

"Do you mean to say you would shoot?"

"Aye, and kill to save this holy place eration."

"Don't you know I could have you threats? Don't you know what the murder?"

"Keep your distance and there'll be Come ten foot closer, and there'll be just as sure as the sun shines above you!"

The red flush had mounted again Pickett's face and neck. He raised his knees and held it threateningly in his hands frightened at the tragic outlook, moved grandfather.

The contractor was not easily cowed. perience in railroad-building had been to to permit him to yield readily to an obstacle kind. He turned aside to consult with his Nicholson, the engineer, observing the from a distance, hurried back with his laborers had already congregated about player.

Abner Pickett, with grim determination face, still sat holding his gun in readiness Gabriel, standing near by, gripped two tightly in his hands.

The consultation between Nicholson and ough was short but animated, and the reached was evidently concurred in by and his men.

McDonough advanced a step and said, "Pickett, we intend to enforce our right to take sion of that lot and begin our work. If you with us you will be responsible for the sequences."

Abner Pickett made no reply. After ly for an answer, the opposing forces consultation to decide upon the best

Then they divided into three groups led by Nicholson, McDonough and the foreman. It was evident that they intended to storm the graveyard from three sides.

But before they could move to their respective stations a buggy containing two men dashed down the road and drew up at the corner of the graveyard. One of the men leaped from the carriage and approached McDonough.

"Are you the contractor in charge of the grading of this section of the Delaware Valley & Eastern Railroad?" he inquired.

"That is what I am here for," responded McDonough, "though I don't seem to be getting to work very fast."

The man turned to Nicholson. "Are you the engineer in charge of the fixing of permanent location and grades?"

"That's about it," replied Nicholson.

"Then, gentlemen, permit me to introduce myself as the sheriff of Meredith county, and to serve on each of you this writ."

He handed to each of them a document bearing the seal of an official seal.

"It is a writ of injunction," he continued, "from the court of Meredith county, issued at the instance of the Tidewater & Western Railroad Company, commanding and enjoining the Delaware Valley & Eastern Railroad Company, its agents, employees, contractors and engineers, and all and every one of them that you do from henceforth altogether absolutely desist from locating, staking out, grading or building a line of railroad through Pickett's Gap in said county, or along or upon the approaches thereto, which gap and approaches have been duly appropriated, condemned and acquired for railroad purposes by the said The Tidewater & Western Railroad Company."

The sheriff rolled out the words of the injunction with solemn and impressive voice and manner; then he folded his own copy of the writ and returned it to his pocket.

"I believe I have performed my duty, gentlemen," he said, politely, "and I wish you both a very good day."

Then he went up to where Abner Pickett was still seated on the wall and shook the old man's hand with hearty vigor. He had taken in the situation at a glance.

"Don't blame you one bit, Mr. Pickett," he said. "I'd have done the same thing in your place."

"Thank you," responded the old man, quietly. "I'm simply doing my duty by the dead."

When the writs of injunction were handed to McDonough and Nicholson they stared at each other blankly for a moment; then the contractor remarked quietly that it looked as if the game were up.

"I'm through so long as the writ is in force," he said. "I undertook to disdrive one outer up on the Susquehanna road, and it cost me fifteen hundred dollars before I got through with the job. We learn by experience."

Nicholson was thoroughly annoyed. He did not understand why the service of a paper like that on a contractor and engineer, should have the effect of blocking a railroad, and he said so in no very polite language. McDonough smiled and began to give orders to his men about hoarding up the tools again.

"I don't propose to get into a controversy with the court," he remarked. "We might as well take our things back to the river. Judging from past experience, we shan't be able to resume work here before snow flies, anyway."

He started back toward the mouth of the gap. Nicholson was still standing where the sheriff had found him, studying the contents of the writ. After a minute or two he folded the paper savagely, thrust it into his pocket, and started back up the road.

When Gabriel, who had stood to fifteen minutes in complete readiness to do his employer's will, saw the retreat, he could not repress some outward display of his inward exultation, whereupon he drew his faithful horn from his pocket and blew on it a blast that sent the echoes tumbling through the glen.

"Put up that fool's plaything!" commanded the old man.

Ten minutes later Dannie and his grandfather walked up the road with far lighter hearts than they brought down. The graveyard had been saved from desecration, at least for the present, and Abner Pickett felt confident that through the medium of the law he could defeat any future plans of aggression by the railroad companies.

But after the stirring events of the first day of October there was no attempt on the part of either company to begin the construction of a railroad or to take possession of any property along the line of survey. All parties were quietly awaiting the determination of the eighty suit begun by the injunction proceedings, and that suit could not come on for trial before the December term of court.

For Dannie, however, the situation remained practically as complicated and as harassing as ever. The main issue was yet to be determined. His responsibility for the whole dreadful state of things and his daily liability to be called to account rested, an ever-increasing burden, on his mind.

Many a night he awoke from some dreadful dream of incarceration in the county jail, or, still worse, of hero denunciation from his grandfather, or, bitterest of all, of sorrowing reproof from the engineer who had been his companion on the night walk up the glen. Many a night, in his wakeful hours, he determined that when morning broke he would go to his grandfather, to Aunt Martha, to the engineer, to somebody, and make a clean breast of the whole wretched business.

But when day dawned and people were about their usual occasions, and things wore such a different complexion, his resolution always failed him, and the secret remained still in his breast. He found, too, good excuses for keeping it.

If his conduct should become known, then there would be no further question about the prior right of the Delaware Valley & Eastern Company to the location through the gap. Nicholson would be triumphant. His friend, the engineer of the night survey, would be made the subject of jest and ridicule. His grandfather would most likely be held to his agreement to sell a right of way through the graveyard, and sooner or later the soil of that sacred place would be torn with the plows and picks and spades of infeeling workmen.

Then to meet the looks and words of those who had known and loved him—grandpap, Aunt Martha, the engineer, Gabriel, even Max, the dog! That would be terrible! And always, as he pondered, there was before him, sharply or dimly, a vision of the gray and forbidding front of the county jail with its stone-paved corridor and its iron-barred cells.

Yet his conscience urged him always to confess. There was one phase of the situation, indeed, against which his conscience constantly rebelled. The Delaware Valley & Eastern people were not now claiming the last line of stakes through the gap as their own. But they were alleging, by inference if not directly, that the stakes set by Nicholson were removed in the night by the engineer of the Tidewater & Western before he replaced them with his own.

To meet this charge, there was only the declaration of the members of the corps that made the night survey that there were no stakes in the gap when they went through. And against that contention was the impossibility of explaining in any other way how the evidences of Nicholson's work could have so completely vanished between six o'clock and midnight of the same evening.

It cut Dannie to the heart to hear this charge made and reiterated against the man who, in the short space of an hour, in the gray of one morning, had taken so powerful a hold upon his boyish admiration and affection. Try as he would, he could not rid himself of the vision of those clear blue eyes looking him through in sorrowful reproof. And yet—and yet he could not bring himself to an acknowledgement of his fault. Oh, those were wretched, dreadful autumn days!

The trial of the county suit was set down for the second Monday of December, and many witnesses had been subpoenaed from the vicinity of Pickett's Gap. Early on Monday morning they had started in two wagons for Mooreville, the county seat. Among them were Abner Pickett and Gabriel.

Dannie had not been subpoenaed. He smiled grimly as he saw the others depart, and thought how much more he could do toward clearing up the situation than all those who had been called.

It was a lonely day for him after they were gone, a dull, cold day, with occasional flakes of snow in the air; and he was glad when night came, and the chores were all done and the supper ended. He and Aunt Martha watched the blaze of logs in the sitting-room fireplace for the usual half-hour before going to bed.

It was a quiet half-hour, for neither of them seemed in the mood for conversation; and yet Dannie's mind was in a tumult.

The departure of the witnesses, the nearness of the trial, the impossibility of his knowing what would occur at Mooreville, the increasing dread that for lack of testimony which he alone could give some terrible injustice would be done—these things weighing on his mind with accumulating power, forced him into a state of nervous apprehension and distress more painful than any physical hurt from which he had ever suffered.

AUNT Martha saw that he was laboring under intense excitement, or was stirred by some deep emotion. She knew that it was not wise to question him, but gently and soothingly she placed her hand on his forehead and began to smooth back his hair. She felt that the crisis which had been impending for many weeks had at last been reached.

And it had. Lashes on his bare back would never have drawn a confession from this boy. Neither commands nor threats would ever have induced him to give up his secret against his will. Yet the influence of the quiet hour, the mellow firelight, the soothing presence of this gentle woman, who had always been to him so loving, so loyal, so truly motherlike, began to draw with irresistible force from his heart to his lips the whole story of his offense and his suffering. At last, unable to repress his emotion, he dropped to the floor at the good woman's feet and buried his head in her lap.

"O Aunt Martha," he cried, "I can't keep it to myself any longer! I can't! I can't! It'll kill me!"

She laid a loving hand across his shoulder.

"Tell me, deary, tell me what it is. I know I can help you."

Thus encouraged, he poured out to her the whole miserable story, without reservation or excuse.

"What shall I do, Aunt Martha?" he wailed at last. "What shall I do? Oh, what shall I do?"

With her handkerchief she was alternately wiping the perspiration from his forehead and the tears from her own eyes.

"There's but one thing to do, Dannie," she said. "Go to those who have been harmed or prejudiced by what you have done and tell them everything—everything."

"And the punishment?" questioned Dannie.

"Take it like a man, whatever it may be. But they will not punish you cruelly; have no fear of that."

"And then, when it's known and settled that the Delaware Valley & Eastern was first in the gap, they'll cut a way through the graveyard, and we can't stop 'em."

"Don't try to foresee the evil that may spring from doing what is right. Your duty is to act in the present. God will look out for the future."

Thus she counseled him, aided him, soothed him, until at last he rose to his feet resolved, no matter what the consequences to himself, to tell the whole story to all who ought to know it.

"Tomorrow morning," he said, "I will go to Mooreville. I will get there before court opens, and if the case was not decided today—O Aunt Martha, suppose they are through with it! Suppose it's all over, and some one else is suffering for what I did! I must go tonight. I must go at once. I mustn't wait a moment."

"No, deary, no. It will be time enough tomorrow morning for you to start. You could do nothing tonight, even if you could get there. Go to bed and try to sleep. You will be stronger in the morning."

He yielded at once to her wish, and, notwithstanding the ordeal he had been through, slept more soundly than at any time since the night of the survey.

[illegible] he was awake and looked out into the darkness, he saw that it was snowing. Aunt Martha compelled him, much against his inclination, to eat a hearty breakfast and to bundle himself well against the storm. When, at last, they heard the muffled jingling of the bells that announced the approach of the Mooreville stage, she put her arms around the boy's neck and kissed him.

"Keep up your courage, Dannie," she said, cheerily. "It won't be hard when you get there. You've done the hardest part of it already."

(To be continued.)



The Cheerful Plowman

SEEING ME ONCE ONLY

I [illegible] my wife and toured last year 'way back to southern Maine, for I had planned a longer stay of rest as well as pleasure. We can gave trouble at a town this side of Clifford's Pass, so I pulled up before a shop of quite pretentious class. The man came out and diagnosed our case as faulty spark and tossed away from breakfast time till two hours after dark. His bill was large and later on I found to my surprise that he had altered not a thing. I couldn't trust my eyes.

He [illegible]," said my every wife, "he'll see some one else and tell you while he had your car in tow before his door."

Yes, that is it. I [illegible] right," said I, but just the same I'll do no little distant part to hurt his cheerful game."

When I came home I said to Matt to Pete to Hank and Jew to Frankton Fritz to Herb and Cliff to Bill to Oliver and Hugh to Oliver to John and George to Ned and Mike and Pat to Harry Absalom and Luke to Jamie Joe and Mat to Gustave Ernest Dave and Ed to Charley Jim and Les to Leo and Chesterfield and Ben to Pledge and Lester Bye. My friends if you hear [illegible] approach that cowbird place this side of Clifford's Pass for there they hold the tourist up. They soak him all they can. Do not, I pray you, that wretched place to one dishonest man!"

Now from that group I found that two when they had threshed their grain had planned to drive their harvests down to points in southern Maine. Thanks, thanks!" said they, "we'll show that place as we would show disease and sore those other crooked places. Let for them with a [illegible]"

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Jersey Club Passes Another Milestone

By W. C. RANDOLPH, Secretary

AT THE largest and most representative meeting ever held by the Pennsylvania Jersey Cattle Club the work of the past year was reviewed and plans laid to make it even better for another year. This meeting was held in Harrisburg January 24th, in connection with the Pennsylvania Farm Products Show. Each year the progress mounts higher. Each year the meeting is larger and more of the Jerseys in all parts of the state are represented. Each year the club takes stock of the results of its efforts and plans for the work ahead with an increased zeal and enthusiasm for ever more progress.

The program of the Club's annual meeting, as we have said before, is a plan that gives each county club a certain credits for work accomplished under a definite scoring system, and the efforts of the county clubs take the form of a race for the highest number of credits with substantial prizes offered by the State Club. The projects are those we consider fundamental lines of work so essential for sound herd and breed development—the use of sires with high producing ancestry as proved by actual production, the keeping of some form of production records, the membership in calf club work, the showing of the better animals of the breed at fairs and field days, and the promotion of a spirit of cooperation among the breeders as shown by their support of local and state organizations.

Bedford in First Place

The Bedford County Jersey Cattle Club won first place in 1928 after having being second in 1927. They had the largest membership both years of any Pennsylvania club, 46 members in 1927 and 51 in 1928. Only three men in the club were using bulls without a tested dam, while the 50 bulls scoring points averaged 742 points per bull. Calf club work had increased from 5 to 21 members during the year. The work of the cows in the Bedford County Cow-Testing Association which had netted 515 points in 1927 increased to 1,050 points in 1928. The best part of the increase in C. T. A. points was that 40 per cent of the 1928 300-pound cows were daughters of the high-scoring bulls mentioned above, proving the soundness of the program.

The credit goes to the bull associations that have been in operation in this county for eight years, because without these organizations it would be impossible for the breeders, most of whom have only small herds, to use such high quality sires. The club of Jerseys also made a big increase the past year in this county. In 25 head were shown by four herds while in 1928, 68 head were shown by seven breeders. With active participation in this well-rounded program year after year there is certain to be rapid and sound development of breed in this county. The final county secretary, Mr. C. E. Kegarding with the State Club for $300 in his pocket and a smile on his face that seemed to say, "We'll be back next year and if any of you fellows want this check you better put a move on early and keep moving the whole blows. That's the way they do on Bedford county.

Other Winners

Indiana county, winner of first place in 1927, landed in second place in 1928. It was not a matter of making progress rather, it was simply that Bedford made quite enough. They also won several splendid new dairy bull associations, their club enrollment numbered 33, their C. T. A. work jumped from 515 to 1,205, their showing in production to 710 points. Every club in the state in Indiana county made good progress but not enough. It was hard to pocket the good prize check after once winning it. Larger one but we trust that they will do better program in 1929 than ever before. We heard them talking about some new and better bulls at the meeting, so watch out for them next year.

The winners of third and fourth places were the neighboring counties of Crawford and Mercer. The former jumped from fifth in 1927 to capture the third prize check this year and Mercer came from way down the line, 10th to be exact, and quietly slipped into fourth place. Their progress is indicated by their total scores of the two years. Crawford from 3,175 to 4,380 and Mercer from 1,580 to 4,360. The membership increases are worthy of special note. Crawford from 19 to 34 and Mercer from 10 to 34. For a detailed account of the work see the accompanying table.

Montgomery county was within 100 points of fourth place and not far from the third. Wayne county, last year's fifth place winner, slipped down to seventh place, not from lack of progress but simply because other clubs made more progress.

Two Years' Work in the Pennsylvania Contest

	Club	Member-ship	Better Sires	Calf Club	C. T. A.	R. of M.	Showing	
1927	Bedford	920	2410	500	515	0	125	
1928	"	670	5701	1050	1030	0	340	
1927	Indiana	470	1380	1250	265	0	600	
1928	"	650	2911	1650	465	0	710	
1927	Crawford	240	980	300	340	340	385	
1928	"	690	1985	700	550	278	350	
1927	Mercer	120	360	950	70	0	80	
1928	"	690	1684	1300	625	0	160	
1927	Montgomery	360	940	650	160	633	95	
1928	"	360	2243	550	250	536	375	
1927	Wayne	380	610	750	1075	240	270	
1928	"	310	970	750	1060	288	430	
1927	Butler	240	550	1050	695	525	270	
1928	"	360	1067	650	750	750	65	
1927	Lawrence	190	480	350	450	0	65	
1928	"	210	1048	400	585	0	185	
1927	Washington	200	470	0	70	70	100	
1928	"	320	1161	0	435	106	90	
1927	Chester	380	1050	0	250	535	20	
1928	"	290	438	0	140	572	190	
1927	Westmoreland	180	470	400	135	129	40	
1928	"	110	673	350	85	151	35	
1927	Somerset	90	310	350	0	0	160	
1928	"	110	528	350	20	0	125	
1928	Venango	260	461	0	60	232	35	

Dairy Topics

By A. G. HUMPHREYS

WHERE comes a time in almost every dairyman's life when he wishes that he could put things easy for a while. When weather is hot during the summer he has to take care that the milk does not sour. At that time he thinks it will be easier in cold weather, and as a general thing somewhat easier but not enough that we can sit down and let things take care of itself.

One particular thing that needs the attention is the separator. To get all possible the separator should be placed on a concrete floor and fastened securely to that foundation. Sometimes the nuts on the floor bolts work loose and that is as bad as if the machine were on a wobbly wooden floor. Whatever the oiling system of your machine it is advisable to use good separator oil. The company manufacturing your machine will advise you what particular oil to use if you are in doubt. Use only good the oil is, and select the system used in the machine. Also remember that the oil will become dirty in time and have to be replaced. This will prolong the life of the machine. The bowl is cleaned with kerosene before it is refilled with fresh oil.

When It Works Best

There is no machine made, within the knowledge, that runs equally well in all temperatures. The separator is no exception. It seems that it does its best work when reasonably warm. Be careful about the temperature of new milk. Suppose the handle and the warm. Don't have it be so warm that it is uncomfortable where the milk touches the hand. Between 90 degrees F. when the milk is being put through. Cold milk runs harder than warm milk, but the machine runs slower. After milk has stood long enough for the temperature to drop below 60 degrees the big loss by reason of cream going out through the milk spout is considerable.

It is a very good plan to flush the machine with some hot water before running the milk through it. When I say "some" hot water I mean about a gallon, depending on how much hot water can spare from the teakettle.

Washing

During cold weather on most farms the separator is washed once a day. It would be better if it were washed twice daily. From the time the milk has been run through in the morning or evening to the next time the machine is used a certain amount of milk collects in the bowl which causes the machine to do poor work. Flushing will remove all the milk and shine out the bowl. The cream screw must be cleaned and cause considerable loss in this way.

Separators put out by reliable companies are made to give many years of service, and are made to run smooth summer regardless of the change in temperatures. When the machine is run over a long time it is generally the care or operation of the machine and not in the machine itself.

Roof of Mouth Sore

I have a young cow that has a sore on the roof of her mouth right up to the end of the grinders. The roof of her mouth is swollen and the sore is about three inches by 4 inch. She is not able to eat anything except damp bran.

B. F. Z.

I would be afraid that some sharp feed in her body had pierced the gums or the roof of the roof of the mouth and also suggest the possibility that this object was implanted there. Perhaps it is stuck between the teeth and projects upward inside the sensitive gum tissue. I would paint the area with metacresylchrome or tincture of iodine. Needless to say it is important to get out the foreign body if one is present.

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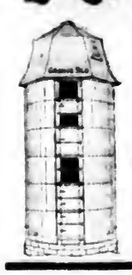
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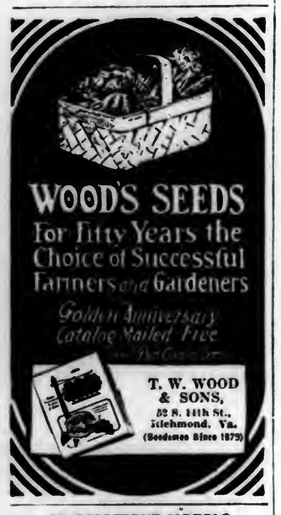
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THE POWER TAKE-OFF

The picture shows a power take-off being used by Mr. Arthur Gay, Luzerne county, Pa., to operate a sprayer on his fruit farm. In the first place the tractor has ample power to pull the big sprayer full of material any place about the farm. This method eliminates the necessity of having an engine on the sprayer. This makes a lighter sprayer and less the cost of the engine. Also it does away with the trouble of the power unit on the sprayer.

The power take-off is being used to operate binders, corn pickers, potato diggers, combine-harvesters and many other field machines. The power comes from the transmission direct to the machine which is being driven. The power take-off is equipped with a slip or safety clutch just in front of the sprayer.

Cliff Jenkins Reads His Meter

CLIFF JENKINS was watching the electric meter man take the monthly readings. "How much did we use this month?" he asked. The meter man subtracted the reading from his record of the last month's reading. "One hundred and seventeen kilowatt hours," was the answer.

"Whew! I can't see how that's possible," said Cliff. "That just can't be right. Seems to me we haven't used so much."

"Must have used the range quite a lot and pumped an extra lot of water," suggested the meter man.

"Yes," admitted Cliff. "That's right. Mandy has been doing an extra lot of cooking and baking this month, and then we have been using more water than usual, sprinkling the garden evenings, and for spraying in the orchard."

"Well, that's probably the answer," agreed Jim, the meter man. "Anyway, you can see for yourself here how much you have used." Cliff didn't even look at the meter dials. "No use," said he. "I can't figure that stuff."

"But it is easy," insisted Jim. "Every man should know how to read his own meter. Here, let me show you. This meter has four dials. Each number on the right hand dial stands for one kilowatt hour, so that a complete turn of the pointer means ten kilowatt hours. The figures of the next dial each represent ten kilowatt hours, and a complete turn of the pointer one hundred kilowatt hours. The third dial toward the left has a value of one thousand, with each number worth one hundred, and the last dial ten thousand with each number worth one thousand.

"It is easiest to start reading the dials from the right toward the left. This right dial, let's call it dial 1, then reads 8. (Fig. 1) We always read the figure that the pointer has just passed, not necessarily the nearest figure. The pointer on dial 2 practically shows 7 but dial 1 pointer was not quite around to zero yet, so dial 2 reads 6, dial 3 reads 5 and dial 4 reads 3. Therefore, your meter reads 3568. Last month's reading was 3451, so you used 117 kilowatt hours."

"Well!" That's easy enough," exclaimed Cliff. "Suppose you draw a meter face and try me out." So Jim sketched four dials (Fig. 2), and Cliff started figuring. "The right hand dial pointer is past 9 and not up to 0, therefore, that's 9. Pointer number 2 looks like 9 but since pointer 1 has not made a complete turn No. 2 reads 8. And No. 3 is 9 and No. 4 is—is—say Jim, is that 7 or 8?"

"Well, No. 3 has not quite made a complete round, therefore No. 4 cannot be eight but must be read as 7."

"Then that meter would read 7989," ventured Cliff.

"Right," agreed Jim. "Now although your meter dial is the type commonly used there are two other types in use. One has the right hand dial marked 1s, the next 10s, the next 100s and the last one on the left 1000s. You read it the same as before but since the 1 dial reads tenths you point off the last figure in the meter reading as a decimal. The other type is labeled Multiply by 10. The reading is done as usual—but the result is multiplied by 10. That's all there is to reading meters. Here, I'll draw three settings for you to be sure out by my next visit,—and now I must be getting along. So long Cliff."

"Good-by Jim, thanks for showing me about those readings."

Here are the drawings Jim left. Can you read the meters? Answers are as follows:

Fig. 3.—2,600 Kw. Hrs.
Fig. 4.—520.3 Kw. Hrs.
Fig. 5.—10,460 Kw. Hrs.

W. C. Krueger.

Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5

(Mailbag of Sue)

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Farm Relief Really Worked

(Continued from page 5)

truck crops. Of course much comes in August. On truck it is one of outguessing the other Sweet corn was fine the last crops in this locality. Is it going be glutted this year? We made corn and tomatoes our big crop year. We missed the guess on

Could there be local organizations tied with national organizations to prevent these gluts when too many farmers plant the same crop. Certainly I would give to twenty-five dollars to help do it. Are there ninety-nine others in Lancaster county and a hundred in every other county in Pennsylvania?

Staple Crops

Every November we raise potatoes. They are a staple crop and why say it? We want some for our cellar and we get pot luck on the price and put in. We were to an acre and a quarter this fall. We have to get pretty low for them to go under our hundred dollars. Then, a hundred to a hundred and fifty chickens. All the roosters we sell, want and others are corn fattened for the Christmas market.

Then we sell the wheat, or is it sold this year? One or the other, for a staple grain crops have to be handled the same as the potatoes. We usually have them for ourselves or for sale. We like to have a hundred bushels of wheat to sell besides what we need for chicken feed, seed and the like. If the crop looks short in the fall we can increase the corn or potatoes to make up the deficit. Rotation and the arrangement may necessitate a small wheat crop, but we don't forget it.

Money is the sticker. The weather is usually miserable. Last year we lost for our income. This year and Next year it will be hogs and dogs or a couple of beeves. Not practical for February. It takes care to fatten in cold weather, but that makes lots of manure for the patches and the potatoes.

Then April we have the eggs. Short of our set minimum this summer stock, but we went way back last summer, so we feel safe in marketing potatoes, chickens, grain crops the times outlined are manageable, governed by the state of the market.

Future Plans

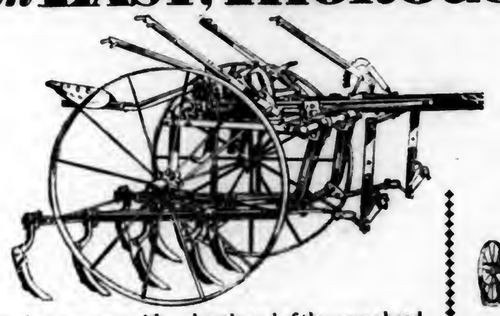
Now we have the hay to sell. If we glutted plow it under and sell grain. We began this year to arrange our rotation so as to plow under in each six or seven-year series. Then till we can build up stock enough to manure a field in each rotation.

We went over the minimum this year. The minimum is set for one hundred and fifty dollars a month this year where there were two in 1921 and there are six. Six cows in 1930 ought to bring us up to a two hundred dollar minimum and still pay increased cost for help. The steady job takes the worry out of the debts. They disappear one by one. The interested friends have smiles on their faces for a greeting and our greatest joy is the gluts.

But for them, are pills practical? I am in favor of lots of prevention. In fact I have stopped bothering about what Congress does. With good health our next step as soon as the debts are gone is to get a thousand dollars in the savings bank with that banker to have as a friend for temporary loans.

Then Congress work out some plan to get an influential friend to the farmers, starting or in hard luck, or should the farmers who have made money quit investing it in chain store stock, etc., and invest it rather in institutions to which a banker and influential friend to them is trying to make money?

Put Your Feet on the Pedals for an EASY, THOROUGH Job



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CASE E-B Two-Row Cultivator. Master lever control—gang shift—wheel guide. Equipped with single or double tongue truck.



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Change the direction of the wheels left or right by slight foot pressure. Pivot wheel action combined with the gang-shift feature gives you almost unlimited dodging range. Doubly responsive to a touch of the foot. Gangs are suspended on steel rollers. Instant, effortless control.

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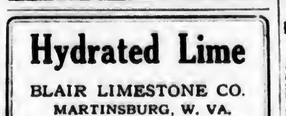
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See Page 17, February 16th

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Thousands credit Delco-Light with amazing savings

From thousands of farmers come stories of time and labor saved . . . bigger earnings. All because Delco-Light does hard work *better and cheaper.* By actual figures it pays a profit. *"Saves $876 a year on milking labor cost"* . . . W. E. Miller, Kentucky. *"Earns $3.00 a day by increasing egg production"* . . . Mrs. Gibson. *"Saves pigs at farrowing time"* . . . Mr. Ruppert, Minnesota. These farmers *know* that Delco-Light is a time, labor and money saver:



Mr. W. H. Fox writes: "I use my Delco-Light 1500 watt plant for power to operate milking machine, cream separator, bottle washer, and two pressure tanks.

"This saves me in labor alone 5½ hours per day. Delco-Light makes me $1.85 per day." ($602.25 a year at 30c per hour.)

Mrs. Fox says "The new Delco-Light 1500-watt plant saves me 10 hours a week."

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Any way you figure, Delco-Light makes money. In stores the 1500-Watt plant will operate a Water System, Frigidaire refrigerating equipment, meat and coffee grinders, light up store, basement and signs. In filling stations it will operate air compressors, gas pumps, and illuminate the place.

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Radio in Farm Life

By GEORGE F. JOHNSON

ANY present day appraisal of farm life is incomplete which does not give profound consideration to the radio.

Recognizing its growing importance in farm business and farm life, the Pennsylvania Department of Agriculture conducted a survey late in 1928 to gain first-hand information on radio ownership among farmers and to ascertain their viewpoint and reactions on radio programs. Approximately 1,800 questionnaires were sent to as many farm radio owners, selected at random, in Bradford, Bucks, Centre, Cumberland, Lawrence and Westmoreland counties. Three hundred and fifty-two replies were received. The results of the survey are given in the following discussion:

Of the farmers answering the questionnaire, 39 per cent have had a radio four or more years. The popular size of radio is apparently the five and six-tub set, with the five-tube predominating. The crystal and one-tube sets, quite numerous three and four years ago, have become practically a thing of the past. Of 340 farmers cooperating in the survey in 1925, 107 or about 32 per cent, had crystal or one-tube sets. Only 20 crystal or one-tube sets, just six per cent of the total, are reported in the present survey.

Cost and Expense

Farmers have paid anywhere from $2 to $525 for their radio receiving sets, the average cost to the 312 giving figures being $111.36. Two hundred and thirty-one farmers, about 66 per cent, are depending on storage batteries and dry cells for electricity; 82, or 24 per cent, on dry cells entirely, and 33, or 10 per cent, have light socket power.

The approximate cost of operating radio sets during the past year was reported in 288 cases, the average cost being $17.30. The use of the radio varies from 10 minutes to 10 hours daily and averages about 2.8 hours, according to the survey. One hundred and four replied that in their homes the use of the radio was increasing, 35 said it was decreasing, 194 replied "about the same"; 19 did not give an answer.

Type of Features Desired

Farmers are interested in a wide variety of radio features with old-time songs leading and jazz music and cooking recipes trailing the list. Eleven types of features were listed in the questionnaire and each farmer was asked to indicate the order of his preference. The results gave the following ranking of the features: (1) old time songs, (2) weather reports, (3) sacred songs, (4) church services, (5) current news items, (6) market reports, (7) talks, (8) barn dances, (9) classical music, (10) jazz music, (11) cooking recipes.

Preferences for Programs

Answers to the question "What radio programs appealed to you most during the past year?" and to the request to "name at least five," show most conclusively that no one program has made an outstanding impression on farm folks. One or more programs were named, however, by 203, and of these, 131 named five or more. More than 150 different programs were mentioned at least once. While programs sponsored by commercial firms were mentioned more than any other type, church services were named more than twice as many times as any one commercial program.

While a preference is shown for programs of a religious, political, sporting or musical nature, it is significant that 270, or 77 per cent, of those replying said they made a special effort to tune in on farm talks and special farm programs.

Both market and weather reports are

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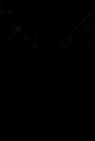
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regular features in the program of most broadcasting stations and perhaps have become responsive to the demands of farmers as much as or more than any other class of people. To ascertain the value of such reports to farmers was one of the objects of the survey.

In indicating the particular farm market reports of value to them in their business 183 or 52 per cent checked livestock, 225 or 64 per cent poultry; 221 or 63 per cent butter and eggs; 118 or 34 per cent, fruits and vegetables, [illegible] per cent, potatoes; 168, or 48 per cent, grain; 153 or 43 per cent, feed, 124 or 36 per cent, hay; 31 or 9 per cent, wool, and 51 or 14 per cent gave no answer, being apparently not interested in market reports.

Radio market reports are used by many farmers in business transactions. In answering the question "Do you depend much on radio reports in buying and selling?" 146 replied "yes," 121 replied "no," and 42 did not answer.

Radio weather reports are also found useful in farm work. In answer to the question, "Do you find radio weather reports help you in your farm work?" more than three-fourths of the replies were in the affirmative. Two hundred and seventy-four said "yes," 59 "no", and 22 gave no answer.

Radio a Social Factor

Two questions were asked with the intention of showing the importance of radio as a social factor in farm life. That the radio is something more than the whole farm family secures much enjoyment or establishes increased [illegible] is doubtless the answers. Of 329 definite replies, 330 said their families would not be satisfied today without a radio and only 9 less than three per cent, said their families would be satisfied without a radio. 14 gave no definite answer, being apparently undecided.

It is the belief of 220, 62 per cent of the farmers, that the radio is helping to keep young people interested in farm life. One hundred and thirty-two, 38 per cent, did not think so, were doubtful or gave no answer.

Stations Depended On for Programs

The question, "What station do you listen to most?" brought forth a wide list of stations, the preference depending largely on nearness to the high-powered stations. For example, in the western part of the commonwealth, KDKA (Pittsburgh) was the first choice of 111 of the 121 persons answering while in the eastern part, of the 21 replies, 128 indicated WJZ (New York) as first choice, 38 WGY (Schenectady) and 26 WEAF (New York).

Stations "listened to most" arranged in order according to the frequency of first choice, were: WJZ (New York) named 141 times, KDKA (Pittsburgh), 139; WGY (Schenectady) 59, WEAF (New York) 29, WHAM (Rochester) 9, WABC (Harrisburg), 8, WCAE (Pittsburgh) 7, WLS (Chicago), 5, WOR (Newark), 2, and 19 others mentioned once each.

One of the conclusions of this survey is that many farm radio owners apparently have not taken full advantage of programs broadcast entirely for their benefit. Pennsylvania farmers can not expect to secure a large number of special farm programs if they depend exclusively on high-powered stations in New York City with their millions of urban listeners. In this respect some Pennsylvania farmers are in a somewhat different position than the farmers of the Middle West who are served with numerous farm programs from their largest stations. This is in no sense an argument against the New York stations with their splendid programs of music, national events and other educational features which appeal to farmers, but it is intended as a plea for Pennsylvania farmers to follow more closely the programs of stations which have regular farm features scheduled.



Sunday Evening...

SUNDAY evening the family gathered around the sitting-room table, lighted by a big kerosene lamp set in a rose-colored vase that Father had bought in Chicago. The children had to sit quietly on the slippery horsehair sofa and try not to giggle. Sometimes Sister would play the little wheezy German organ with carved cherubs decorating its sides. . . .

No one was allowed to laugh or play. . . . You could hear the hired man slip in the back way on tiptoes, after finishing the chores. Finally, reduced to desperate boredom, you might try counting the figures on the wall-paper. Mother knitted, and watched the clock to see when bedtime came.

Such were Sunday evenings years ago. But, today, Sunday evening is looked forward to with pleasure. The children anticipate its coming. The thundering music of great church organs thrills them . . . a famous minister warms the whole family by his message of hope and cheer . . . all join in with the grand old hymns that come over the air . . . *for* NOW *they have a radio set!*

The rest of the week is just as full of interest! With a modern battery-operated radio set powered by the long-lasting Eveready Radio Batteries, you receive grain and live-stock prices the same day they are made on the market. *Many farmers have more than paid for their radio with this one feature!* You can hear sparkling music, opera, political speeches, entertainment from the great cities. *You can never be isolated from the world with a radio in your home!* Just be sure your radio is up-to-date—you'll never know how perfect radio reception can be until you own one of the latest 1929 battery-operated sets!

• • •

To power your battery set, be sure to use Eveready Layerbilt "B" Batteries. They contain the patented, unique *flat* cells, packed together in layers, which abolish waste space and give you more active materials for your money, and longer service. This exclusive construction also abolishes 60 soldered connections and 29 fine wires that often cause trouble in old-fashioned batteries. Write for our booklet, "Why Radio is Better with Battery Power." Tells facts you should know.

NATIONAL CARBON COMPANY, Inc.
New York San Francisco

Unit of Union Carbide and Carbon Corporation

Every week in Eveready Hour Network, *East of the Rockies,* 9 P. M., Eastern Standard Time, through WEAF and associated N. B. C. stations. *On the Pacific Coast,* 6 P. M., Pacific Standard Time, through N. B. C. Pacific Coast network.

SEE AND HEAR THE NEW EVEREADY RADIO SETS

EVEREADY
Radio Batteries

TIGHT BINDING TEXT CUT OFF

Produce Market Review

THE potato market in most sections of the East continued dull and sluggy. Prices were generally somewhat lower last week although the best stock was practically unchanged. Fairly liberal truck receipts and a slow demand brought the market for Pennsylvania potatoes almost to a standstill in Philadelphia. The bulk of the receipts show a very wide range in quality and condition, as could be expected at this season of the year. There were more Maine potatoes on the Philadelphia market than there has been for some time. It is likely that some of these were being handled on a commission basis.

Maine Green Mountains have been bringing $1.40 per 120-pound sack. Pennsylvania round whites sold at $1.10@1.40 per 120-pound sack or from five cents to ten cents lower than a few weeks ago. Part of this decline was not due to a weakening in the market but more to the poorer quality of the receipts.

The seed situation in New Jersey shows but little change from last year. So far only 26 cars of northern seed potatoes have been shipped into the state. There appears to be plenty of home-grown seed in South Jersey and the price is reasonable. Northern grown seed is about $2 a sack cheaper in Maine than last year.

Sweet Potatoes

The sweet potato market was steady with prices showing but little change from last week. The only noticeable change has been the slower demand for the poorer offerings. Dealers state that they have no difficulty in selling several loads of fancy stock while it takes a much longer time to sell one load of average quality. New Jersey yellows sold at $1@1.25 per ⅝ basket in Philadelphia while reds brought $1.10@1.35. There were some exceptionally fancy lots that brought a premium of ten to fifteen cents. New Jersey yellows sold mostly at $2.25@2.65 per bushel in New York with some fancy wrapped stock bringing $2.65@3. New Jersey stock brought $2.50 a bushel in Boston and $2.75 to $3 in Chicago.

The apple market in Philadelphia shower a slight improvement during the week. Fancy apples were somewhat stronger and dealers stated that they were able to move somewhat larger quantities of this fancy stock. Romes, Stayman, Delicious and Winesap sold at $1.25 to $1.75 per bushel with the fancy lots selling at $1.85@2. The stock selling between $1.25@1.50 was hard to move and sold with more difficulty than the fancy stock. York brought $1@1.50 per bushel and Nero $1.25. There were some rail receipts of extra fancy three-inch Stayman that brought as high as $2.35 per bushel but this was highly colored, fancy stock. Prices of western boxed apples advanced somewhat at shipping point. The combined shipments of both eastern and western apples was about 60 per cent larger than at the same time last year.

Eggs and Poultry

The live poultry market in New York was rather weak toward the end of the week. Fowls were in moderate supply and broilers were fairly plentiful with prices averaging lowet than last week. Colored and Leghorn fowl were quoted at 28@30c per pound, broilers at 35@43c and pullets at 32@35c. The dressed poultry market was steady with a rather light supply from nearby sections. The demand was fair, especially for the better grades. Fowls sold at 26@35c and chickens at 30@43c.

The Philadelphia egg market was unsettled during the week. Declines of about five to six cents a dozen occurred early in the week but as receipts cleaned up and further receipts were not as heavy as was first expected prices again climbed higher. Studies of egg marketing show that February is the most irregular month of the year. Storage stocks are light and receipts vary considerably with weather conditions. There have been a number of other years when prices in February have gone even higher than this season. Extra first were quoted at 45@46c per dozen during the latter part of the week and firsts at about 43@44c.

The egg market in New York City was in a very unusual position during the past week, stock sold mostly on a basis of quality and prices were irregular. Brown eggs were in greater demand than white eggs and were very scarce with the better grades selling at comparatively higher prices than whites There was a shortage of western mixed colors. The best white eggs ranged 35@36c per dozen with a few lots bringing 49c. Brown eggs brought 46@50c and mixed colors 43½@47c.

Dairy Products

The butter markets in the East were firm during the week. Arrivals of fresh butter were somewhat lighter than the previous week and receivers were able to prevent supplies from accumulating. Storage stocks are comparatively light and production no more than normal, and there seems to be no likelihood of any sharp increase in production.

Prices on 92 score butter in Philadelphia and New York advanced 1½ cents during the week. The market on this grade closed at 51½c in Philadelphia and at 51c in New York City. There was a good demand for the lower grades and prices advanced.

W. R. W.

Livestock

PITTSBURGH
Cattle

HIGH water interfered with the movement of livestock, reducing receipts of cattle to the lowest point on record at this market. Only 13 carloads were on sale, and prices were unevenly higher, 25@50c above last week's level and about a dollar above that of two weeks earlier. No steers of choice quality and finish were offered, but some good 1,300-pound steers, fat but a trifle plain, brought $12.50 per cwt. No real good handy or light weight steers were on sale, but fair fleshy butcher steers went at $11.50@11.65 and fair light steers around $11. Heifers were scarce and stronger, one Choice 700-pound baby beef going at $12. Fat cows were stronger and so were canners, the latter going largely at $5.75@6. Bulls were scarce and higher, but few sold at $10 or over.

Choice grain-fed steers, 1,200 lbs, or over	$12 50@12 75
Good to choice	12 00@12 50
Fair to good, do.	11 50@12 00
Plain heavy steers	10 00@11 75
Choice handyweight steers	12 00@12 25
Good butcher steers, 1,000 to 1,150 lbs.	11 75@12 00
Fair to good, do.	11 25@11 75
Ordinary to fair, do.	10 50@11 25
Common, do.	9 50@10 25
Good light butcher steers	11 65@12 00
Fair to good light steers	11 00@11 50
Common to medium, do.	10 00@10 75
Inferior light steers	8 50@ 9 50
Feeders	Nominal
Stockers	Nominal
Choice heavy bulls	10 00@10 25
Choice handy butcher bulls	10 25@10 50
Good handy bulls	9 75@10 25
Fair to good bulls	9 25@ 9 75
Common to fair bulls	8 50@ 9 25
Inferior bulls	8 00@ 8 50
Choice fat heifers	10 50@11 00
Good to choice heifers	10 00@10 50
Fair to good heifers	9 50@10 00
Common to fair heifers	8 50@ 9 50
Choice fat cows	9 25@ 9 50
Good to choice fat cows	8 75@ 9 25
Fair to good cows	8 00@ 8 75
Common to fair cows	6 00@ 7 50
Canners and cutters	5 00@ 6 00
Fresh cows, calf at side	50 00@150 00

Hogs

Monday's supply was about 35 double-deck carloads. Trade was fairly active on everything except pigs and common light weights. Prices of good hogs were a shade below last week's close, sorted handy weights going at $11.75 against $11.80 on Saturday. Heavy hogs ranged from $11 for extreme weights to $11.50 for those averaging around 250 lbs., and mixed lots sold at $11.50@11.70. Bulk of light Yorkers met good or weighty enough for handyweight lots brought $11@11.25. Pigs were very dull at $9@9.50 and look like a good thing to keep in the country at current prices. Many of the pigs coming here are from southern points, Kentucky and Tennessee. Sows brought $9.75 if good and most stags sold around the $7 mark.

Heavy wts., 250 lbs. or over	$11 00@11 50
Heavy mixed	11 50@11 70
Medium wts., 180-200 lbs.	11 70@11 75
Heavy Yorkers, 165-180 lbs.	11 70@11 75
Light Yorkers, 125-150 lbs.	10 75@11 25
Pigs, 100-110 lbs.	9 00@ 9 50
Roughs	9 50@ 9 75
Stags	6 00@ 8 00

Sheep and Lambs

Monday's supply was about 8 carloads, mainly lambs. The few sheep here sold at about former prices, the best offered going at $10.50 though they were hardly good enough to be classed as tops. A few of medium quality brought $8.25. No clipped sheep were offered but they are rated at around $7.50 for good handy wethers. One deck of good western lambs brought $17.50 and a few bunches the same figure, but bulk of the fat lambs went at $17.25, with medium kind $14@15.50 and culls largely $11@12.50. A few clipped lambs have come in recently, tops selling at $15 @15.25. No early lambs have come forward but some are expected next week and more after that.

Good to best wethers	$10 00@10 50
Fair to good wethers	9 50@10 00
Good mixed	9 75@10 00
Fair to good, do.	8 50@ 9 50
Common to fair	6 00@ 8 00
Inferior sheep	4 00@ 6 00
Good to best spring lambs	17 25@17 50
Medium lambs	14 00@16 00
Culls and throwouts	11 00@13 00

Calves

Only 450 calves were on sale. Best veal calves were firm at $18.50, seconds largely $14@15.50 and others on down to $10@12.

Miscellaneous Produce

Philadelphia

Eggs.—Extra firsts, 45c; firsts, 43½c; seconds, 39@42c; selected and candled fresh eggs, 51@53c; select in cartons, 53@55c.

Butter.—Creamery, tubs, 92 score 51½c; 88-89 score, 48@49c.

Poultry.—Fowls, 31@32c; Leghorns, 31@32c; young chickens, 35@38c; broilers, 40@43c; old roosters, 23@25c; ducks, 27@35c; turkeys, 30@40c; rabbits, pr., 18@20c; Guineas, per pair, $1.20@2.

Strawberries.—Fla., 32-qt. crate, mostly 30@34c per qt.

Apples.—U. S. No. 1, per bbl., Virginia Winesaps, $5@5.50; New York Greenings, $1.40@1.75 per bu. bskt.; Md. Ben Davis, $1.35; nearby ⅝ bskts., Delicious, $1; Stayman and Romes, 75c@$1.

Celery.—Fla., 10-inch crates, washed, 3 doz., $1.50@2; Calif. crates, rough, $2@2.75.

Potatoes.—Pa. round whites, per 120 lbs., $1.10@1.25; Maine Green Mts., $1.40@1.45.

Sweet potatoes.—Md. and Del. bu. hamper, No. 1 yellow, $1.40@1.50; N. J. ⅝ bskts., $1@1.25.

Beets.—Nearby, ⅝ crates, 75c@$1.

Leeks.—Nearby, per bunch, 3@5c.

Collards.—Va., bbls., $1.50.

Carrots.—Nearby ⅝ bskts., $1@1.50.

Cabbage.—Old N. Y., 100-lb. sack, Danish, $2@2.25; new, Texas, 100-lb. crates, $3.

Lettuce.—Calif. Iceberg, crates, 4 to 5 doz., $3@3.50; Fla., ½ bbl. hamps, Big Boston, $1.50@2.

Onions.—Ohio, 100-lb. sacks, U. S. No. 1, yellow, $4.50@5; New York, 100-lb. sack, $4.50@5.

Mushrooms.—Nearby, 3-lb. bskt., 50c@$1.15.

Parsnips.—Nearby, ⅝ bskt., $1@1.25.

Rhubarb.—Mich., 5-lb. boxes, fancy, 60@75c.

Turnips.—Nearby, ⅝ bskts., purple tops, 20@40c.

Peppers.—Fla., crates, green, fancy, $3@3.50; choice, $2@2.50.

Field Cress.—Eastern Shore, bu., 75c@$1.

Pittsburgh

Butter.—Creamery prints, 92 score, 57@57½c; tubs, 56@56½c; local tubs, 52@55c.

Eggs.—Fresh, select white, [illegible]@44c; brown, 42@43c; current receipts, [illegible]@50c; pullet eggs, 35@40c.

Poultry.—Heavy hens, 29@31c; Leghorns, 28@30c; springers, 29@31c; roosters, 18@20c; ducks, 26@30c; geese, 22@25c; pigeons, 40@50c per pair.

Lancaster

Butter.—Country butter, 55@60c; creamery, 55@60c.

Poultry.—Chickens, dressed, $1.25@2.50 each; springers, 75c@$1.25 each; ducks, $1.50@2.75 each; squabs, 25@50c each.

Eggs.—Fresh eggs, 38@42c.

Vegetables.—Beets, 8@15c per bunch; egg plants, 20@30c each; string beans, 40@45c per ¼ pk.; beans, lima, 40@45c; per pt. box; cabbage 10@20c per head; carrots, 5@15c per bunch; cauliflower, 25@50c per head; celery, 10@25c per bunch; cucumbers, 8@15c each; spinach, 12@15c per ¾ pk.; rhubarb, 12@20c, per bunch; peppers, 5@8c each; endive, 10@15c per head; lettuce 10@25c per head; radishes, 8@10c per bunch; mushrooms, 25@30c per qt. box; onions, 20@25c per ¾ pk.; green onions, 10c per bunch.

Potatoes.—Per bu., 65@75c.

Sweet potatoes.—20@25c per ¾ pk

York

Butter.—Country, 55@60c; separator, 60c.

Poultry.—Hens, dressed, 24@26c; Leghorns, $1@1.50 each.

Eggs.—Fresh, per doz., 38@40c.

Vegetables.—Potatoes, 65@90c per bu.; cabbage, 5c@20c per head; lettuce, 8@20c bu.; spinach, 18@20c; ¾ pk.; turnips, 15c ¾ pk.; parsley, 2@3c; celery 8@15c stalk.

LANCASTER
Cattle

Lancaster, March 4.—Receipts 400 head. Steers and yearlings [illegible] firm. Top of $13 was paid for cattle 1,350 1,400 lb. class. Bulk of steers $11.50@12.25. Fat she stock was [illegible] strong; bulls and cutters steady; [illegible] and feeders nominal.

Good steers	$11 [illegible]
Medium to good	10 [illegible]
Common to medium	8 [illegible]
Good to choice heifers	10 [illegible]
Medium and common	7 [illegible]
Good to choice cows	7 [illegible]
Common and medium	6 [illegible]
Low cutter and cutter	5 [illegible]
Good to choice beef bulls	9 [illegible]
Cutter, common and medium	7 [illegible]
Feeder and stocker cattle	8 [illegible]
Good to choice calves	12 [illegible]
Medium	9 [illegible]
Culls and common	7 [illegible]

Hogs

With 700 hogs on sale the [illegible] fully steady.

Heavyweights, 250-350 lbs.	$11 [illegible]
Medium weights, 200-250 lbs	11 [illegible]
Light weights, 160-200 lbs	11 [illegible]
Packing sows trough and smooth	9 [illegible]

INTER-STATE MILK PRICE

The Inter-State Milk Producers' [illegible] tion announces the following milk [illegible] effect March 1st. Philadelphia [illegible] price March first, for 3 per cent [illegible] per 100 pounds, 7.35 cents per [illegible] ruary surplus price, Class 1, $2.50 pounds, 5.45 cents per quart; Class [illegible] per 100 pounds, 4.6 cents per quart differential is 4 cents for each half [illegible] and 2 cents for each half tenth [illegible] or down in butterfat test.

PITTSBURGH MILK PRICE

At a meeting of representatives [illegible] ducers, consumers and distributors [illegible] burgh last week to consider the [illegible] of milk in this district this month, decided to allow the present price [illegible] main; that is $3.85 for Class 1 [illegible] for Class II milk, f. o. b. city. [illegible] country plants are $3.10 and $2.80 [illegible] The price to the consumer will [illegible] same as last month, 15c a quart.

How are your
FARMLIGH
BATTERIES

Winter has been hard on them. Farmlight batteries get more use and about [illegible] cold weather than any other time of year.

Take advantage now of special USL turn-in [illegible] and replace with long-life dependable

USL
FARMLIGHT
BATTERIES

Built by the makers of the famous USL auto & radio batteries

MAIL THE COUPON

USL Battery Corporation
Niagara Falls, N. Y.

Please send me complete information on the USL special "[illegible]" proposition.

Name .....

Address .....

Farmer's Business Letter

[illegible] run of logs this week was a little [illegible] than last week's small supply. [illegible] was keen and the market [illegible] further advance of about 20 cents [illegible] average at the close of the week [illegible] up above $11, with packers paying [illegible] for their choices. Smooth [illegible] kets [illegible] afforded the bulk of the de[illegible] one of the big packers being pra[illegible] out of the market all week though [illegible] a liberal supply of directs on which [illegible]. Hogs are so scarce in relation [illegible] that all classes of good hogs [illegible] at the top, one of the big packers [illegible] a drove of 370-pound butchers at [illegible] on Friday.

[illegible] markets had 504,000 logs this [illegible] against 588,000 last week, and 700,000 [illegible] week last year.

[illegible] price of hogs here for the week [illegible].35, a gain of 40 cents over last [illegible] and $2.75 higher than a year ago.

[illegible] of 130,000 hogs in Chicago this week, [illegible] 30,000 came direct to packers, one [illegible] large packers having built of these.

Steer Trade Weak

[illegible] cattle market showed strength the [illegible] half of the week, but lost ground [illegible] heavy cattle being especially diffi[illegible] to move at the close. Top steers sold [illegible] $15 against $15 last week, the for[illegible] price for heavy steers, the latter for [illegible] $10. Best yearlings here this week [illegible] $10, last receipts have included very [illegible] lots of real choice steers. Bulk of [illegible] sales this week were at $11.25@13.40, [illegible] $10@13.15 last week and $11.50@[illegible] a year ago.

[illegible] of cattle here this week at [illegible] were 6,000 smaller than last week, [illegible] the smallest total, barring holidays, [illegible] the strike period of 1920.

Stockers and Feeders

[illegible] of the light trade in stockers and [illegible] is at a range of $9.50@10.50. The [illegible] good market has weakened the de[illegible] for feeding stuff. A year ago prices [illegible] calves and feeders were about a dol[illegible] higher than now and more of a bullish [illegible] was evident, though a decline in [illegible] cattle market was under way then.

Lambs Some Lower

[illegible] some increase in the run this week [illegible] sales were 25@50 cents lower at the [illegible] though the average price for the [illegible] of $16.45, was 25 cents higher. Year[illegible] were off 25 cents with lambs but [illegible] sheep were unchanged. Receipts this [illegible] at 23,000 showed a gain of 9,000 over [illegible]. Colorado-fed lambs are being [illegible] in good number, about 35,000 [illegible] arrived here for the week, the [illegible] run of the season.

Grain Trade

[illegible] wheat market was up and down [illegible] week, showed more weakness than [illegible] and a net loss of three or four [illegible]. No news of an encouraging nature [illegible] though the opinion is expressed [illegible] there is about 25 cents loss in rela[illegible] to other things. Wheat (No. 2 or [illegible] at Chicago) ranged from $1.20⅜ to [illegible] during February, these prices being [illegible] since last September and October. [illegible] on this crop have been lowest since [illegible].

[illegible] held its own this week, without [illegible] change in price. The trade is at [illegible] to know how to figure corn. Un[illegible] factors are the effect of weather on [illegible] movement, the farm to farm demand [illegible], the amount fed (which is com[illegible] further by the rise in hogs) and [illegible] quality of figuring farm reserves. [illegible] no weakening factors are apparent [illegible] market, demand being large enough [illegible] care of receipts without large ac[illegible] of supplies.

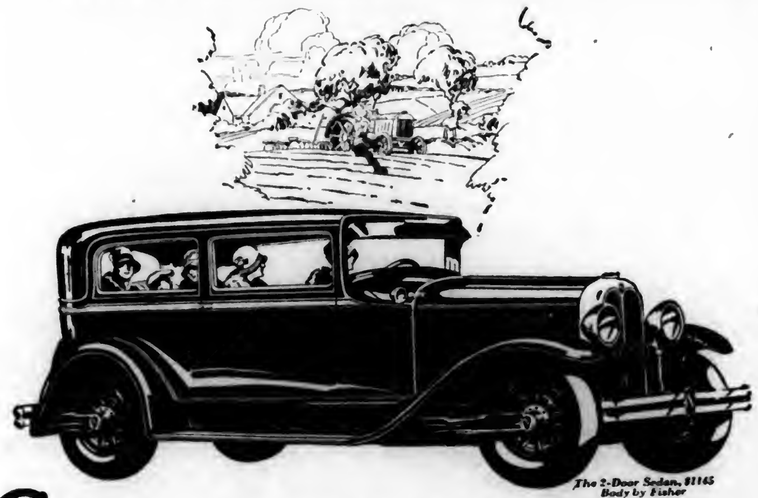
Cows Sell High

[illegible] cows continue in good demand at [illegible] prices, indicating that farmers find [illegible] a good proposition. A northern Illi[illegible] report says that prices are $5 to $15 [illegible] higher than a year ago. Best grade cows, [illegible] Holsteins, to come fresh soon, [illegible] $175. Guernseys about the same. [illegible] red and white or straight red sell [illegible] at $160 and up to $140. Choice cows [illegible] with records up to $200. Heifers [illegible] to soon bring $80 to $130. A [illegible] Wisconsin report quotes "extra [illegible] springing cows of good size and type [illegible] testing association records of 300-[illegible] fat" at $140@200. Watson.

[illegible], March 2, 1929.

RED FOXES

[illegible] have a couple of inquiries for red [illegible]. Those who have this kind of live[illegible] for sale should notify us. There are [illegible] orders on shipment of it in Penn-



The 2-Door Sedan, $1145 Body by Fisher

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New ideals. New standards. Rising among progressive millions who dwell in America's farm regions. Millions who are demanding motor cars worthy of the highways that yearly unite city and country in closer accord.

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A demand that finds ready answer in the great New All-American Six. In its new and balanced elements of speed, stamina and economy . . . in its new and attractive features of comfort, safety and style.

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Sterling qualities . . . qualities required in a car for the modern country home. Embodied in a remarkable engine and a remarkable chassis. Embodied also in the proud insignia "Body by Fisher."

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In short a finer breed of motor car. A new car which, because of its unrivaled value, is making a tremendous appeal to farm families everywhere. A car you should see and drive at your first opportunity. A New All-American Six.

★ ★ ★

Oakland All-American Six, $1145 to $1375, f. o. b. factory, plus delivery charges.

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The New OAKLAND ALL-AMERICAN SIX

PRODUCT OF GENERAL MOTORS

Agricultural Lime

Hydrated
Ground Burned
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Our lime, burned from Western Pennsylvania high-calcium grey limestone and sold in these three forms for the past 18 years, represents the standard, unfailing and economical method of sweetening the soil. The wonderful results enjoyed by our many customers over this period of time prove these facts. Can anyone afford to waste both time and money by using substitutes? If your dealer cannot furnish our Agricultural Lime write to us for prices.

Rock Point Stone & Lime Co., New Castle, Pa.

Worth More — Cost No More

GRO-ALL

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SPRAY and DUST MATERIALS
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Dealers Wanted

THE CENTRAL CHEMICAL CO.
HAGERSTOWN, MD.

Factories: Gettysburg, Milton, Pa.; Baltimore, Hagerstown, Frederick, Md.; Norfolk, Mt. Jackson, Harrisonburg, Va.

10 DAYS TRIAL!

The SHAW Du-All Tractor

[illegible] Plows, Seeds, Cultivates!

THE SHAW MFG. CO. Dept. PF-3 GALESBURG, KAS.

100 APPLE TREES or PEACH TREES $7.95

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are short-cuts to finding out truths. The truths about everything you want to buy. The names in advertisements are names of solid reputation. The labels in advertisements are symbols of satisfaction. It pays to read the advertisements, for then you know what is good. The products they tell you about are being bought, tested constantly. The fact that they're still being advertised is alone proof of their worth.

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TIGHT BINDING TEXT CUT OFF

The 4TH Ingredient



ALONG with their ammoniates and superphosphates and potash, V-C Fertilizers always contain a fourth ingredient. This is not a substance at all, yet it makes the whole mixture good as to sources and blend, as to contents and condition. V-C Fertilizers would not be the same without it.

This fourth ingredient, found in no other fertilizer but V-C, is a priceless one. It is... *V-C's good name!*

VIRGINIA-CAROLINA CHEMICAL CORPORATION
Richmond, Virginia

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Greatest All-Year-Round Layers
Superior to Leghorns. One customer writes: "245% net profit in 5 months." Another: "A flock of 24 hens laid an average of 198 eggs in a year." Still another: "210 Leghorns had 28% production in Dec. and 55% production in Jan. while 345 White Campines had 42% production in Dec. and 70% in Jan. CATALOG FREE; stamps appreciated.
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Ohio Accredited chicks—every breeding bird banded. Strong, healthy, well bred flocks carefully bred for high production.
WE SHIP C. O. D. $2.00 will book order. On orders placed before March 1st we will give 10 chicks per 100 extra. Illustrated catalogue and price list on request. Write today.
BLUFFTON HATCHERY, Box H, Bluffton, O.

PEERLESS CHICKS
All flocks are B. W. D. tested and treated for pin, round and tape worms. Also fed Cod Liver Oil which produces highest quality chicks.
S. C. White Leghorns (Hollywood and Tom Barron 12c
S. C. Buff and Brown Leghorns 12c
Barred Rocks and S. C. R. I. Reds 14c
Wh. Wyandottes, Wh. Rocks and Buff Orpingtons 15c
100% delivery and satisfaction guaranteed
THE SMITH HATCHERY, Bryan, Ohio

Baby Chicks from free range, choice flocks of heavy laying Barred Rocks, White Rocks, S.C.R.I. Reds. 12c each; S.C. White Leghorns, 10c; heavy mixed, 10c; light mixed, 8c. 100% live delivery.
PENNS CREEK HATCHERY, Selins Grove, Pa.

CHICKS from leading strain; Postpaid.

	100	500	1,000
S. C. W. Leghorns	$11	$52.50	$100
S. C. Barred Rocks	12	57.50	110
Mixed Chicks	8	40.00	80

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Hampton's Black Leghorn DAY OLD CHICKS
The kind that lay. Circular free.
A. E. HAMPTON, Box F, Pittstown, N. J.

RIVERDALE CHICKS L. Brahmas, Wh. Wyan., Barred and White Rocks, S. & R. C. Reds, W. Leghorns, Anconas, Buff Orpingtons. Write for price list.
Riverdale Poultry Farm, Riverdale, N. J.

YANKS CAN'T ROCKS

NO BLUFF CHICKS, JUST REAL STANDARD QUALITY. Thousands of customers know. Order year after year. A satisfied customer my best advertisement. Join the old reliable plant. 18 years' satisfactory service cuts down expensive advertising. My customer reaps the benefit in ordering from this small ad. S. C. WHITE and BROWN LEGHORN SPECIALIST. 200 to 300 Egg Strain CHICKS, $13 per 100; 500 or more $11 per 100. 100 Assorted Chicks, $8 per 100. Free and 100% Live Delivery Guaranteed.
HOUSEWORTH'S LEGHORN FARMS
Port Trevorton, Penn'a

BABY CHICKS C.O.D!
Send no money, just mail your order. We ship C. O. D. and guarantee live delivery of chicks from pure-bred, inspected and culled flocks.

Prices on	25	50	100
S. C. Wh. and Br. Leghorns	$3.00	$5.50	$10.00
Bd. Rocks and R. I. Reds	3.50	6.50	12.00
Wh. Rocks and Wh. Wyandottes	4.00	7.50	14.00
Brahma Chicks	7.50	4.50	8.00

Write for prices if interested in 2 weeks old chicks.
Bellefonte Poultry Farm, Box 900 Bellefonte, Pa

BABY CHICKS
Purebred and utility stock from free range and breed leading strains, 12 varieties, 8c up. Live arrival prepaid. Bank ref. Write for free circular and prices.
ST. STEPHEN HATCHERY, St. Stephen, Ohio

EWING'S English White Leghorns
are the product of 15 years of breeding from directly imported Barron strain sires, with pedigrees of 250 to 314 eggs. Breeders extra large and vigorous. Husky chicks, fertile eggs. Fully guaranteed. Free mating list.
E. T. EWING, Atlanta, Penn'a

LIVABLE CHICKS sent C.O.D. from our own big, healthy egg-bred stock. 300-egg blood, big type Tancred White Leghorns, $14 per 100; $40, 300; $65, 500. "Big Indian" Rose Comb R. I. Reds, Rich dark color, $10, 100; $40, 300; $75, 500. Parks Bred-to-Lay Barred Rocks. (Reg. Permit), $17, 100. Free, circular.
WILSON'S POULTRY FARM, Nottingham, Pa.

QUALITY S. C. Wh. Leghorns, $11-100; S. C. CHICKS Barred Rocks, $13. Light Mixed, $9. Heavy $11. Special prices on larger lots. 100% live delivery. Postpaid. New circular free.
EDGAR C. LEISTER, McAlisterville, Pa.

Chicks from Blood-Tested Stock
Pennsylvania Supervised Flocks.
Shipped C. O. D. Free Circular.
Sunnybrook Poultry Farm, New Berlin, Pa.

QUALITY GUARANTEED
White Leghorns, Barred Rocks, Rhode Island Reds at exceptionally low prices. Write for circular.
MARYSVILLE HATCHERY, Box 16, Marysville, Ohio

Farm Conditions

Lebanon Co., S. E. Pa.
Feb. 27: The foot of snow of last week has all been melted. Farm work at a standstill. Good cows and horses bring $200 at sales. Farm organizations active. Tree thinning demonstrations in order. Much tobacco is trucked to Lancaster county markets. Prices around 20c lb. There will be much moving this spring. Chick season on again. Eggs 34c, butter 55c, hay $14. P. H. W.

Potter Co., Northern Pa.
Feb. 19: Heavy snowfall last night and it will prolong the good sledding enjoyed for weeks. Farmers hauling logs and out and fast over the good roads. Several stores and dwellings destroyed by fire. A stage driver on a rural route found a deer wood-chuck beside the road, early in February and took it to the city at the end of his route. Dairymen's League meetings held at central points, in an effort to obtain more milk. Some potatoes moving but prices very low. Butterfat 48c, eggs 30@32c, cheese 23½c, potatoes 40. M. C. Smith

Union Co., Central Pa.
Feb. 21: The deepest snow of this winter makes a needed covering for wheat. Public sales will be held daily the next five weeks. Except hauling manure to fields and getting home wood, little farm work can be done. Cows and hens sell best at sales. Wheat and corn are being marketed at $1.40 and $1 each. Oats is 55c, veal calves $12@14, eggs 36c, hens 28c. Clover seed and fertilizers are being bought. I. N. Glover.

Centre Co., Central Pa.
Feb. 23: Fine winter weather, mercury varying from considerably below zero at different times up to a thaw last week which bared the sunny side of the hills. Wheat $1.40, rye $1.10, corn 98c, barley 80c, oats 55c, buckwheat 90c, butter 45c, eggs 40c, veal calves $13. A.

Lawrence Co., Western Pa.
Feb. 25: Old-fashioned winter. Plenty of snow, fine sleighing on side roads. Stock is wintering well. Hay plentiful. Timothy $16 per ton, clover $18, ear corn 55c, live poultry 28c, dressed poultry 45c, good country butter 55c, strictly fresh eggs 45 to 50c. M. L. V.

Lancaster Co., S. E. Pa.
Feb. 25: About twelve inches of snow fell last week, but as there was no wind the roads were not blocked. The State Highway Department soon cleared the highways and traffic was not delayed. The epidemic of influenza has passed and there is very little sickness at present except colds. Geese have started to lay. Chickens are not laying as well as usual at this time of year. R. Chester Ross.

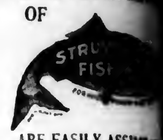
Marshall Co., Northern W. Va.
Feb. 23: The past two weeks have been the coldest of the winter. Deepest snowfall of the season fell last week. Health greatly improved after epidemic of colds and influenza. Livestock coming into spring in fairly good condition. Farm sales started, fresh cows selling high. Winter wheat badly frozen out. Farm Bureau and health unit doing good work. The matter of adopting the county unit for handling this year's clip of wool is being much discussed by farmers. Quite a number of fat hogs going to market. Incubators being set. Road work to start in spring joining Pennsylvania and West Virginia over State Route 2. Frank M. Day.

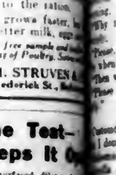
Carroll Co., Northern Maryland
Feb. 26: Spring-like weather came to an abrupt end with a heavy fall of snow February 23rd, the first real snowstorm of the season, was ten to twelve inches deep. During the favorable weather farmers were busy hauling manure, pruning orchards and trimming grape vines. Some timber is being cut. Farmers are becoming more interested in farm wood lots. A stone road in the upper part of the county is nearly done as a result of the unusually good weather.

The Carroll County Dairy Improvement Association has completed its second year, having had 309 cows making records. The milk average was 7,777 lbs. with a butterfat average of 308 lbs. The association closed the year with 23 members. Thirteen herds averaged 300 lbs. of butterfat.

Plans are being made to have Carroll county farmers listen in on a nation-wide radio hook-up program on March 14th from 10:30 to 11:30 p. m., eastern standard time. Harry I. Rinehart.

Wirt Co., Central W. Va.
Feb. 20: We are having winter weather, snow on the ground, after several days of spring-like weather. Farmers getting very little done. Plenty of feed. A few sales and stuff bringing fair prices. E. N. B.

THE NATURAL M... OF

ARE EASILY ASSIMIL...
It is now well established fact that ... crabs in their natural state, in the ... phorus, calcium, Iron, Sulphur, Iodine etc., of STRUVEN MEAL are much more easily ... by the animal body than ... added to the ration.
The animal grows faster, ... hens lay better milk, eggs ...
Write us for free sample and ... "Care and Feeding of Poultry, Swine ...
CHAS. M. STRUVEN & ...
114-116 N. S. Frederick St., Balt...

Heals the Test— Keeps It O...
These new, soft-surfaced dilators ... and assist the inflamed teat cells to ... Improvement quickly heals ... For positive results in treating ... conditions. Cut or Bruised Teat ... Milker goes by. Nature's Way ... lubricant and for ... dilators ... medication into the teat canal.

DR. NAYLOR Medicated TEAT DILATORS
36 Dilators, packed in jar of medicated ointment mailed post paid for $1. If your dealer does not keep our products in stock. Satisfaction guaranteed.
Dr. H. W. Naylor, Dept. 10, Morris, N.Y.

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1909-1929 First to ohio Chicks in U. S.
UHL PIONEER HATCHERY
New Washington, Ohio

300,000 White-Brown Buff Leghorns **CHICKS**
PURE STRAINS Tancred ... from American & C. White ... and Buff Leghorns. Eggs and ... direct from some of the finest ... Pennsylvania Breeders ... Egg Production, Depend... Special Poultry men. 100% Live ... Shipped Service. Place order ... No Money—Chicks Shipped C.O.D.
Pennsylvania Co-Operative ...
Box 318, Grampian, ...

BABY CHIC...
100% arrival guaranteed

	25	50
White Leghorns	$2.75	$ 5.00
Red Rocks and Reds	3.25	6.00
Heavy Mixed	2.75	5.00
Light Mixed	2.50	4.50
Pekin Ducklings	3.50	16.00
Mixed Ducklings	4.50	17.00

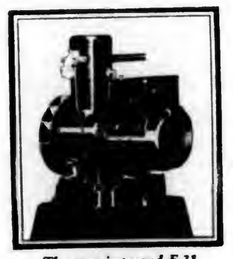
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SHIPPING CRATES LOANED
SHIP YOUR LIVE BROILERS and ... New York's Oldest Live Poultry ... We are headed ... returns made daily. Highest prices, unlimited. Inquire about our ... crates, tags, shipping instructions and ... dar. Poultry P. O. KRAKAUR Poul... West Washington Market, New York ...

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From Tuberculin Tested ...
28 per cent milk solids, 66 per cent ... as custard with no fat eggs ... Top-packing and lemon pepper ... Increases egg production and ... Palatability. Good for chicks, ... hens. Send direct to us the ... about 485 lbs. Write for ...
TITUSVILLE DAIRY ... Titusville, Pa.

5666. Etc.—Push ... dealers in your territory ... prizes NOW. Prompt ... to four of Brookhaven ... cans. ZENITH BUTTER & EGG ... Street, New York City.

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The new improved E-31 Westinghouse Light Plant

YOU have always looked forward to the day when you could *afford* to bring all the advantages of electricity to your farm.

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FARM ELECTRIC PLANTS AND BATTERIES

The new type WL Replacement Battery showing close-up of indicator cell.


DAIRY CATTLE

SEVENTH ANNUAL **PUBLIC SALE**
Saturday, March 16, 1929
... Registered Holstein cattle, 11 cows and ... to freshen December or later, good grade ... consisting of heifers. In this offering you will find ... of the best and richest cows from the best ... herd sire in N. Y. state. Champion Sensation ... cows had No. 2 R.O.P. sire of his daughters just ... making a 741 lb. butter in 365 days on milk ... herd has been accredited for 3 years. Also 100 ... Chester White hogs. Write for catalogue.
F. L. Heilman & Son, Cleona, Lebanon Co., Pa.

PUBLIC SALE
50 Head of Pure-Bred and High-Grade GUERNSEY CATTLE
Thursday, March 21st, 1929
... one mile south of Waynesboro, Pa. along ... Waynesboro and Gettysburg Pike. Accredited herd. Cattle tuberculin tested before sale. Three ... cows, all fresh or soon to freshen. Three ... heifers, all fresh. Longest time for ... CHAS. E. MARTIN, Waynesboro, Pa.

FOR SALE—Three Registered Guernsey Bulls ... months old, two from A.R. ... with good heads and color, and sired by a ... bull, son of Langwater Kenney and ... Kenney. A.R. record 15,176.5d Milk and ... Class A. These bulls are priced for ... Accredited herd No. 5416. Come and ... and prices with C. BOLTON FARM, ... Bristol, Pa.

Four Guernsey Heifers
... months old, from good sire. One registered ... with R.O.P. backing 11876 ... sire's ... a grandson of the ... and sire of ... Accredited herd. Health ... JOHN H. HERR, Jr., R. 2, Refton, Pa. ... Quarryville, Pa.

DAIRY CATTLE

Reg. Jersey Bull ... Accredited herd. Robert Rainford & Son, Midway, Pa.

REG. JERSEY BULLS ready for service. Also ... Jersey heifers. Accredited herd.
C. F. & M. W. BIGHAM, Gettysburg, Pa.

PURE BRED JERSEY HEIFERS
... to 8 months old. Write or call
I. J. HARSHBARGER, Mattawana, Pa.

FOR SALE: Pure bred Brown Swiss bull ... old, solid color, backed by heavy milk ... ex-changes for pure bred Holland Dutch stock. ... DR. J. F. BULL, Somerset, Pa.

Holstein Bulls ... for sale from our accredited herd. From calves to service ... ages (from R.O.P. 32 lb. 3 days ... cow. Also Yearlings.
Crystal Spring Stock Farm, Littlestown, Pa.

SWINE

Registered Duroc Gilts ... Large type, ready to farrow April 1. Bred to the ... Chief Orion King I. 252651. Also a few ...
K. W. HAMILTON, Home, Pa.

Durocs Bred sow sale March 22nd. ... Spring farrow. This litter bred ...
I. J. HILLER, R. 4, Easton, Pa.

DUROCS ... Big type, Pedigree Duroc ... Write ... Choice ... O. C. Gingrich, Hummelstown, Pa.

Spotted Poland China Boars
ALFALFA HILL FARM, Custar, Ohio

SPOTTED POLAND-CHINAS ... Spring ... Bred ... A. M. KENNEL, R. 2, Homer Brook, Pa.

BIG TYPE POLAND-CHINA ... fall boars and ... Prices right. Write or call on ...
O. C. POWELL, Ada, Ohio

REGISTERED SPOTTED POLAND CHINA ... for sale at all times. Write ...
BROOKSIDE FARM, Middletown, Va.

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CHESTER WHITES—Pedigreed big type Champion blood, all ages, 75 sows farrowed 151 pigs, priced low until please. C. E. Cassel, Hershey, Pa.

CHESTER WHITES since 1887. Choice bred gilts. Large fall pigs, either sex. Immune. J. C. & C. H. Brautigam, R. 3, Sidney, Ohio

Hampshire Hogs Bred gilts, service boars, pigs. Shippensburg, Pa.

REGISTERED BERKSHIRE PIGS
From large winning stock. $18.00 each.
FRED HILNER, R. 1, Millville, Pa.

REGISTERED BERKSHIRE BOAR PIGS
10 weeks old. Money makers.
W. F. McSPARRAN, Furnlss, Pa.

Reg. Berkshires Superior breeding stock. All ages. Both sexes. Choicest bloodline.
WOLF CREEK FARM, R. 2, Slippery Rock, Pa.

O.I.C. BRED GILTS. Fall Pigs and orders for spring pigs. Everything Registered.
EDWARD RITTER, Williamstown, W. Va.

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AYLESBURY and ROUEN DUCKS. Emblen strain. Eggs, baby ducks. Bred from prize winners.
SHALLENBERGER FARMS, Amanda, Ohio

Reid's Turkey Farm No Blackhead for 15 years. Two Breeds. FREEHOLD, N. J., Star Route.

Special Fall Prices on high class breeding Turkeys, Geese, Ducks and Guineas; write your wants and for mating list. Pioneer Stock Farm, Telford, Pa.

ADVERTISING reduces the cost of products that add pleasure and comfort to living.

TIGHT BINDING TEXT CUT OFF

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WANTED—Farm superintendent, one who can keep books preferred. Address P. O. Box 228, Lucasville, Ohio, stating age, experience and salary expected.

WANTED—Farmers to farm on share basis in Somerset and Cambria Counties. Write Wilmore Real Estate Company, Wilmore, Pa.

WANTED—Single man for poultry and general farm work. McNees Farms, Carnegie, Pa.

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WANTED—Country girl or woman on Poultry farm near Pittsburgh. Week's washing done. Good home. State wages expected. McNees Farm, Carnegie, Pa.

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AGENTS AVERAGING $17 DAILY showing new amazing household device that washes and dries windows, sweeps, dusts, cleans walls, scrubs, shines, Cleans autos. Very attractive price. Over 100 per cent Profits. 156 3rd St., Fairfield, Iowa.

AGENTS—MAKE $25 to $100.00 weekly selling Coca Cigarettes and Cheroots to farmers and motorists. All brands. Express collections sterling. Established 25 years. Particulars free. Bisler Co., Box C 15, Jackson, Ohio.

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EVERY HOME A PROSPECT.—Make big money. Light work. Take orders for trees, shrubbery. Work entire year. All or part time. Complete cooperation. Leadership service. Commission paid weekly. We deliver, collect. Apply Williams Sons Nurseries, Desk L, Rochester, N. Y.

SALESMEN—Specialties—Line of necessities for every store, garage, office, school. Big seller—big profit. The Brush Works, St. 40, St. Paul, Minn., Iowa.

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GUARANTEED HOME-SPUN TOBACCO. Chewing, 5 pounds, $1.50; 10,-$2.50. Smoking, 10,-$1.75. Pipe free. Pay Postman. United Farmers, Bardwell, Kentucky.

BIG SAMPLE TOBACCO for 10c and 5 names of users. Kentucky Tobacco Company, West Ludlow, Kentucky.

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6 lbs. CLIPPINGS FOR PATCHWORK, $1.00. 3 lbs. Silks, $1.00. Extraordinary value! Send no money, pay postman $1.00 plus postage. Satisfaction guaranteed, or money refunded. Sniffer Mfg. Co., Dept. 56, Whitman, Mass.

100 ASSORTED dishes packed as first quality, consisting of cups, saucers, plates, bowls, cut, meats, platters, etc. All useful. Slightly imperfect, $5.50, prepaid. Send money to us for immediate shipment. Home China Co., Millis, Mass.

LONG'S PURE HONEY—Direct from producer, 5-lb. pail clover or buckwheat, $1.15 postpaid. Wholesale prices on request. Satisfaction guaranteed. W. C. Long, Millville, Pa.

HONEY.—Amber, 5 lbs., $1.00; 10 lbs., $1.90, postpaid. 100 lbs, $13.00 here. Noel J. Loucks, Springboro, Pa.

BULK COMB AND EXTRACTED, white, 5-lb. pail, $1.25; amber, $1.10, postpaid. Ed. Mitchell, Costalia, Ohio.

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MAKE BIG PROFITS with Chinchilla Rabbits. Real money makers. Write for facts. 848 Conrad's Ranch, Denver, Colo.

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POSITIONS WANTED by Farm School Graduates, 20 years of age, having had three years practical and theoretical training on the large School farms. Some of these graduates are trained as dairymen; herdsmen; tractor operators; vegetable gardeners; orchardists; poultrymen; greenhousemen; landscape men; and general farm management. Only interested in good farms. Ready for employment April 1st. Communicate with C. L. Goodling, Dean, Farm School, Bucks Co., Penna.

DO YOU NEED FARM HELP.—We have Jewish young men, able-bodied, some with, but mostly without experience, who want farm work. If you need a good, steady man write for an order blank. Ours is not a commercial agency. We make no charge. The Jewish Agricultural Society, Inc., Box C, 301 E. 14th Street, New York City.

POSITION as working manager on fruit farm or gentleman's estate, desired by man 40, married, familiar with general farming. Special experience in fruit growing. Harry E. Linn, R. 3, Harrisburg, Pa.

POSITION WANTED by working farm manager, married, small family. Thoroughly experienced dairy, poultry, gardening and field work. Available April 1 to 15. Address Box 110, Pennsylvania Farmer, Pittsburgh.

SITUATION by general farmer, age 40, married, two children. Good manager, excellent character, splendid reference. Address Box 108, Penn's Farmer, Pittsburgh, Pa.

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WANTED.—To buy Registered Guernsey heifer calves, heifers and cows, priced reasonably. Hugh Sanford, Mocksville, North Carolina.

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A FEW "SUCCESSFUL" DEMONSTRATOR incubators for quick sale at great reduction. 60 to 300 eggs capacity. Good as new. Des Moines Incubator Co., Box 734, Des Moines, Iowa.

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WANTED—Raw Furs, Rabbits, Especially good Muskrats, $1.75. Also want live rabbits, Muskrats, Minks, Raccoons, Foxes. Sterne Fur Co., New Brunswick, New Jersey.

WANTED—Old books, letters, stamps, etc. Box 212, Bridgewater, Va.

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WANTED.—Hay, Straw, Grain, Potatoes, Apples, Cabbage, etc. Carloads. Pay highest market prices. The Hamilton Co., New Castle, Pa.

DOGS

RAT TERRIERS, Fox terriers, Bats 10c. Pete Slater, Box P.F., Pana, Ill.

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CERTIFIED SEED POTATOES that vigor and high yielding ability. Paul R. Smith, Clymer, Pa.

SEED CORN.—Calico, also Early Golden Surprise. Second to none. Charles Freed, Lancaster, Ohio.

40,000 DISEASE-FREE CUMBERLAND RASPberry Plants, $25.00 per 1,000, $3.00 per 100. A. Zelp, Wernersville, Pa.

IRIS.—The world's most beautiful flower. Write, L. W. Lighty, East Berlin, Pa.

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MEDIUM and MAMMOTH RED and ALSIKE Clover, $21.00. French Medium Red for fine Buckhorn. Sweet Clover, Unhulled, $11.00; Hulled, $25.00. Buckhead Grimm, Ideal, Alfalfa, $25.00. Timothy, $4.00. Bags free. Sturdy, Pedigree Alsike and White Mammoth, $20.00. Alsike, Extra Choice, $25.00. White Blossom Sweet Clover, $25.00. Grimm, $35.00. Variegated Sorghum, $2.50. Imported Seed—Italian Rye Corn, Hulled and Unhulled, $2.50. Siberian Seed Oats, $3.00. All above seeds are all free from noxious weeds according to the Ohio State Laws and are high in purity and germination. Recleaned and graded. Inoculator for clover and alfalfa, $1.00. Send for Seed list. M. G. Stoller Products, Inc., Bucyrus, Ohio.

EARLY VEGETABLE PLANTS—Prepaid. Cabbage: Wakefields, Copenhagen, Golden Acre, Flat Dutch, Bermuda Onions, Early Harvest, Postpaid, 100, 40c; 200, 75c; 500, $1.50; 1,000, $2.75. Collect 1,000 $1.00; 2,000 $2.75. Tomatoes: Earliana, Bonny Best, Ponderosa, Stone, Prepaid, 50c, 90c; $1.50; 1,000, $2.50. Peppers and Egg Plants—50, 75c; 100, $1.25. Extra Selected Delivery. Plant Co., Ottawa, Ga.

CABBAGE PLANTS NOW READY. All open grown field Cabbage plants from selected stock. Our customers have been getting our plants for years and Charleston Wakefield, Copenhagen, Dutch Golden Acre, Flat Dutch. Prices by parcel post prepaid, 200 for 75c; 500, $1.50; 1,000, $2.75. Express, 1,000 to 5,000, $2.25. Express Collect over 5,000, $1.75 per 1,000. Bermuda Onions, Yellow Bermuda and Cabbage plants. Roots well packed and shipped promptly. Satisfaction guaranteed. Tifton Plant Co., Tifton, Ga.

TIFTON'S RELIABLE PLANTS. Copenhagen Cabbage, Bermuda Onion, Flat Dutch, Wakefield, Dutch Ballhead. Cauliflower, Snowball. Postpaid 500, $1.50; 1,000, $2.50. Express collect 1,000, $1.25. Over $2.15. Crate $2.50. Tomato, Pepper, Cauliflower, Egg Plant, same price. Tifton Plant Co., Tifton, Ga.

1,000 STRAWBERRY PLANTS $2.50. Progressive, Improved, Everbearing, Selected Mastodon, Everbearing $4.50. Instructions. Catalog free. Prepaid, 100, $2; 1,000 well rooted, grade plants, $3. Up. Quills, shrubs, perennials, Quick stock guaranteed, state certified inspected. Write Hillcrest Nurseries, Salem, Mass.

TOMATO PLANTS Open-field grown, Stone, Earliana, Globe and Chalk's Early Jewel. Booking orders now. Ready May 15th. 200 for $1.00; 1,000, $3.50; 5,000, $7.50. Satisfaction guaranteed. Ohio River Plant Farms, Hawesville, Kentucky.

HIGH GRADE SEED POTATOES. Russets, Green Mountain, Gold Coin, Irish Cobbler, Banner, Walter Raleighs and Certain Seconds. Prices right. Catalog free. The Kershner Potato Farms, Richfield, Pa.

PRIVET, BARBERRY, EVERGREENS, ROCK Plants, Concrete Vases, Flower Boxes. Flowering plants in cup. Hedge plants. Send for very lowest prices. Send for list. John W. Hoy, 171, Churchville, Pa.

RUSSET CERTIFIED SEED POTATOES, passed four state inspections. No. 1 grade and quality guaranteed, $2.50 per 120-lb sack cash with order and shipped as directed. Wm. S. Long, Marion Center, Pa.

CLOVER SEED, white. Nothing finer. Alsike seed reclaimed to 99.50 purity. Unexcelled for adaptability. Also Alsike, Timothy, Mixed for samples and prices write A. Sargent, Sargent, Indiana.

CERTIFIED SEED POTATOES. Red Bliss and original strain Certain No. 1. Buy direct from grower. Write today for prices. N. Fairport, New York.

C. O. D. FROST PROOF CABBAGE PLANTS. Leading varieties now ready. Sent 500, $1.00; $1.00, 5,000 $4.50. Farmers Plant Co., Tifton, Ga.

FROST-PROOF CABBAGE and Potato Plants. Strictly first class large, fine and well rooted. $1.00 per thousand. Cash. Live Monton variety wanted. Guarantee Plant Co., Ty Ty, Ga.

SEND NO MONEY. C. O. D. Frost Proof Cabbage and Onion plants. All varieties. 300, 65c; 500, 75c; 1,000, $1.00; 5,000 $4.50. Standard Plant Co., Tifton, Ga.

SEED POTATOES.—Russets, Green Mountains and World's Wonder and Certified Seed Potatoes for sale. All raised from certified seed. Prices right. M. R. Witters & Son, R. No. 1, Lebanon, Pa.

HARDY ALFALFA SEED $3.75 pure, $10.00 bushel; sweet clover, $3.75 pure, $4.00. Return seed if not satisfied. Geo. Bowman, Concordia, Kansas.

SEED CORN. Indian Yellow, Indian Yellow, Yellow Dent, Crawford, 2-ear basket Chester Pewter, Seed corn specialist. Waterstown, Indiana.

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TEN lots, each containing [illegible] and each [illegible] were fattened on [illegible] ration consisting of corn meal, cottonseed meal, and wheat bran. The [illegible] weighed on an average 265 pounds when [illegible] and were fed for 85 days. In a [illegible] experiment, according to a report by [illegible] Their [illegible] were [illegible] pounds. For each [illegible] there are 2,000 pounds [illegible] of three-fourths [illegible] minerals. [illegible] were 243 pounds [illegible] cost of 1.44 pounds [illegible] 85 days.

[illegible] pounds [illegible] cake, [illegible] 100 pounds of [illegible] pounds.

It will be noticed [illegible] less than one-fourth of the ration by weight but the most rapid gains in fattening hogs.

2. That oats should be limited to less than one-fourth of the ration by weight but the most economical use of feed in fattening hogs.

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[illegible] Gun Reduced

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EXTRA GOOD FARM and retail [illegible] only [illegible] large town. Would [illegible] Full particulars [illegible]

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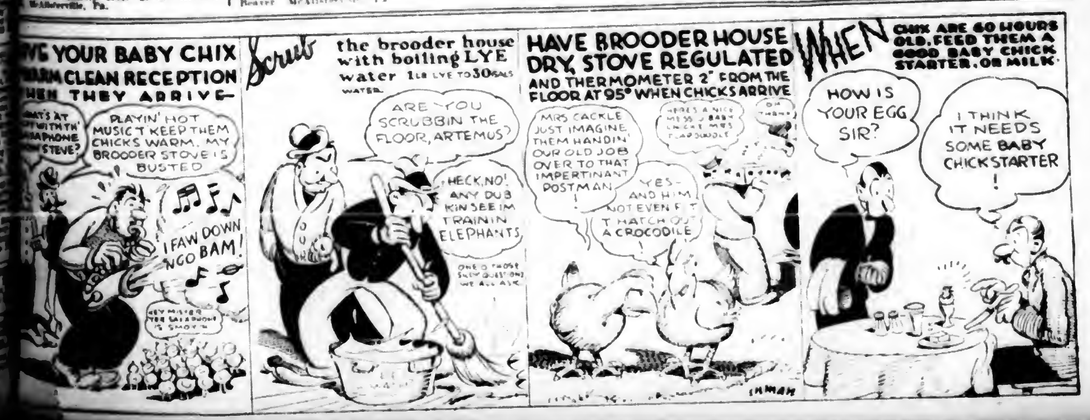
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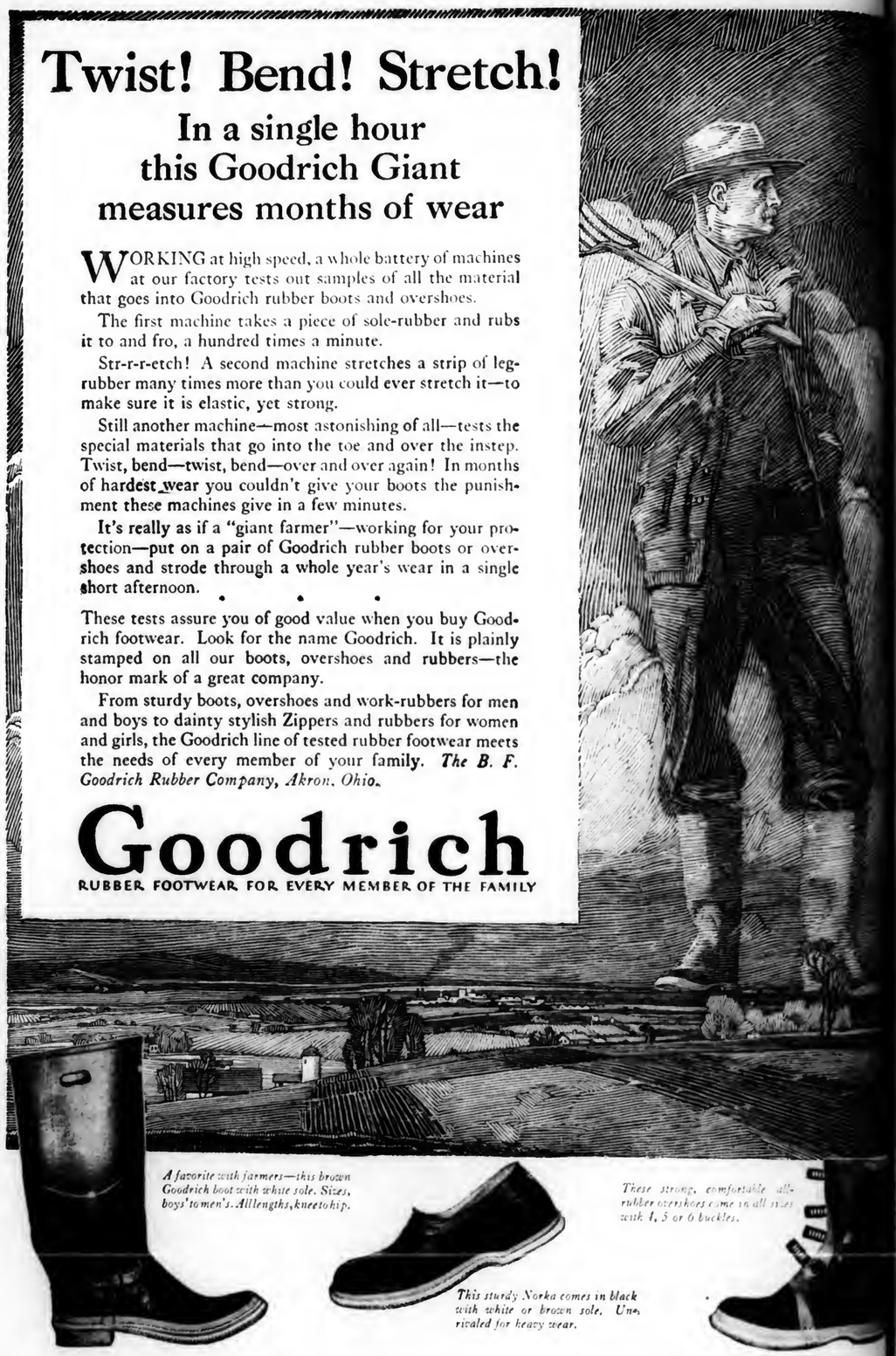
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PENNSYLVANIA STOCKMAN *and* FARMER

March 16, 1929

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Farm Facts and Fancies

By ALVA AGEE

THE Chicago Journal of Commerce runs a column daily that is entitled "Along the Highway". It is written by W. G. Sibley, whose philosophy of life has gained him the title, "The Sage of the Ohio River". He has known very rich men and poor ones, and what he says about the amount of property that should satisfy a man is worth considering. He says: "A man is rich only when he feels rich. To be wealthy is to feel that way. It is a state of mind, not a matter of property. Riches, like happiness, seem always to be in the future. . . The rich feeling does not come to men because in almost every case as a man adds to his possessions his wants increase. . . It is because of this multiplication of wants, particularly in city life, that we have frequently expressed the belief that men in villages and on farms who feel rich with resources of ten or twenty thousand dollars, get more content and pleasure out of life than city men who feel poor with much larger possessions."



A Matter of Content

The essential thing is a reasonable contend, and the writer might have made the sum named smaller and kept within the truth. The man and his family who use their capital and their ability to get along, and who enjoy industrial strain, keeping watts within income, get more satisfaction out of life than most people whom we rate as wealthy.

The mischief in it all is the inability to keep wants down. Matters are worse now because the movies, the radio and motor cars thrust upon our notice a lot of people who spend money freely. These influences go out into the country where we once thought we were fairly well-to-do and now find that we are relatively poor, if the measure be dollars instead of satisfaction, and the contrast saps away at the satisfaction and leaves one feeling poor.

Think This Out Straight

Now, some friend I value will be saying that this is a deadening doctrine, and that farmers should be far from contented with their financial situation. Of course they should not be satisfied. They should be more thoroughly in earnest to curb taxation, which is running wild, to stop development of unused land at public expense, to extend tariff benefits as far as they will go—the list is too long for mention here—but such activity as a citizen is something wholly apart from an intention, after all, to keep personal wants within personal income, now and when matters improve.

I speak from experience when I say that there is pleasure in keeping one's scale of living down where income demands, and there is no necessity of envying a rich neighbor across the way. The only trick is not to want anything better if it must come through strain and fear that one cannot afford it. "Easier," you say, "in the later years of life?" Yes, I reckon it is. If we didn't learn more about the actual values of life as we grow older, it wouldn't pay to grow older.

Tariff on Seed Potatoes

There is bound to be a lot of selfishness in a protective tariff bill, and much inconsistency. The claim is made that there is inconsistency in the demand for high duties on potatoes for the table and none on seed potatoes. That is not true. They are two very different things. We have the ability to grow all the potatoes we can eat, and far more, but to date we have not demonstrated our ability to provide growers with all the disease-free seed potatoes that they need.

Prince Edward Island may not have any particular advantages in soil and climate over some districts in this country, but the farmers and the authorities there came to see that it would pay to have stricter regulations observed than has been the case in some of our states that have been furnishing certified seed. Great numbers of our growers believe this so thoroughly that they are willing to pay a long price for this imported seed. Why handicap them when disease takes such heavy toll from our growers? The day may come when there will not be absolute need of new seed, and then it should be barred in the interest of our own producers, but right now we need a bigger stock of seed relatively free of disease.

New Farming Land

We wish more strength to the hands of organizations in the fight they are making against the big irrigation project in the Northwest. They did not get anywhere in their opposition to Boulder Dam, but in that case the land lay close to the need of growing crops other than water, the danger of disastrous floods, and considerable political influence. Probably they were hopeful in their present fight, but it will be more aggressive. The American public is stirred as never before, and that is the best help of all.

It is a chance in national policy that we want, and now is the time to show evidence that the change is to be made. It would be a help if all our congressmen were to receive letters asking that all reclamation projects be set aside until the land is needed, and that will be a matter of very many years. We are just learning to get heavy crops from the land now under cultivation, and the land now so highly taxed.

Big Farming

The predictions that the example of our industries is to be followed by agriculture in having control of production centered in the hands of big people are not alarming for this generation of farmers. They may seem reasonable enough to those who do not know farming conditions, but most of our food will continue to come from farms no larger than they are today.

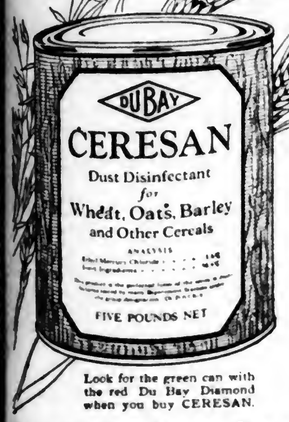
There are few farms of almost any size in our eastern and middle states that are being operated successfully. Where the holdings are large it has been found better to have them broken up into farms that could be rented to men who would have direct personal interest. The large small-grain farms of western states give us no measure of value under eastern conditions. It certainly looks that way.

Government Whitewash

Farmers' Bulletin 908, United States Department of Agriculture, Washington, D. C., information for fruit growers about insecticides, spraying apparatus and important insect pests, gives the following directions for making government whitewash: Stone lime one-half bushel, salt peck, ground rice three pounds, plaster Paris one-half pound, glue one pound, water five gallons.

First slake lime with warm water, strain through a fine sieve or screen. Dissolve the salt in warm water, boil rice flour to a thin paste and dissolve glue in boiling water. Mix in following order. Slack lime, pour salt solution on lime, then rice paste, mix plaster of Paris and glue and bring to a boil and use when boiling hot, but add five gallons of water. Stir all thoroughly and let stand a few days. Better applied hot with a brush.

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	Beckert Seed & Bulb Co.	Pittsburgh
	W. J. Sturgeon	Kittanning
	J. R. Fulton	Everett
	J. F. Wineland	Curryville
Allegheny	Brumbaugh & Niesley	Martinsburg
Armstrong	Orr & Grazier	Tyrone
Bedford	Charles H. Shive	Doylestown
Blair	Grohman's Drug Store	Butler
	Schettig Hardware Co.	Ebensburg
Berks	Bellefonte Hardware Co.	Bellefonte
Butler	Howard H. Weaner	West Chester
Cambria	Cowdricks Drug Store	Clearfield
Centre	C. F. Abbott	Espy
Chester	A. L. Ballinger Co.	Meadville
Clearfield	Harrisburg Seed Co.	Harrisburg
Columbia	Hurst Pharmacy	Girard
Crawford	W. B. Angle	Chambersburg
Cumberland	A. L. Sherk & Son	Chambersburg
Dauphin	Geo. J. New's Sons	Blairsville
Delaware	M. W. Trainer	Indiana
Elk	The Kline Grain Co.	Shelocta
Erie	Louis Zarfoss & Son	Columbia
Fayette	E. R. Witmer	Lampeter
Franklin	A. S. Groff	Lancaster
	Sprecher & Gans	Lancaster
Fulton	H. F. Ruhl	Manheim
	D. L. Herr	Millersville
Greene	Lebanon Implement & Supply Company	Lebanon
Huntingdon	Trexler Farms	Allentown
Indiana	A. O. Gehman	Coopersburg
	Trexler Farms	Siegersville
Jefferson	Gallagher & Stevick	Wilkes Barre
Juniata	Kline & Co., Inc.	Williamsport
Lancaster	Chappel's Seed Store	Williamsport
Lawrence	A. G. Gilboney	Belleville
Lebanon	G. L. Schlabach	Easton
Lehigh	Paul W. Heckman	Nazareth
Luzerne	W. W. Kalb	Sunbury
Lycoming		
McKean	Eutalia Milling Co.	Coudersport
Mercer		
Mifflin		
Monroe		
Montgomery		
Montour		
Northampton		
Northumberland		
Perry		
Philadelphia		
Pike		
Potter	Ed. D. Daily	Genessee
	J. M. Parks (Valley Milling Co.)	Harrison Valley
	William M. Grover	Ulysses
Schuylkill	R. C. Walters Estate	Middleburg
Snyder	Berlin Feed Co.	Berlin
Somerset	C. H. Schmucker	Friedens
Sullivan	Markleton Supply Co.	Markleton
Susquehanna	C. A. Phillips	Meyersdale
Tioga	R. Reich & Son	Meyersdale
Union	E. S. Thomas	Thomas Mills
Venango	Pickett Hardware Co.	Warren
Warren	The Murray Company	Honesdale
Wayne	The Frank G. Reamer Co.	Greensburg
Westmoreland		
Wyoming	Gay-Murray Co., Inc.	Tunkhannock
York	Emory V. Bupp	York
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	W. M. Hinkle	Dover
	J. A. Frear & Sons	Dover
New Castle	Clarence Voshell & Son	Felton
	W. W. Wilson	Frederica
Sussex	Harrington Hardware Co.	Harrington
	Ellwood A. Pierson	Wilmington
	The Philips-Thompson Co.	Wilmington
	George E. Swain	Georgetown
	Chipman & Penuel	Laurel
	Collins and Ryan	Millsboro
	Burton Brothers	Seaford
MARYLAND		
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Baltimore	The Meyer Seed Co.	Baltimore
	Wiseman-Downs Co.	Baltimore
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Cecil	G. A. Allender	Elkton
	C. W. Ashby	Rising Sun
Frederick	P. L. Hargett & Co., Inc.	Frederick
Harford	McComas Bros.	Bel Air
Howard	Patapsco Pharmacy	Elicott City
Kent	Massey & Wilmer	Chestertown
Montgomery		
Prince George's		
Queen Annes	Queens Annes Co. F. B.	Centerville
Washington	Ernest Miller	Hagerstown
Wicomico	White & Leonard	Salisbury
Worcester	D. H. Bradford & Son	Snowhill
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	J. S. Collins & Son, Inc.	Moorestown
Camden	Gardiner Cheeseman	Grenloch
Cumberland	Minches Seed Store	Bridgeton
	I. Serata & Sons	Bridgeton
	S. V. Davis	Shiloh
	Vineland Farmers Exchange, Ins.	Vineland
Gloucester	Reed & Estelow	Mullica Hill
	Ed. Hann	Swedesboro
Mercer	Farmers Co-operative Assn. of Mercer County	Trenton
	M. C. Ribsam & Son's Co.	Trenton
	Jos. H. Courtney & Co., Inc.	Windsor
Monmouth	W. T. Pierce	Allentown
	Rooney & Ely Co.	Englishtown
	Monmouth County Farmers Exchange	Freehold
	H. B. Kemp	Long Branch
	Reed & Perrine	Tennent
	C. H. Roberson	Freehold
Salem	Andrews and Avis	Elmer
	Garrison's Rexall Pharmacy	Elmer
	G. M. Andrews & Son	Woodstown
	The South Jersey Farmers Exchange	Woostown
WEST VIRGINIA		
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Hancock	The Faulk Bros. Co.	Chester
Harrison	Weber's Flower Shop	Clarksburg
Kanawha	Charleston Nursery & Seed Co.	Charleston
Marion	Hauge Flower & Plant House,	Fairmont
Ohio	Elm Grove Milling Co.	Elm Grove
	Kennedy Hardware Co.	Wheeling
Wood	The City Pharmacy—The Rexall Store	Parkersburg

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Mensel & Kaerr	Harrisburg
Walter S. Schell, Inc.	Harrisburg
Murray Co.	Honesdale
The F. L. Myers Co.	Huntingdon
Lancaster Drug Co.	Lancaster
New Castle Hdwe. Co.	New Castle
Bohnman Bros.	Philadelphia
Henry F. Mitchell Co.	Philadelphia
The Philo. Seed Co., Inc.	Philadelphia
Shoemaker & Busch Inc.	Philadelphia
Smith Kline & French Co.,	Philadelphia
Valentine H. Smith & Co.,	Philadelphia
Steelman & Archer	Philadelphia
Beckert's Seed Store	Pittsburgh
W. J. Gilmore Drug Co.	Pittsburgh
George A. Kelly Co.	Pittsburgh
The I. W. Scott Co.	Pittsburgh
Shigley-Massingham Co.	Pittsburgh
Bright Hardware Co.	Pottsville
H. F. Hertzog	Reading
Peerless Drug Co.	Reading
White Rose Seed & Nursery Co.	York

DELAWARE

O. A. Newton & Son	Bridgeville
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MARYLAND

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J. Bolgiano Seed Co.	Baltimore
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Loewy Drug Co.	Baltimore
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Chamberlain & Barclay	Cranbury
Deoghten Seed Co.	Newark
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Bennett, Denison, Clayton & Company	Prospect Plains
American Chemical Specialties Company	Springfield
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NESHAMINY GARDENS

By R. P. KESTER

THE condition of the dirt roads this spring brings home again to those who do not have improved highways handy to their places the imperative need of extending the hard road program as fast as possible. Those who voted against the road bond issue will be inclined to ask whether the advice they followed last fall at election time was wise or otherwise. In spite of the fact that voters were told there was plenty of money from current income to continue the building of highways there is a frantic endeavor at Harrisburg to find more money, even if the tax on gasoline must be raised and the motor license fees increased. As usual, farmers will be found holding the bag.

• • •

If there is going to be a remaking of the gasoline law, farmers, stationary engine owners and gasoline launch operators should get together and demand that gasoline not used on the highways be relieved of the tax. The cry of those who opposed the bond issue was, "Let those who use the highways pay the upkeep cost." In view of this motto, how can they ask those not using them to pay this tax? Most of the states levying a gasoline tax exempt that used on farms, in factories and for operating launch boats.

• • •

An insistent demand is being made on the Legislature that the state pay a greater part of the cost of running the rural schools. It is to be hoped that these efforts may prevail. Many school districts are at the end of their rope in their ability to raise money. If the state is to dictate, as it does, the conduct of the public schools, and demand observance of laws and rules which require the expenditure of more money than can be raised in the district, it is only fair that the state should pay the bill. Although general taxes have advanced two hundred to three hundred per cent during the last ten years, the state tax rate has not been changed. Is it not time that the people demand a revision of the state tax law?

• • •

Today, the first of March, we had fresh, new tomatoes sliced for dinner, and the price paid was only eighteen cents per pound! Beautiful, fresh strawberries were selling at forty cents per quart, only five cents more than we received last summer. I mention these things from time to time simply to emphasize the changes that are taking place in production and marketing,—changes which must affect the northern and eastern producer. For example, tomatoes cannot be grown in hothouses in the North in competition with these prices.

• • •

I have read recently a new book by my friend Thomas I. Mairs, of State College, "Some Pennsylvania Pioneers in Agricultural Science." Professor Mairs has written a short but interesting biography of the men who did the pioneer work in the establishment of State College. Any one visiting that extensive and impressive institution today cannot realize the hardships and handicaps which the pioneers had to overcome. I was personally acquainted with a few of these men, and I am sure that the author has done a true and valuable piece of work, judging them all by those I know to be faithfully portrayed.

• • •

Another little book I have read with a great deal of interest is one written by James Mitchell of Clearfield. Mr. Mitchell was one of the leading lu[mbermen] of that county in the days when lumbering was the major interest, and his long experience fully qualifies him as biographer of a past industry. I remember when, as a boy, lumbering was [the] principal business was the dominant [one] in Clearfield county. It [seems] impossible then that the [time] would come within a generation when the native lumber would be gone and practically all that was required must be shipped from afar. And the wonder of it is that those who labored hard and sold the timber from the virgin forests received little more than small wages in exchange.



• • •

The old home farm had some of the finest hemlock that ever grew on cultivated acres when I was a boy. I recall that during one of the years my father realized that he must get out a raft of timber in order to meet ends meet. The bark was peeled and hauled to the tanners six miles away. He received three dollars per ton for it and was "docked" from 100 to 200 pounds on nearly every load for no reason other than that he could not help himself. The peelers got a dollar a day each for their work, and we boys got two dollars and a half per day for hauling.

• • •

The bark returned enough to keep the three families during the time it was being marketed, but there was nothing left to credit to the bark hauler. But that is not the worst of it. The big hemlock trees were made into square timber during the winter, and hauled three miles to the river. In the spring it was "rafted in" ready to float down the river to market. But the rains were hard and timber was slow in coming. Father sold the raft of beautiful timber ready to run to Lock Haven at four cents per cubic foot. When it was settled up in the spring he had a few dollars and fifty cents per day for his own sale and team after the cost of making and rafting was paid, but not a cent for the timber!

• • •

But what would the people have done in those days without it? And what would people do now if they were in as straitened circumstances? In those days there were no automobiles to keep up, no electric light and power bills, no telephone charges, no radio expenses, no movies to pay for, and taxes were comparatively low. I am mentioning these things merely to show that the old days were not all good, and also to show that the greater part of the farm "problem" of today is due to the changed standards of living rather than to any purposeful grinding by the "other fellow".

A Reminder

THE busy spring season is at hand. Skilled farm labor is high priced and scarce. So I wish to beg that you encourage that boy or girl of yours to do his or her utmost and, in addition, maybe, keep them the rest of their days on the farm.

Make them little partners. If you have poultry give them a setting of eggs—chicken, guinea, turkey, duck or goose—and let them see to all the work of hatching and raising them. Or, if you supervise and suggest, let them do the work. Be sure that the stable is full of litter and rat and weasel proof.

If you are a trucker, let your child have a certain number of rows to plant which shall be all his own. If you raise swine or cattle or sheep make a present to your little partner of some especial pet.

R. P. K.

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Possibilities of the Potato Situation

By W. R. WHITACRE

POTATO growers in all sections of the United States are wondering what 1929 holds for them. They have passed through a year of record production when prices dropped below prewar levels and they still have potatoes to market. Last year it is estimated that 462,944,000 bushels of potatoes were produced on approximately 3,842,000 acres and the question that is most discussed at this time is, "What will be the acreage in 1929?"

When we study the potato business over a period of years we find that high prices attract increasing numbers of growers and result in larger acreage, higher production and lower prices. When prices reach a level at which there is no profit, acreage decreases, production is smaller and prices higher. The economist calls this a cycle and at present we are in the downward swing. The crop in 1925 and 1926 was light and most growers were able to make a profit. In 1927 acreage jumped sharply and production was heavier but prices were still high enough for the better and most favorably located growers to make some profit. The past year saw another large increase in acreage and we all know the result.

Some figure that prices have dropped to the low point, that many growers are in poor financial condition and are generally discouraged with the potato business and that acreage in 1929 will be much lighter. There are, however, a number of conditions that would tend to influence this. One of these is the heavy carryover of old potatoes which will have to be marketed at a time when new potatoes are becoming the center of attraction. Another is the low price of seed potatoes which are now selling on practically the same basis as table stock.

Early Producing States

It looks as though the early producing states in the South will have a lighter acreage than last year. This is indicated by lighter shipments of seed and by reports from the growers. One reason for this is that these growers were severely hit by the poor prices last season, and another is the anticipated competition with a larger than normal carryover of old potatoes. According to the Department of Agriculture, the early states are planning to reduce their acreage about 30 per cent.

It seems logical that reduction in acreage should be most decided in those sections in which prices have been least satisfactory. It is never safe to predict what acreages will be but there are certain conditions that have a definite effect. It seems to me that as you come up the Atlantic coast reduction is likely to be lighter than in the more distant states. For instance, New Jersey is not likely to reduce her acreage to the extent of Florida or Virginia.

The Late Crop Sections

In the late producing sections the situation is different due to the longer market period. Pennsylvania with its many local markets can afford to produce potatoes at lower prices than Maine or Wisconsin. This has been demonstrated this past season. This has been demonstrated this past season when the Pennsylvania grower has received more for his potatoes than the grower in practically any other producing section. This fact takes away the chief incentive that tends to reduce acreage and while there may be some reduction it does not seem likely that the farmer who is really in the potato business will make much change.

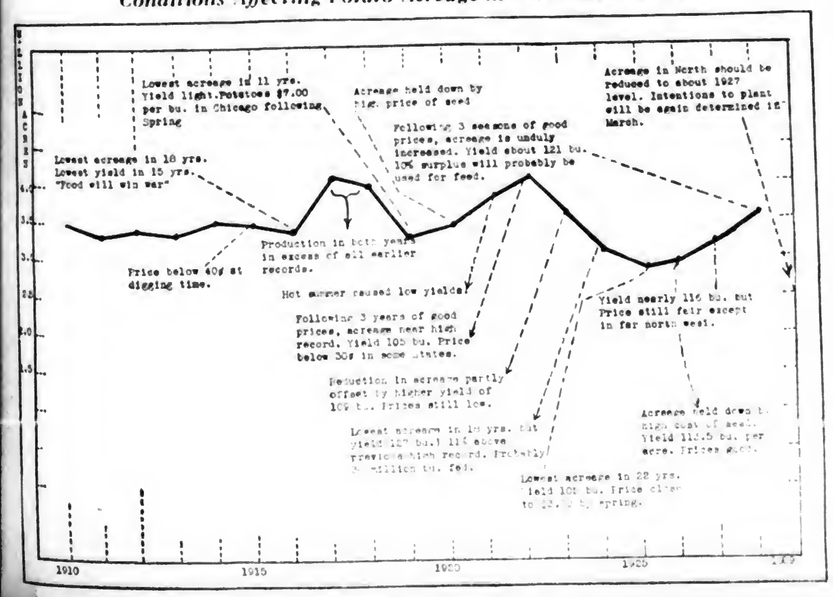
Western New York state may show a smaller acreage and some of the central and western sections. Manners is a hard nut to crack, and most anything may happen, but the potato industry is more firmly established there than in almost any other part of the country and a glance over the past shows that acreage there does not fluctuate to as great an extent as in many other states.

While 1928 was a disastrous year for the potato grower it is likely that he will try to put that out of his mind and recall the prosperous years of 1925 and 1926. It seems one nature to forget our unpleasant ventures and remember those successes on which we were lucky. Cheap seed and the often-stated belief that "things won't be any worse than this past season," will probably have an influence.

When we look over the past years it is interesting to note that a comparatively small decrease in production causes prices to soar, while a small increase will cause them to drop to a far greater extent. A drop of less than 25 per cent in acreage has caused prices to advance better than 100 per cent. For instance, in 1924 the crop was estimated at 421,585,000 bushels and the top price on December 1 was $2.20 per 100 pounds on the Chicago market. In 1925 the crop was estimated at 323,465,000 bushels and the top price on December 1 was $4.50. The comparison of prices between these two years is even more striking if followed throughout the season.

The question, "Will potatoes pay in 1929?" cannot be answered until the season is over, there are too many things over which farmers have no control and others just as uncertain. One thing that is fairly sure is that the grower who plants good seed, on productive land, gives his crop best attention and produces a crop of high quality at a low bushel cost and then sorts, grades and markets his crop wisely is far more likely to make a profit than the average grower.

Conditions Affecting Potato Acreage in the United States



Mr. Zinn's Plan to Avoid a Surplus

I HAVE read Mr. Zinn's plan to get rid of the farm surplus over several times and studied it from different angles. I am not quite sure that Mr. Zinn is correct when he says the plan "will hurt no one but the consumer and he might as well be hurt as any one else."

A large class of consumers are laborers who have families depending on their daily labor for support. Many of these are not making money as it is. Many laborers cannot get steady employment and perhaps there are as many laborers who are not making money as there are farmers just breaking even and the ones who are losing money at farming. These people have already as great a burden as they can bear. Then why should this class be made larger by the addition of two-thirds of the farmers as Mr. Zinn suggests? Not only would this class be made larger but the burden of the laborer would be made greater.

Then again, would it not be an injury to society generally to send two-thirds of the farmers from their homes and make them transient citizens without any permanent home? The citizen who moves from place to place and has no permanent home cannot have as much interest as a citizen as the one who has a permanent home.

Our country is already suffering from an over production of citizens who have no permanent home, so it seems to me that Mr. Zinn's plan to help one-third of the farmers would injure all.

Then again, granting that Mr. Zinn is correct in classing one-third of the farmers as misfits, what assurance has he that they would find places where they would fit better? Then why turn misfits from the farm to become worse misfits some place else and perhaps finally become burdens upon society generally.

All employments have their misfits and it does not look quite fair for the farmers to unload all of their misfits on other vocations.

Perhaps it is better for all of us that Mr. Zinn's scheme, as he admits, cannot be worked.

V. J. Legg.

TIGHT BINDING TEXT CUT OFF

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Volume 100, Issue No. 11 — Established 1877

FROM WISCONSIN

LAST week we tried to help entertain a delegation from Wisconsin, a representative body of men and women just finishing a two-weeks' tour of good will covering thirteen states. They came on a special train that carried also a fine exhibit of the products and resources of their state. Naturally the dairy cow was much in evidence as a leading product, and five specimens of as many breeds were on exhibition. The Wisconsin delegation carried another exhibit of much interest to us—its own toastmaster in the person of Arlie Mucks, champion thrower of the hammer and other things, Secretary of the Wisconsin Livestock Breeders' Association, a delicate youth of around three hundred pounds. Among the many interesting people in this company was Solomon Levitan, who as his name indicates is a son of Israel. He started as a peddler in Maryland but found Berks and Lehigh counties better adapted to his method of speaking the English language, since he came from Germany. He moved on to Wisconsin and is now Treasurer of that state. He had a few statistics along which he submitted for comparison and we are willing to bring them to the attention of every state. For instance in 1928 he collected $7,142,928.49 gasoline tax at a total cost of $13,493.91. Moreover he collected $74,000,000 taxes for Wisconsin at a cost of $38,000. Can any state treasurer beat that? The Wisconsin delegation reflected great credit on their state, not merely by what they are and what they exhibit but by their modesty and fairness in telling about things in Wisconsin. We who are accustomed to the blow-hard methods of some boosters for other regions fully appreciated that—and will welcome them again.

A MEETING OF SHEPHERDS

THE forty-seventh annual meeting of the Tri-State Sheep and Wool Growers' Association was notable for many things, a few of which deserve special mention. First of all, and rather strange to an old-timer, was the very slight attention devoted to the tariff. We and many others can easily remember when that was the principal topic for discussion. It is of interest still to the sheep industry, but this year it was completely overshadowed by the discussion of feeding and management. The representatives of all three states expressed the conviction that hereon, rather than on legislation, depends the future welfare of the ovine industry in this region. Another topic of earlier years, the destructive dog, was likewise put into the shade, though the dog menace has not disappeared.

One important development of recent years is the participation of young people. Sixty-eight boys and girls entered the wool judging contest. The wool show developed an interesting divergence of judgment in the Merino classes. The veteran breeders of Merinos were not convinced of the correctness of that judgment which ignored their old standards in the fleeces of breeding animals. They understand the requirements of the market, but they believe also that in breeding they must strive for the ancient fundamentals as the only way to preserve quantity and quality of wool on foundation stock. This reminds us that hardly enough was said about the preparation of wool for market, which is one of the most important of all topics at any gathering of wool growers.

THE LAND BANKS

THE report of the Federal Farm Loan Board for 1928 is an interesting document, not the less interesting because it is so constructed as to answer some of the current criticisms of the present administration of the system. Leaving most of these aside for they will come up later, we find that the twelve federal land banks have loaned to 401,865 borrowers a total of $1,194,470,055. The banks report a lesser increase in loans than in previous years, but this has been the experience of other institutions which lend money on farm mortgages. Interest rates on loans made in 1928 averaged 5.04 per cent. Last June bonds bearing 4 per cent were salable, but in November it was necessary to get in line with the advancing money market and pay 4½ per cent.

A good deal has been said about foreclosures by land banks and about their policy of handling the farms they were compelled to take over. Last year the twelve banks had to take 2,652 farms. The number of farms owned by the banks increased 586 during the year—which does not indicate that the banks are dumping farms regardless of price to the demoralization of the market for such properties. Neither do joint-stock land banks appear to have followed the dumping policy, for they acquired outright 1,028 farms and had 968 of them at the end of the year. Some districts report an improved demand for farm properties during the year, such improvement "most marked for the better grade of farms." The Board believes and says that the bottom has been reached in the price of farm properties—in which most observers will concur. The percentage of farms that have failed to pay interest and amortization charges has been low—.74 one-hundredths of one per cent or 7.4 farms per thousand. Has any other institution lending money on land a lower percentage of foreclosures?

The number of joint-stock land banks declined from 50 to 48 during the year and their total loans declined $13,281,000, or to $656,516,475. Three of these banks are now in hands of receivers, but most of them appear to be doing pretty well. Thirty-one of them paid dividends during the year and others added to their resources instead of paying dividends. The bonds issued by these banks are rated according to the merits of the institution issuing them rather than according to the system, and this is as it should be, for it is a powerful incentive to good management.

JUST AHEAD

NEXT month a special session of Congress will begin the consideration of two measures in which farmers are naturally interested. The first of these is the tariff. For eight weeks hearings have been held on the subject, though no tariff bill was before the committee or the country. The hearings were for the purpose of developing information which may or may not be used in framing amendments to the present law. At these hearing 1,157 witnesses appeared, and their written and oral testimony will fill 10,000 printed pages. That ought to be sufficient to allow a committee of Congress to make a start on tariff revision, to devise a bill which may be published and discussed as usual.

The second measure before the special session of Congress is so-called farm relief legislation. Hearings will be held on this subject for two weeks or more, then a bill will be framed for the consideration of the country and the legislators. Nobody knows what that bill will be, but since the present administration is opposed to government in business we are pretty certain that it will not include such economic monstrosities as have appeared on past measures. Fifteen hundred invitations to participate in preliminary hearings should bring out enough men and enough ideas to afford some basis for a bill. We venture to predict that this bill, no matter what it is, will fail to satisfy the chronic reformers and likewise the conservatives who think that all such legislation is bound to cost the country more than it is worth.

When the two bills appear we shall attempt to discuss them. Meantime it may be wise to remember that no tariff bill is going to do anything for the man who doesn't make something; that no relief legislation is going to relieve anybody of the necessity for economical production. Whatever may be the merits of forthcoming legislation in either line it is not going to do anything for anybody who fails to do something for himself.

A TEMPORARY VICTORY

THE Dairymen's League classes as a "catastrophe" the proposed extension of the New York milk shed which was averted when the president of the League promised adequate supplies for New York City in spite of a February shortage. According to League officials the day was saved for their members when the New York Commissioner of Health was persuaded not to send inspectors into western territory. Had the inspectors been sent western milk must have been admitted, breaking the New York market and adding to the flush season surplus.

We dislike to think that these eastern dairymen avoided disaster only because they had a persuasive leader or because a certain official happened to be in a receptive mood. That is skating on ice which is entirely too thin. Eastern producers can sell milk of superior quality because they can make quick deliveries; their freight costs are, or should be, comparatively low; they are skilled in economical production, or can acquire such skill. On these factors must the dairymen of the New York milk shed rely for their production and on their production must they eventually rely for protection from western competition. For they may not always be blessed with persuasive leaders and sympathetic city officials and an apathetic consuming public.

ANOTHER GENTLE ONE

FOR many years Charles Wheeler has been known in Ohio and other states as a breeder and exhibitor of pure-bred Guernsey cattle. One day last week Mrs. Wheeler noted the prolonged absence of her husband at the barn. She went out to investigate and found him dead in the box stall of his herd sire, an animal which he had personally cared for and trained until its behavior was considered ideal. This well behaved bull had suddenly attacked and murdered its confiding master as so many gentle and trusted bulls do. The bull known to be vicious is the safest because it is distrusted and watched, but even so it sometimes finds a victim in a careless attendant. When will we learn the truth that every bull is a potential killer and never be trusted?

Eastern Farm Comment

By MILES HORST

LAST week was full of events for Fayette county farmers. To begin with a driving snow storm swept across this county on Tuesday, blowing down telephone lines and even electric lines.

On Thursday they held the annual meeting of their extension association. At this time they initiated their new county agent, C. D. Whel, who takes the place of C. L. Rumberger, the latter resigning to affiliate himself with the H. J. Heinz Company.

Folks in this county are valuing the extension work highly. The farmers realize that they have one of the finest markets for their produce found anywhere in the country, for the county is an industrial county, importing far more produce than is locally produced and this means good prices. They are eager to improve their methods and their production so as to benefit by this condition.

On the other hand the business people realize that the coal and the coke industries in the county are on the wane. To keep up their business, new enterprises must be encouraged and but the agriculture is the most promising. So here we have a united support of a progressive program in agriculture.

Dr. C. G. Jordan, Secretary of Agriculture, in speaking to a banquet of farmers and business men, some three hundred in number, emphasized the importance of country and town people working together, and pointed out the possibilities of the future agriculture of this state and of Fayette county in particular.

On Saturday, the Pomona Grange of the county held its quarterly session in the court house at Uniontown. While the attendance was not so large, there was no lack of pep on the part of those present. There are today 2,100 active Grangers in the county. The goal of the Pomona is to bring this membership up to 3,000 during the next two years. The amount of fire insurance on farm buildings carried by the Grange Mutual Insurance Company in this county runs into the hundreds of thousands.

* * *

THE progress of the potato industry in York county was strikingly portrayed at the tenth annual spring potato meeting held at Stewartstown, March 6. Dr. E. L. Nixon, the chief speaker of the day, went back ten years and told of the conditions as he found them in York county then. At that time there were no high pressure sprayers in use. Nothing was known of disease-free seed, potatoes were planted in corn stubble ground and yields of 200 bushels per acre were considered very good. He told of the effort he had in organizing several spray rings and getting growers to plant special seed. However, a few growers followed instructions. They were successful. More were convinced. As years rolled on sprayers increased in numbers, seed potatoes were beginning to be ordered by carloads, rotations were adapted to potato growing and yields increased. The result was that in 1927 there were ten growers who made the 400 Bushel Club and in 1928 the number jumped to thirty-five. The whole attitude of growers toward their crop changed very materially too, during the period.

The interest in the various problems of the industry in the county today is very keen as shown by the fact that several hundred growers were present at these sessions. Much of the time was given to a question and answer discussion in which Dr. Nixon and County Agent Weber led.

Growers in York county have not been discouraged by the conditions of the potato markets during the past season. Their concern this year is to grow a better crop, more economical than before, and to put it on the market in a more efficient manner.

* * *

THE Pennsylvania Department of Highways is filing in various county court houses in the state ultimate rights-of-way along main state highways running through the several counties. These ultimate rights-of-way range from 50 to 100 feet in width. The Department is doing this in line with the provisions of a bill passed by the 1927 Legislature, which gives the Highway Department the power to do this, and also provides that properties built within this ultimate right-of-way, after it has been filed in the court house, will not need to be compensated for when in the future the Highway Department may determine to widen the highways to the ultimate limits it has fixed. This makes it advisable for any person wanting to build structures of a permanent nature along main highways to first ascertain where the limits of this ultimate right-of-way are.

* * *

LAST fall a small group of potato growers in eastern Pennsylvania, desiring to develop a special trade for their potatoes, decided to put out specially selected baking potatoes in twenty-pound cartons. They went to particular expense in grading their stock so as to meet the best demands of the trade, packed them carefully and then proceeded to sell them. The potatoes went at a good price and sold very readily. Within several weeks, however, the demand for this stock fell off rapidly. They investigated and found that the potatoes, which to all purposes appeared to be of the best quality, when baked turned out a soggy, cheese-like mess. They sent a sample of these potatoes to State College asking what was the trouble. The College could not answer because they had never done any work on the culinary properties of potatoes.

It was unfortunate for this group of potato growers that this venture should have turned out like this, but it points to an all important need in the potato industry; namely a thorough study into the various causes that make for different culinary properties of our potatoes. We know very little today about the effects of different fertilizers on the quality of potatoes, or of soil conditions, or even of methods of culture.

* * *

THE usual crop of salary raising and job making bills has appeared in the Legislature now in session at Harrisburg. As far as we can ascertain these are either directly or indirectly sponsored by those who would benefit by their passage.

Judging by the number of candidates for office and applicants for public jobs, no salary increases are needed to fill any of these positions. The state's money is needed far more to support schools and roads out in the communities from which the taxes to support the government after all come.

* * *

THE Berks County Pomona Grange held its quarterly session at Stouchsburg, Saturday, March 2. It was an all day event and full of interesting things from beginning to end. The program was well balanced. It had interesting features of entertainment and gave ample time for the discussion of current problems before rural people.

J. M. McKee addressed the body on the developments in rural electrification. Legislation of interest to farmers was discussed by John Light, secretary of the State Grange. An address on Grange welfare was given by Jacob H. Taylor, a member of the Potomac Grange of the District of Columbia, a Grange organized by Kelly the founder of the Grange.

Resolutions were adopted, sustaining the activities and work of the National Grange; favoring the collection of the gasoline tax from the distributors instead of from retailers as at present; supporting legislation providing for the classification of townships in the payment of state reward in road building, much as the plan followed in providing state aid to schools; and favoring the return of one cent per gallon of gasoline tax to the townships for road building purposes.

* * *

THE biggest problem in the rural electrification program of Pennsylvania today is that of lowering the minimum guaranteed revenue required of farmers who desire service from rural electric extensions. This factor more than any other is retarding a rapid extension of electric service into the rural communities of this state.

The Pennsylvania Joint Committee on rural electrification from the very beginning of its existence has recognized this problem and has constantly striven to find a solution. Their efforts have not been in vain as a glance backward will show. During the past two years the average minimums required have been lowered, more in some areas of the state than in others. But much in this direction is still to be desired.

Since the minimum guarantees are based on the cost of erecting the extension, as provided by Order No. 28 of the Public Service Commission, the problem resolves itself into two parts—the cost of the extension itself and the rate of return required as based on that cost.

The main items entering into the cost of an extension are materials, labor and supervision. The Joint Committee has worked out a plan whereby consumers can supply a part or all of each item entering into this cost. In many cases, consumers have availed themselves of this opportunity, particularly in supplying labor. In some cases they have undertaken to supply all three items. Experience has shown that where farmers undertook to supply one or more items, their cost of doing so was usually less than the estimates of the electrical company. This indicates that the companies still have room to improve their methods of management and procedure, which in turn would lower their costs of erecting these lines.

Most of the companies have filed rates of return on the cost of extensions at two per cent per month or 24 per cent per year. A few have filed rates of return at 1.5 per cent per month or 18 per cent per year. If we go back four years we find that many of the companies were requiring a return of 30 to 35 per cent on the investment they made in strictly rural lines. Progress here too has been made.

As said before, the Joint Committee on Rural Electrification has been devoting much of its energy to this phase of rural extensions. The rural group has been collecting facts in this and in other states that might throw more light on how to reduce these minimums. They have repeatedly challenged both the companies' methods of estimating costs and the justification of the present filed rates of return on the costs of extensions. The electrical companies have been sympathetic to these challenges. The very spirit with which both the rural and the electrical groups are approaching this problem speaks well for progress in its solution.

* * *

THE annual banquet of the Allegheny County Cooperative Association was held in the Chamber of Commerce Building, Pittsburgh, on Saturday evening, March 2nd. Several hundred farmers and their wives enjoyed a dinner of locally grown products, were entertained by musicians of radio fame and heard several talks on current matters affecting farmers.

The toastmaster was M. C. Black, manager of the Cooperative Association. The farmers were welcomed to Pittsburgh by T. C. Foley of the Pittsburgh Chamber of Commerce who stressed the importance of the industrial towns of western Pennsylvania as markets for farm products and cited the growing appreciation of these markets by local farmers. E. S. Bayard of the Pennsylvania Farmer responded to the address of welcome. He urged farmers to "talk up" their business and to avoid the chronic pessimism about agriculture which actually decreases the value of farm land and makes conditions worse instead of helping to improve them. He cited definite figures to show how Chambers of Commerce could increase the prosperity of the towns by promoting the prosperity of surrounding rural sections.

Other speakers were: N. S. Grubbs, formerly county agent of Allegheny county; Messrs. Zellers, Kleppinger and O'Halloren of the organizations through which the Association buys its feeds; George Black, manager of the commodity division of the Lancaster County Farm Bureau and son of M. C. Black of the Allegheny County Cooperative; M. S. Winder, secretary of the American Farm Bureau Federation.

Mr. O'Halloren stated that between 40 and 50 million bushels of American corn are supplanted annually by foreign molasses imported and used in the manufacture of industrial alcohol. He favors congressional action to place a tariff on this kind of molasses, without changing the present duty-free status of molasses used in feeding stuffs. He predicted that farmers will eventually form "cold-blooded merchandising organizations" as the best means of solving their problems.

Mr. Winder said that Illinois farmers are now deeper in debt than ever before. He stressed the need of more efficient distribution of farm products after they leave the farm as one way to give the farmer a larger share of the consumer's dollar. He spoke in favor of tariff readjustment, but opposed a general upward revision of the tariff, since such a move would leave farmers in relatively the same position they are now with regard to other industries.

Too much land is being farmed, Mr. Winder believes. He urged that marginal land should be reforested and that no new land reclamation projects should be undertaken. Production of farm products graded to "high standards of known quality" was cited as the first step toward successful cooperative marketing. Mr. Winder made a very strong plea for members to be loyal to their organizations.

* * *

FIFTY pure-bred Jersey, Guernsey and Holstein bulls, selected from best herds and calved by cows with high milk and butterfat records, will be distributed to West Virginia dairymen at cost through the West Virginia Better Dairy Sire Special which will operate over the Baltimore and Ohio Railroad April 17 to 26. Sixteen stops are to be made by the train. Its itinerary is as follows: Parkersburg, April 17; Sistersville and Moundsville, 18; Cameron and Mannington, 19; Shinnston and Weston, 20; Pennsboro and Salem, 22; Elkins and Philippi, 23; Terra Alta and Oakland, Md., 24; Petersburg and Moorefield, 25, and Hancock, 26.

* * *

GOVERNOR ROOSEVELT of the state of New York, is advocating a gas tax in that state. But in his recommendations to the Legislature he proposes that gasoline used in tractors on farms should not be taxed. He is right in advocating this exemption.

TIGHT BINDING TEXT CUT OFF

A Square Meal for the Garden

A Discussion of Fertilizers and Their Use for Flowers

THE farm housewife who wants a flower garden with shrubbery, a pretty lawn, perennials and annuals, has the best opportunity in the world. Space is not restricted as on a city lot, and there are ample opportunities for vistas, enchanting views, wide open lawns, shrubs and trees in plenty. Besides there is good soil and fertility from the barnyard.

Picture a poor city lot dweller in comparison. He has loads and loads of yellow clay subsoil out of his cellar now strewn over his yard. His house stands just two feet from the lot line. His lawn is an old sod from a country pasture. He has a little tree out in front that cost $15 and came 15 miles from a farm woods, and he cherishes it for all its future possibilities to lend a little shade to the lawn. He buys fertilizer from a hardware store at five to seven cents a pound. Manure costs $4 a load. His task is stupendous to conquer that obstinate and impoverished soil, except at considerable expense. I have suffered through those trials myself and know what is ahead of the man who starts landscaping and gardening the usual city lot.



The House Should Be the Center of the Picture, with Open Lawn, Shrubs and Trees and Flowers at the Sides as a Frame to the Picture. Picture Shows Growth Four Years from Planting.

By L. L. Rummell

In years past I have said that about all we need ask of the garden is standing room for the plants, and we can make them grow. In my early days fighting cellar clay on a city lot I practically demonstrated this, but I must say there was not much satisfaction in it. Each spring and fall I loaded this ungrateful clay and shale full of humus with manure and leaf mold. Then I brought in some muck soil and put it just in the flower borders, black, fine muck, so light it would drift like snow on the onion fields of Hardin county. I spaded under a crop of rye in the spring. I got a load of sand and loosened up the clay with that. Early in the spring I put on complete fertilizer at the rate of half a ton or more per acre, and then before each kind of flower bloomed a little dessert course in the form of nitrate of soda or sulphate of ammonia.

Did it work? Yes, I would say it did, but it was both laborious and expensive. Shrubs and flowers both made unusual growth and produced a wealth of bloom and color. The flower borders are always full of little bamboo stakes to hold up the tall growing plants. It has shown that one can grow flowers on soil so poor at the start that standing room is the biggest thing it has to offer.

Good Top Soil Needed

But would we do it again? Well, hardly. I would take the same money and time again and spend them in importing some real top soil with fertility already in it. And were I making flower borders about a farm home, and did not have suitable soil, I would scrape off the top soil and haul in some from an old barnyard or feedlot or from the best spot in the alfalfa field to replace it. Then too add some well-rotted manure with it.

The lawn itself needs first consideration. It takes a little longer but my preference is for a lawn seeded rather than soded. For spring operations the lawn may be graded, the seed bed prepared level and smooth and fine; some well-rotted manure added to it; a high-grade fertilizer used at the rate of 400 or 500 pounds per acre; and then seeded.

The old lawn this spring may need thickening up a bit. Some seed may be helpful, but in most lawns plant food rather than seed is needed. Lawns are like our old pastures; they "run out" or become impoverished because a big crop is cut off annually and little or no restitution is made. A high-analysis complete fertilizer should be applied liberally early in the spring before growth starts. Then in addition doses of sulphate of ammonia can be given every month, just a light sprinkle. Lime has no place on lawns ordinarily and only encourages weeds, as dandelion and plantain.

When shrubbery is set out it needs the best soil about its roots with some leaf mold or rotted manure and a little complete fertilizer. Little growth need be expected from it the first year for it gets some set-back by transplanting. The next spring give each shrub a small handful of fertilizer, putting it in a wide circle as far out as the tips of the roots. Nitrate and sulphate must be used with caution and moderation or they may kill a shrub. Hydrangeas especially seem sensitive. We have piled the leaves from our trees about the base of the shrubbery in borders and about foundation plantings, and as it decomposes it feeds the shrubs. Today after four years we no longer feed these shrubs, because they are large enough.



A Garden Made on Cellar Clay Supplemented with Manure and Fertilizer

The flower garden though needs liberal feeding every year. Flowers get their charm in size and color, and these depend on a soil well fed. We crowd flowers into a border as thick as they can conveniently stand. It is about the same as planting corn broadcast and expecting the soil to feed each plant so well it will make a good ear. We don't realize what exorbitant demands we make of a soil in a flower border. No sooner is one plant done in growth and bloom and another is ready to take its place, and it is that way from April till October. No farmer works his soil that way except a greenhouse grower. This only emphasizes the need for liberal feeding of flower beds, so that they get a square meal every day in spring and summer.



My first suggestion in providing this full meal at the flowers' banquet table is a naturally fertile soil, as mentioned above, even if we must import it. Then in the spring work in as much manure or leaf mold as you can. That is the tonic and salad course. The soil itself provides the main or meat course of the meal. Then add the side dishes in the form of a complete fertilizer, 3-12-4 or better, and put on 500 to 1,000 pounds per acre. If I were to figure out how much I use in these borders, I likely would find it comes close to a ton to the acre, that is, just in the beds themselves. Then the dessert course is some nitrate of soda or sulphate of ammonia dissolved in water and sprinkled about the plants just a week or two before blooming.

There is a chance in getting too much nitrogen though in the flower garden, and as a consequence the plants get too much stature, require staking and sometimes do not bloom so well. Dahlias are a good example, or tomatoes among the vegetables. Nitrogen gives size, foliage in luxuriance and dark color. Phosphorus and potash are needed for stiff stalks and flowers of color. Roses need phosphorus and potash particularly and there is danger of too much bush if nitrogen is used in excess.

Editor's Note—As the accompanying pictures show, Mr. Rummell has been as successful in establishing a beautiful home under unfavorable circumstances. In his next article he will discuss this subject more fully.

◇

A Bug This Week

THE hollyhocks were in bloom, and what a riot of color, a galaxy of white and red and pink great stately stalks towering above all else in the flower border. Then one night came a rain and wind storms, and down went several of the very best. A closer observation showed some debris like sawdust at the base of the stalk, and there was a tiny hole the size of the lead in a pencil.

Or it may have been a choice dahlia, or a clump of golden glow. Now and then I find a choice zinnia falling over. Delphinium is not immune either. It may even be an aster, a lily, a peony or a phlox plant. In each case it is the same work of the stalk borer.

The culprit is a long striped caterpillar that works through that tiny hole and made a long tunnel up and down this stalk, safe from all danger from the outside. Some have mistaken him for a European corn borer. Their habits are somewhat similar.

The females lay eggs on weeds like docks, ragweeds, etc., and next season there is a new brood.

Clean garden culture is the one effective way to keep down the numbers of these worms. Gather up the refuse about the garden, cut off old weeds, rake up the trash along the borders and fences, and burn it all. The over wintering eggs are thus destroyed.

Early spring is the time to combat many of the garden pests. Many diseases and insects carry over winter in this rubbish and old plant stalks. A good hot bonfire early in the spring will give the garden a clean slate and prevent some troubles later. The stalk borer is only one of a big lug family that can be dealt a death blow by this spring clean-up.

L.



Milk Cart Serving Raw Milk from Brass Cans, Goes, Holland. The Canal Boat Is Being Loaded with Grain for Amsterdam Markets

The Human Side of Europe

Milk Marketing Methods That Seem Strange to An American

By ELLEN S. BRINTON

ON my European trip last summer I was interested in seeing the customs and practices in the dairy countries in regard to production and use of milk, and what I found Grades of milk as we understand the in this country are practically unknown. There are almost no laws in country I visited in regard to milk whether on the farm or in city. The dealer handling milk on commercial scale pasteurizes or sterilizes the milk for safety and also to keep it sweet longer. Much higher temperatures are used than in America and the holding time is longer, and on top of that the customer invariably boils the milk as soon as she receives it.

My first insight into foreign dairying was in London when I visited a large city plant. Glass-lined tank cars were coming into use for hauling milk from country to city but the old-fashioned English "churns," as they are called, are mostly seen. Glass bottles are growing in popularity everywhere, but the bulk of the milk sold is still ladled out of cans into the customer's pitcher.

With all dipped milk the problem is how to evenly distribute the cream so that all customers get their proportionate share. To overcome this it is the universal practice to homogenize the whole milk—or put it through a special machine at heavy pressure and thus break up the butterfat globules that they can never rise to the top and form cream. One company in London is so convincing in its arguments as to the benefits and economy and healthfulness of this homogenized milk that it actually gets about a cent more per quart for it than for milk with the natural cream line!

One conspicuous result of this creamless milk is that pitchers of cream like we have for cereals and coffee are almost unknown. Milk is used instead for tea and for coffee. In Austria the popular combination is coffee with whipped cream. English cream is 50 per cent butterfat and is used mostly for dessert purposes. I had lunch at one delightful English home and shall never forget the plum tart with cream poured over it.

Holland has the same general dairy customs as England with delivery in brass milk cans, on hand carts, small horse carts or the famous dog carts. I went to the island of Wacheren, Zeeland, in the extreme southern part of the country as I knew this was a country section and rather more out of the line of travel than the better known parts near Amsterdam. Men and women still wear the quaint costumes with wooden shoes to work in (but leather shoes for Sundays), cows are pastured on the dykes, and often milked there, the women carrying home the milk pails on shoulder yokes.

I visited a large farm near Goes and was especially interested in the cow stable equipped with blue glass windows. One can scarcely imagine the weird, ghostly, cathedral-like appearance this gave to the interior of the barn. I was told this was done in order to protect the cows from flies, the windows being changed to white glass in winter. The farm is operated by a company in a very modern manner, shipping grain and feeds wholesale to Amsterdam, with Belgian horses, pure-bred cattle and pedigreed pigs fed on imported American corn, so whether it is not the blue glass was really useful it had apparently been installed with some definite reason.

The dairy foreman invited me to his house to have a glass of milk and I was interested to see how he stepped off his wooden shoes (klumpen) at the kitchen door and continued inside in his heavy woolen stockings. The children did the same. The whole kitchen was a curiosity with a round flat stove, something like the conventional heater known as laundry stove, and the milk had been boiled. It was not yet cold.

"We always boil it as soon as it comes in," the host told me. Somehow I had not thought of farmers making their own milk. The nearby village of Goes was served with raw milk from the farm, and in the usual big brass can, and every woman boiled her milk at once, I was assured. This was proved when a thousand miles away in Austria I met another Dutch woman from this very section.

"I would not think of drinking milk unless it had been boiled first," she declared.

Of course such milk tastes different from American milk pasteurized at a low temperature, but Europeans have used heated milk for generations as a health protection, and think nothing of it. How then did the prejudice against pasteurized milk develop here when usually we are so quick to take up with every imported custom?

It was interesting to note that in some of the countries newly organized since the war are to be found more modern practices than in those territories less disturbed by the upheaval. Germany for instance has forbidden milk to be served from push carts or "dipped" on the street. I did not see a single interesting milk cart after leaving Holland.



Push Cart Serving Milk—London

Most of the continental milk companies operate grocery stores or delicatessen shops. Milk is taken to the store in cans and sold loose in the customer's container. One milk company in Vienna has 400 stores. The dairy business in central Europe is more diversified than in America for besides sweet milk and children's bottled milk, there are various cultured products such as sour milk, sour cream, yoghurt (a thick sour milk like junket sold in a small jar and eaten with a spoon) and all kinds of cheeses.



Special room and apparatus for treating milk with ultra-violet rays. Dark tank in background is of copper with light tubes inside. Tubular cooler, covered with glass in center of picture. White tank in foreground supplies the filling apparatus.

Women do much of the [illegible] dairies, such as scrubbing, washing bottles and cans. I saw one woman receiving milk and expertly judging quality as she passed from can to can tasting with a spoon. I asked in Prague what the average wages were and was told that women handling milk cans (a laborer's job) got $3.60 a week. But perhaps that should not be considered so small for a college-trained woman in a highly-paid professional job received only $45 a month. Living costs are, of course, lower than ours but many modern things that we consider essential in this age are not thought of by people of average means over there.

And yet in technical matters they are often ahead of us. For instance, doctors there have been questioning how vitamin content of milk could be improved, especially vitamin D with anti-rachitis properties. There has been so much agitation over this that commercial milk companies are treating milk with ultra-violet rays. I saw an apparatus in Vienna in daily use, the milk being sold in blue glass bottles for special identification and of course at a special price.

In Prague the matter of securing a perfect milk for infant feeding seemed to be of chief importance. The Czechoslovakian Department of Agriculture has a number of experimental farms and I had the privilege of visiting one in company with Dr. Jaroslav Dvorvak, director of the dairy division. Here they are endeavoring to produce milk such as has been demanded by physicians and baby specialists of that section, and that is raw milk produced by the cow with proper modification suited for babies. The milk is sold as "Ultralakte," or Hygienic Vitamized Milk.

First the cows are tested for tuberculosis, and for mastitis and blood count taken. Ultra-violet ray glass is installed in stable windows. The cows' feed is carefully controlled to increase the mineral content and among other things is fed cod-liver oil for vitamin, and dried blood for iron. Silage is not used on account of it being so strongly acid. Fof baby feeding Doctor Dvorvak claims that such milk is not biologically or scientifically correct, also that the bacterial content is too high, and the aroma is bad. The cows are washed in the stable and then taken into another room and milked by machine—thus getting a very low bacterial count as with certified milk in this country.

Then the milk is put through a special process to still further increase the anti-rachitis properties. In a copper tank in an atmosphere of pure nitrogen the milk passes over pipes and is exposed to the violet rays. It is cooled over a surface cooler covered with glass like that in the stable windows and finally is sealed in special bottles made of cobalt glass also sensitive to the ultra-violet rays.

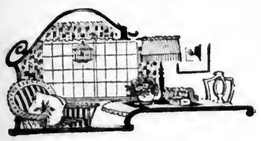
This process of producing and treating milk for infants was presented to the World's Dairy Congress at London in a written paper by Vaclav Bronsky, the director of the farm. The government authorities seemed to feel that the experiment would revolutionize infant feeding. More than any other place I regretted my inability to speak the native language, as it was so difficult getting the story correctly through interpretation. However, if any one is particularly anxious for more information I have detailed descriptive leaflets that could readily be translated into English.

◇

Seed Potato Production Increased

CERTIFIED seed potato production reached a new record in 1928, according to the U. S. Bureau of Agricultural Economics. Production was approximately 45 per cent greater than in 1927, 104 per cent and 135 per cent greater than in 1926 and 1925 respectively, and 35 per cent greater than the former record crop of 1924. In 1928, 10,365,807 bushels were produced, compared with 7,127,640 in 1927, 5,080,708 in 1926, 4,396,794 in 1925, and 7,506,587 bushels in 1924 when the previous record crop was produced. The 1924 figures, however, did not include the production in California, Idaho, Maryland, South Dakota, Washington and Wyoming, as figures were not available for those states in 1924, but the aggregate production in these states probably was less than a million bushels. Cobbler and Green Mountain were the leading varieties certified in 1928, 1927 and 1926. Prices averaged about 50c per bushel lower in 1928 than in 1927.

TIGHT BINDING TEXT CUT OFF



The Farm Home



"Top O' the Evenin' to Ye"

By GERTRUDE S. STEWART

ST. PATRICK'S DAY is the time for the "faith and fun" night, when old and young should join in merry laughter. If you are not giving a party, or going to some sort of "shindig" then by all means, do celebrate at home with your am folks. We offer some hilarious suggestions which are adapted to all ages and any number of folks.

Pipes, shamrock leaves, high hats, or green ties make the most attractive kind of invitations, place cards, tally cards, or decorations for the rooms and table. Harps and potatoes are suggestive, too.

A bit of costuming adds interest and green ties for everyone are easily made with crepe paper. High hats for each guest (or member of the family) are quickly fashioned with cardboard and black crepe paper. I have worn them made to order at the party using the crepe paper alone.

With a bit of Yankee ingenuity, you can plan a "poifect feast of fun" at almost no expense. Let the games be based on real Irish symbols using the potato, pipes, shamrock leaves, pigs, pokes, Blarney stones, etc.

Potato Games

There are all sorts of potato relays, carrying the rolling spuds on a knife to a given spot or basket is a familiar one. A peeling contest is good sport, too, when each is given a huge potato and a dull knife to see which side can be through first, keeping the peeling in just one nice long strip. For either of these games, choose sides having a group of Pats and one of Mikes.

A keener potato game is quiet, when all guests try their skill at carving a nice fat pig, using a potato, a knife and a few toothpicks. A candy chocolate pig is an appropriate prize for the best piece of architecture.

Play Irish Poke

A gayer time I have never had than last year playing this game. Pat and Mike had their respective sides lined up in the large room, and each person was given a brown paper bag and fifteen inches of bright green cord. Pat's bags were adorned with green shamrocks, Mike's with green pipes. These we painted on with crayolas anxiously wondering "What next"?

The decorating finished we were told to blow up our bags, tie them securely and then fasten them to our left ankles. Then to an old Irish tune, we marched in opposite directions, thereby weaving in and out Pats among Mikes.

After the laughter subsided a tiny bit, we were told to march on top of the bags of the opposite side. Can you imagine the fun? It was shure wild. Count was constantly being taken and he who had escaped with a whole bag was allowed to solemnly "Kiss the Blarney stone".

Do you know how this is done? Blindfold the lucky one. Then lead him up to a mirror where he plants his kiss. Then quickly release the blindfold.

Quiet Games

After so much excitement let the folks have a few quiet games:—Provide each one present with a paper shamrock leaf, at the top of which each writes his name. Then each guest is allowed to sketch the very best pig he can, constantly trading papers. The leaf with the most pigs at the end of ten minutes, is awarded a prize, a green kerchief or green tie being most appropriate.

Another nice game is having an "old Irish smoke". Each guest is given a clay pipe. A huge shamrock leaf, with a circle cut out of the center is suspended from some central place and all try their skill at blowing nice bubbles through this shamrock. Or pretty smokes result by having your electric fan take a share in the fun, and this breeze scatters bubbles beautifully. A few drops of glycerine will toughen the bubbles, and you might even add green coloring to the suds for extra effect.

Play—The Rocky Road to Dublin.

Call for four or five Irish Mugs to do this stunt. Arrange a walk promiscuously strewn with potatoes. Let them practice walking down the path not touching a single potato. Then blindfold them and have them try it again—but carefully remove all the potatoes before the signal is given to start. The audience has a circus watching the "stepping", and the walkers have a circus later when they espy the way they have been tricked.

When Do We Eat?

Refreshments for Paddy Parties always include potatoes, so make either potato chips or serve potato salad, with plenty of green peppers chopped in. If the crowd is not too big, an Irish stew served from a big iron kettle is mirth-provoking. With it serve shamrock biscuits. Then wind it up with a green ice and pipe-shaped cookies.

Lettuce sandwiches are nice cut shamrock shape, and lemon jello is tasty and Irish if you tint it with green coloring. Cakes are iced and further decorated with shamrocks easily cut from green gum drops. I'd like to rent the new Masthaum and invite you all to a big party, for I dearly love the fun of St Patrick's day. I must tell you about a salad for the family or the party.

Moon Mullins Salad

On head lettuce, place one-half of your finest canned pears. Use two cloves for his eyes, and with pimento strips shape a nose and mouth—red of course for he must be Irish. With rich golden cream cheese—arrange some hair. A fat date will make a good hat. Stick a little birthday candle into his mouth as rakishly as possible for the pipe. Light this candle just before serving. The dressing may be added in a ring about the whole picture, or passed.

Good luck to you till next St. Patrick's Day.



A St. Patrick's Day Dinner Is Always Appreciated

The Business of Mothering

By HEPSY NEFF

MEN of special training and ability command a wage of from $25 a day up to staggering figures but there are tasks for which no one has ever been able to fix a daily wage which seemed to equal the value of the service rendered. Chief among these is the work done by the mothers in the home. Some present conditions seem to indicate increasing failures in the home and thinking people are seriously seeking causes and remedies. Would a daily wage for mothers trained in home-making prove a remedy? Unquestionably real training in home making and motherhood would promote health as no other means could. Indeed, the actual saving in dollars might return all costs of such training or even show a margin of profit on the investment. But the thought of wages for mothering one's own child has an unpleasant sound.

Perhaps there is need of such criticisms of women as are going the rounds of the magazines. For instance "Seeing Women as They Are," "Ladies and Lawlessness" and others. Criticism is wholesome if it does not stop at mere criticism. Why may we not do our own criticising. Men accept the common standards of business even when they are kept on the job ten hours a day, because success depends on staying on the job. Men's organizations recognize the claims of business and affairs of interest to men are largely confined to evenings. Nothing is allowed to interfere with business. How about the business of home-making?

During an hour of marketing I met a young mother with her three-year-old child in her arms. His cheeks were flushed, his head drooped wearily on her shoulder and his only comfort was a small thumb thrust far back in his mouth. She had been a mile or more from home, she told me and Bobby had missed his afternoon nap.

Unconsciously, perhaps, she had broken three important rules of mothering: the daily nap, a walk beyond the strength of her child and an unchecked habit of thumb-sucking, when a bit of surgeon's adhesive plaster around the precious thumb would have cured the habit. Would any man holding a job in any business deliberately break three of its important rules without expecting to lose his job? Can mothers learn absolute loyalty to their business? They most certainly can and such loyalty will make a big difference.

Sewing Kit Winner

KEEP a mirror from the discarded bureau on the floor of your sewing room. In it you can see to properly adjust the length of skirts. It can be tipped at various angles to help in fitting the draping from the waist down.

It is handy any time to notice if all slip and dress lengths are just as they ought to be. Here you can see yourself as others see you.

* * *

Buy good pins for the sewing room and buy them by the box. They are so much quicker to use and disposed of than if a pincushion is used. Use pins instead of so much basting. But if you must baste then choose a thread of different color than used for the stitching, so the threads are easily removed.

Margaret B. Rutherford

Dozens of women have suggested the following ideas in their contest papers:—

1 Buy thred by the dozen spools—saving time and money.

2 Thread several bobbins at a time, saving time and disposition.

3 Keep emery paper handy for sharpening needles—on and off the machine.

4 When the shirt collars break, open the edge and turn the collar.

5 A flash light helps thread machine needle on dark days; so does a white paper or cloth behind the needle.

6 You can darn or mend nicely and quickly on the machine if you remove the presser-foot. A small embroidery hoop helps sometimes, too.

One Woman's Way

SPRING is near and all we farm women like to add some new beauty to our homes in the spring but quite often the expense is the question.

There was a small plot of ground to the northeast side of the summer kitchen which had never been put to special use, so I decided it would improve the appearance of the place to put this to some use.

I searched the place until I found enough old rails and ends of boards to piece up two beds about fifteen feet. I then got some manure from the horse barn, without straw, dug this under and raked the beds off until the soil was very fine, then I set out cabbage, pepper, tomato, head lettuce and flower seed. It took a little over twenty yards of the garden hose to cover the beds and as I had been careful to select good seed my plants were soon up and growing.

I watched the beds carefully so as not to allow them to dry out and several times before watering I scattered over the beds a few handfuls of pulverized sheep manure. This hastened the growth and made nice stout plants. These were not for early planting but for main crop.

Besides the asters, tomatoes, head lettuce, peppers we raised, I put three hundred heads of cabbage into the cellar. This year I expect to put twice as many, for I am putting up a new cellar by thirty feet.

Nora

Setting the Dinner Table

By GERTRUDE S. STEWART

In the field of home making, 4-H Club girls learn not only how to plan a good menu (from the health standpoint) but also how to cook it palatably, and serve it gracefully.

Part of this last aspect of meal preparation is learning to set a table in the accepted way—a thing too often overlooked by busy mothers. These club girls are at the age when they help their mothers constantly with all sorts of household tasks.

Wide-awake girls always have ideas as to what is attractive and up-to-date in the home, and the wise mother will "see, look and listen" when these buds blossom forth. Girls are especially interested in the pretty little details connected with hospitality. They love to entertain their friends and help plan dinners for the family and family friends.

Notice the home demonstration worker in the picture showing this club how to arrange a dinner table for six persons. The low bowl of flowers will not hide any one's view of others at the table. An attractive round centerpiece of white linen is beneath the bowl.

Silver is placed in proper position—forks to the left, knives and spoons to the right. A neatly folded napkin is at the left. Water glasses will be placed at the tip of the knives; also salts and peppers, if needed. If bread and butter plates are used, their place is above the napkin, on the left.

Platters and food containers are placed squarely in front of the server, while the tea with necessary cups is at the right of her who pours.

How good to see a dining room free from unnecessary articles that not even add charm to its appearance! Farm girls are constantly learning how to create and keep an attractive, pleasing dining room, and much credit is due the state extension workers for making splendid club projects for them.



"If" for the Woman's Clubs

MRS. William J. McIlvaine stirred the hearts of all who heard her when she spoke before the Pennsylvania Society of Farm Women in Harrisburg in January. She brought out the fact that we learned the value of organized efforts during the World War when time and talents were needed for best results.

Three-fourths of the women of the United States live in villages and on the farms. These women—every individual one of them, needs to contribute to the common social order if she is to be really happy, and the club provides the very best way, says Mrs McIlvaine.

Women, by instinct are social workers, and she proved this fact with that beautiful story about the village lights. A small town had been feeling for a long time the need of lighted streets. Yet no funds were available for the purpose and leadership, too, seemed lacking.

Then the women got together, and decided to use their brightest lamps in the windows toward the street. Under this magic the dingy paths were brightened for united action brought results. One woman who had no lamps burned her best candles all through the night.

Whole-hearted cooperation brings success to every club. Every organization thrives if members attend with interested regularity, do cheerfully their service on committees and programs, and give suggestions to president or leader as well as committee chairmen.

Last year was a good year, but we must not rest satisfied on that record. "Ever onward" should be our keyword for 1929. The splendid address was fittingly closed with a parody on Kipling's "If"

If you can hustle like everything,
Market, dust and get your luncheon, too
If you can mend the hose
And cook two chickens
And maybe bake a cake or two;
If you can call up your committee
And find them out, or sick, or 'fraid to work,
And in your heart find no self pity,
No desire to answer "Sneak" or "Shirk";
If you can organize, and work, and wait on table
And miss the speech you wished so much to hear,
If you can watch the mob eat all they're able
And not be cross nor want to shed a tear
If you can bear to hear them criticize the cooking,
And think they paid too much for what they ate,
If you can sniff smile and swallow hard when no one's looking,
And never say one word of spite or hate;
If you can see your name come up for office,
And be prepared for triumph or defeat;
If you can squelch all bitter thoughts of malice,
And never say a word that isn't sweet;
If you can stand to hear your truth distorted,
And have your motives questioned by a friend,
If you can keep your soul supported
By love and truth until the end;
If you can talk with equal favor
To common cabbages or kings, forsooth,
If you can let your prejudices waver,
And never be afraid to face the truth;
If you can listen, sew, or make a motion,
Brave storm or sunshine throughout the year;
If you can feel real pleasure and devotion,
You'll be a LIVE CLUB WOMAN, then my dear.

G. S. S.

Now serve
The Quickest Cooking Hot Breakfast

Get these wonderful premiums with coupons in each package



Mother's Oats now cooks in 2½ to 5 minutes and gives your family the rich nourishment their day's work calls for

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A coupon in every package

Each box of Mother's Oats you purchase contains a valuable coupon redeemable for useful and attractive premiums.

There's fine guaranteed silverware, attractive gold-shell jewelry, cooking utensils, books . . . a myriad of things to choose from. Many you've wanted but may have felt you couldn't quite afford. Now yours, with Mother's Oats coupons.

Be sure you get Mother's Oats, the only genuine, with the incomparable flavor, the quick, ready energy, the nourishment and richness your family demands. And write today for the great premium catalog, free. Address: Mother's Coupon Dept., Room 1708, 80 East Jackson St., Chicago, Ill.



MOTHER'S OATS

Mother's Oats comes in 2 styles, the Regular and Quick Mother's that cooks in 2½ to 5 minutes

TIGHT BINDING TEXT CUT OFF



Smiling Breakfasts Begin With a Good Night's Sleep

ILL-TEMPER is largely a matter of under-nourished, sleep-starved nerves. You can't rest properly upon a sagging bedspring, and how can you feel right if you don't sleep right? The way to get the best of rest is to equip your bed with a Foster Ideal, and enjoy the comfortable body fit of 120 finely tempered, upright Ideal Spirals. There's better rest in the Foster Ideal Spring, because it gives your spine finer support. And there's better health in the Ideal because it gives your tired nerves a greater degree of Nature's nerve food—sleep.

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Western Factory: St. Louis, Mo.

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Expose to Light and Laundry

"IS the color fast?" is often asked when purchasing washable and other fabrics. As a rule, the salesperson can give but little information. The only way to protect yourself from the chance of having the material bleach out when washed or take it exposed to sunlight is to take a sample of the fabric home and submit it to the conditions under which it is to be used.

No dye yet discovered is fast under all conditions. Some dyes are fast to light, others to perspiration, others to washing and ironing. Curtain material must be affected as little as possible by light. Dresses for small children need frequent washing, and material for this purpose should be tested with repeated laundering in mind. Prints, ginghams, and other cotton fabrics for wash dresses must not only withstand soap and water but exposure to sunlight when being dried and also when being worn. The heat of the iron may affect some dyes more than others. By trying all these treatments on the sample, the chances of purchasing unsatisfactory material are lessened. Very few dyes will be found that do not fade at all, but this test will soon show those that last reasonably well.

Fastness of a dye depends on the chemical composition of the dye used not on the color. Dyestuffs are grouped into various classes according to their composition, and the dyes in some classes are more fast than those in others. Without knowing just what kind of a dye was used—and it is practically impossible for the consumer to tell this—the fastness of color in two fabrics cannot be predicted. A dye that is one of the poorest of its class may have been used on one of the fabrics, while the other may have been dyed with one of the best. Contrary to the common belief, green, lavender or any one color is just as fast as another if similar dyes are used.

The household methods of soaking fabrics in salt, alum, pepper, vinegar and various other solutions as a means of "setting" the color are largely a waste of time and materials. Though the color will not run from a dyed fabric as long as it remains in a saturated solution of salt or alum, this has no permanent effect on the dye. A fabric after treatment in this way is just as likely to fade when washed later in the ordinary way. No successful household methods of setting the color in dyed fabrics are known.

U. S. Dept. of Agriculture.

Ounces of Prevention

"HOW do you manage to keep the matches under your chin from getting soggier all the time?" asked the Wise Woman's friend. "We're about the same age and weight, neither of us has the plump and dimply type of chin to work with, but while you've only the least suspicion of a droop between the point of yours and your neck, and that's less than it was three months ago, mine grows steadily more visible. Do you go to a facial specialist?"

"I wanted to," confessed the Wise Woman, "the first time I saw myself sidling in a triple glass at Stacy's, but Billy-boy needed a new overcoat—and shoes. So I communed with myself and formed three steady habits. Now the habits form me. I never think of them, they come so as a matter of course.

"First of all I bought myself the smallest baby pillow to be found, just large enough to tuck under my neck, until I sleep on that instead of on my big feather one. I stretch out my body as I drop off to sleep, with my shoulder blades pressing toward each other, and my head bent slightly back. That means chin up. It sounds stiff, but I persisted, and before a week it was as natural to me as it had been to draw up my knees and curl into a bunch on cold nights. It's helped my stooping, too."

"It certainly has. And the second habit?"

"Second and third go together. While I use plenty of cold-cream for cleansing my skin, I still enjoy splashing face and neck with clear cold water in the morning. I took a hint from a list of beauty culture appliances, and when I was drying my face, and after, I cupped my chin in my two hands, with or without the towel, and spent a minute or so pressing upward the muscles there and on both sides; good firm pressing. In between 'goes' at it, I give those same muscles fifty spats with the backs of my fingers, around from one cheek-bone to the other, alternating hands, and smacking soundly. Then cold water, a little more pressing, and—you have my other two ounces of cure and prevention."

"But—you could do those several times a day!"

"I do," said the Wise Woman.

A. Dunbar

SANDPAPER HINTS

In sealing shiny new fruit jars, a piece of sandpaper (even if worn) will prevent the hand from slipping.

• • •

Sandpaper is ideal for cleaning sticky laundry irons. It makes the iron fairly slide across the fabric.

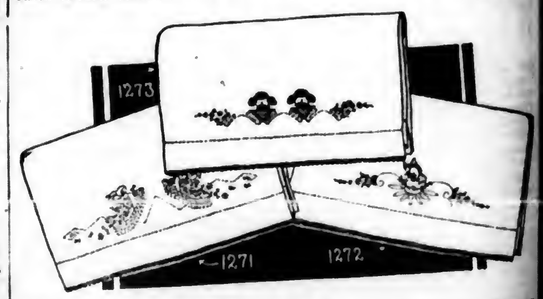
• • •

Stains on your best enamelware or on your glass baking dishes are easily removed with sandpaper—of the finer grade. The coarser grade is good help in removing burned pie or pudding "run-overs" from the sides and floor of your oven.

Clarice Raymond

• • •

Note:—And just today I used a small piece of sandpaper to clean a hat of fine felt that had become water-spotted. A real milliner taught me this trick, and she says, "Always rub in a small circular motion". G. S. S.



HERE are three new designs in pillow cases stamped on white Indian head, a very satisfactory material, and having what is termed a false hemstitched hem. They are lace trimmed in assorted styles and colored laces. All that will have to be done to completely finish them is the small amount of embroidery. These are wonderful values and most moderately priced. These cases are only $1.25 per pair postpaid and will be sent to any address. Send your order to Embroidery Department, Penn'a Farmer, 7301 Penn Ave., Pittsburgh, Pa.

A Plea for the Birds

MANY of us country people live in comparatively quiet places, off the main highways where there is not much of a mad rush or to me not many big accidents. Yet even we see enough of recklessness. The worst of it, of course, is that which endangers human lives. But there are other lives being sacrificed every day that too many people are disregarding. For the past two or three years I have been much impressed by the number of dead birds and animals I have found while walking from my home to town, a distance of one mile, over a road traveled mainly by farmers and small-town people. The chief beneficiaries of the birds. Often I see two or three and sometimes five or six dead birds and occasionally a small animal or two. Most of the birds are valuable song birds—flickers, songsparrows, doves and quail, especially. Sometimes when I am riding with some one I see a bird barely escape. Once a quail flew back of the windshield and was lucky enough to make his way on through the car.

Some of these accidents are unavoidable. Birds are difficult to see when the attention is centered on larger things, and even when the car is being driven carefully and at a reasonable speed some of the little feathered folks may be killed. It is better to kill feathered folks than human folks, perhaps, but the pity is that too many of both are being killed. And the carelessness that kills birds can easily kill humans, especially children and old people, if they are in its path. Now that the migrating season has begun, let us use a little more caution, and urge others to do so, that our little friends of the wild may not become the victims of our thoughtlessness and haste.

Jennie Reed

Rolled oats cookies.—Seeing a request for oatmeal drop cookie recipe using uncooked quick oat flake, will send mine: One cupful shortening, one and one-half cupfuls granulated sugar, three-fourths cupful buttermilk or sour milk, one cupful chopped raisins, two cupfuls ground rolled oats, two cupfuls sifted flour, three eggs well beaten, one rounded teaspoonful soda in milk, one half teaspoonful salt and one teaspoonful cinnamon. Drop on pan and bake.

ADA E. EBERLY.

Pretty Sound Advice

Eat less	Chew more
Rock less	Walk more
Chair less	Bathe more
Worry less	Work more
Idle less	Play more
Talk less	Think more
Go less	Sleep more
Waste less	Give more
Scold less	Laugh more
Preach less	Practice more

This pretty bit of health logic was seen in the lobby of the Y. W. C. A. in Harrisburg. Can we find a better jingle to hang in our kitchen right over the sink? If any of you have one you think superior, send it in. Until we get that one, let's adopt this. G. S. S.

Housedresses and Lingerie



FOR morning wear, what could be more attractive that this coat frock or smock No. 330. It is particularly effective in flowered sateen with contrasting collar and binding. Size 36 requires 3¾ yards of 36-inch material with ⅝ yard of 36-inch contrasting. It is designed in sizes 16, 18, 20 years, 36, 38, 40 and 42-inch bust.

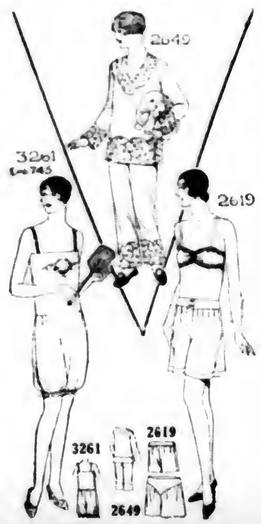
A decidedly attractive slenderizing model for the busy housewife of black and white percale is No. 750. There is satisfaction in having attractive morning dresses that are smart enough for general daytime wear as sketched in this pattern No. 750. Size 38 requires 2⅝ yards of 40-inch material with ⅝ yard of 36-inch contrasting. Sizes 16 years to 50-inch bust.

Now that the ensemble is the center of interest in milady's wardrobe and because it is smart to carry out unmatched color plans, several blouses to be worn with pleated or plain skirt should be planned for spring. No. 457 with its plain lines and fitted hipyoke comes in sizes 16, 18, 20 years, 36, 38, 40 and 42-inch bust. Size 36 requires 2 yards of 40-inch material with three yards of bias piping.

With the spring sales of remnants at their height two yards of 40-inch material will be ample for either No. 3261 or 2649. The former is designed in sizes 16, 18 years, 36, 38, 40 and 42 inch bust. Embroidery pattern No. 745 (blue) will cost 15c extra. No. 2619 tailored shorts and bandeau requires 1⅝ yards of 40-inch material with 2½ yards of trimming. Sizes 16, 18 years, 36, 38, 40 and 42-inch bust.

White or colored crepe with contrasting bands is suggested for the pajamas No. 2649. Size 16 requires 3 yards of 40-inch material with 1⅜ yards of 36-inch contrasting. It is designed in sizes 6, 8, 10, 12, 14 and 16 years. The toy elephant, to be stuffed, is included.

All patterns 15c each or two for 25c. Address Pattern Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pennsylvania.





Get finer flavor in the foods you bake—this way!

You want more than good looks—you want fine flavor in the foods you bake. The secret is in your flour—be sure you use the right kind. Flour made from the wrong type of wheat will often produce cakes or biscuits that are perfect in appearance but disappointing in taste. To be sure of *finest flavor,* insist on Pillsbury's Best Flour. It is made only from carefully selected, full-flavored wheat—it will give you that delicious, delicate, unmistakable flavor that marks your perfect baking—you can depend on that, always!

for better flavor, use this one fine flour for all your baking

Pillsbury's Best Flour

for bread, biscuits and pastry

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The VOSS FLOTO-PLANE WASHER



The Low Priced Quality Washer for Farm Homes

Before you buy any washer investigate the VOSS. It is priced $5 to $30 less than other washers of comparable quality.

The VOSS is made in the "Farm Belt" (Iowa) and has been especially designed for farm service. It will wash the heaviest, dirtiest garments, yet you may safely entrust your daintiest clothing without fear of injury. It washes cleanly, quickly and economically any and all laundry, and with a minimum of effort on your part.

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Every part that goes into the making of a VOSS, from the famous Briggs & Stratton gasoline engine to the Timken bearings, is of highest quality. Your sturdy VOSS will give you a lifetime of trouble free service.

There is a Voss dealer nearby

Visit him. He will explain the 12 big features that make the VOSS the best washer for the farm home on the market today, regardless of the price you pay. He will tell you of the "Buoyancy Point" washing principle, an exclusive VOSS feature which alone would convince you of the supremacy of the VOSS.

Send Coupon and we will mail you free, an interesting booklet, descriptive of VOSS Floto-Plane Washers.

VOSS Floto-Plane Washers, with electric motors are also available.

VOSS BROS. MFG. CO.
DAVENPORT, IOWA

VOSS BROS. MFG. CO., Davenport, Iowa. Please send me information on the VOSS Floto-Plane Washer as checked ☐ Gasoline Power ☐ Electric Power
Name _____
Address _____

TIGHT BINDING TEXT CUT OFF

A FARMER out our way

. . . decided not to feed his stock. Look at the money he'd save. Figured it all out . . . so much per week per head. A great idea!

The day before the last one died they took the farmer off to a big house over the hill. Wife says they let her go to see him every Tuesday. Thinks he's beginning to show a little improvement now.

Purely fiction, of course, but there are thousands and thousands of farmers, not knowing the good Chilean Nitrate of Soda will do for their crops, who are starving their wheat, corn, fruit, truck . . . not making half as much money as they could make easily.

Crops need food, just as livestock does . . . just as you do yourself. Chilean Nitrate is the food to feed them. Feed them plenty of this quick-acting nitrogen fertilizer and make some real money this year. 800,000 farmers used Chilean Nitrate last year. Ask your County Agent or consult your Experiment Station. The natural nitrogen—not synthetic—not artificial.

FREE—Fertilizer Book

Our new 44-page book, "How to Use Chilean Nitrate of Soda" gives fertilizer information for all crops. It is free. Write for Book No. 1 or tear out this ad and mail it, with your name and address written in the margin, to office nearest you.

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EDUCATIONAL BUREAU

Chilean Bureau of Agriculture — Profitable Crops

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In writing please refer to ad No. H-23

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Quaker Hill Farm

NORTHERN MICHIGAN RUSSETS — PRINCE EDWARD ISLAND COBBLERS AND MOUNTAINS—NEW YORK RUSSETS AND RURALS
High-yielding strains—Officially inspected and certified. Let us quote prices on your requirements of potatoes and other farm seeds

K. C. LIVERMORE, BOX P, HONEOYE FALLS, N. Y.

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Spray your Orchard and Garden with our Spray Materials.
They always give the best results.
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HAGERSTOWN SPRAY MATERIAL CO.
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10 So. Market Square, Harrisburg, Pa.

When writing advertisers please mention Pennsylvania Farmer

Night Applications Help to Control Spray Burn

By S. W. FLETCHER

RECENTLY I saw a number of apples taken out of cold storage one day which had been russeted by spray burn. The apples were badly shriveled, and had lost their bright color. They would be discounted at least fifty cents a bushel on the market, as compared with another lot of the same variety which were not russeted and had kept plump and bright colored in storage.



Nature provides an efficient protection for the apple in the waxy covering; if this is destroyed the fruit loses moisture and deteriorates in storage. The most common cause of russeting is spray burn. The injury is caused mainly while the apple is very small, as in the petal fall spray. This is why some fruit growers in New Jersey, where spray burn is a more serious problem than in higher altitudes, use a weaker fungicide, as the New Jersey dry mix, instead of the standard lime-sulphur.

One of the advantages claimed by some growers for dusting, as compared with spraying, is greater freedom from burn. This helps to offset, in their estimation, the somewhat lessened efficiency of dust in the control of insect and fungous pests. For this reason it may pay to dust varieties like Jonathan, Grimes and Ben Davis, which are very susceptible to spray burn, when it would not be practicable with other varieties.

Much depends, also, on weather conditions at the time of spraying; the hotter the weather the greater the danger of spray burn. This is one reason why fruit growers are coming more and more to spray, as well as dust at night. It is cooler, the material sticks better and the air is more likely to be still. Some growers claim that they can cover the trees more thoroughly at night—the sprayed leaves show up better in the artificial light. At any rate, it is best to avoid spraying in the heat of mid-day. There are seasons when even unsprayed fruit russets somewhat, but usually it is the result of imperfect application of sprays. The Michigan Experiment Station has been particularly impressed with the results of adding zinc sulphate to the standard lime-sulphur summer spray, to prevent burn. Further experimental evidence is needed to establish this point.

Fruit Notes

THE new Federal Standard Container Law eliminates the 2, 7, 10, 12, 14 and 28-quart baskets or hampers, and the 14-quart splint basket. Get rid of these before November first. The ⅝-bushel hamper is still legal together with ¾, ¼, ⅝, 1, 1¼, 1½, and 2 bushel baskets and hampers. The law applies only to fruit in closed containers, not in open crates. The tall bushel hamper is disappearing rapidly from Pennsylvania markets and the straight side bushel is taking its place.

• • •

THE drift among New Jersey potato growers, according to A. J. Heckley, is decidedly toward the use of complete fertilizer, instead of nitrate alone, and toward the use of a medium quantity of nitrogen, and more attention to green manuring crops. Applications of potash and phosphorus seldom pay in Pennsylvania except when used with nitrogen. The drift in this state is toward the use of less nitrogen and more phosphorus to encourage the growth of cover crops; and to emphasize the importance of maintaining the organic content of the soil. The physical condition of a fruit soil usually is of more importance than its chemical composition.

• • •

SEVERAL peach growers have reported the apparently successful use of a spray of oil combined with either Bordeaux or summer lime-sulphur, to be applied to peach trees in the dormant stage, for the control of both leaf curl and red mite, as well as scale insects. The College experts, however, are not yet convinced that this is sound practice; they believe that the kill of red mite eggs with the combination sprays is not as high as with oil alone. The grower would like to save one spraying, but it is evident that this combination treatment is still experimental.



CLEAN TILLAGE THAT IS REALLY CLEAN

A block of fine Dutchess apples in the orchards of O. A. Newton & Sons, Sussex county, Delaware, as they appeared last fall. This is an example of fine tillage methods followed by the Newtons in their 58 acres of apples, with peaches and 25 of apples interplanted with peaches. The orchards are disked in the fall, except where scarlet clover is used for a cover crop. Even then the land near the trees is disked. In the peach plantings it is thought that this practice helps control the Oriental moth. It also enables the ground to be put into good shape quickly in the spring. The land is level so there is no need for cover crops to prevent erosion. The Newtons are the Master Farmers for the state of Delaware for the year 1928.

Truck Crops

By GILBERT S. WATTS

GOOD old Black Seeded Simpson lettuce! Today a dealer who distributes great quantities of seeds to home gardeners told me he wanted more of this variety than all others combined. It is rightly so. Black Seeded Simpson develops very rapidly in early spring. In summer it remains sweet and tender when most other varieties of leaf lettuce grow bitter and unpalatable. Yes, head lettuce is fine—even if it heads. But this grand old variety is dependability itself and deserves a place in every home garden.

• • •

BEER'S Improved is a pole Lima bean of the "potato Lima" type. Favorable reports indicate that this fine variety is worthy of trial by those who like this vegetable which is so delicious and satisfying when used in the green state, fresh from the garden.

• • •

THOSE who prefer large, meaty purple-pink tomatoes for home use or market but find Ponderosa late and often badly shapen should try Dreers' Favorite. This variety is becoming very popular and can be counted on for a heavy yield.

• • •

IT is nice to have a few pole beans to come along after the early bush ones are gone. Burger's is an extremely promising green variety of the very highest quality, altogether stringless. Moreover, it is about a week earlier than Kentucky Wonder.

• • •

TABLE QUEEN squashes are fast increasing in popularity. They are easy to grow and easy to eat. Plant like pumpkins and they are ready in summer, continuing to bear until frost. A hill or two will supply a family. Pick the green-colored squashes when the spot on the under side that is in contact with the ground has turned to an orange color. Those with white ground spots are too young. May be used baked, steamed, fried or in pies.

• • •

CHRISTMAS CALABRESE or Green Sprouting broccoli continues to attract attention. Quantities are now sold in the larger cities. A packet will provide enough for a trial in the garden. Give same culture as cabbage or cauliflower. When a small head, somewhat like cauliflower, has formed cut this and use. Then numerous sprouts, each with a small head, will come up. Cut these six to eight inches long. They may be used in a number of ways, as greens or as young cabbage, cauliflower or Brussels sprouts. This vegetable has been popular in Italy for generations and deserves wider recognition in America. It is not only delicious and will add variety to the products from the home garden.

• • •

HAVE you lost early cabbage or late cauliflower plants from the attack of maggots in previous years? If so it will pay to be prepared with information and materials. Write this memo down where it can be found when needed:

Dissolve one ounce of corrosive sublimate in ten gallons of water (five ounces in 50 gallons or ten ounces in 100 gallons, etc). Apply a half cupful at the base of each plant soon after setting. In about ten days make a second application. If maggots are known to cause loss very frequently another application should be made about 20 days after planting.

• • •

THERE is still time to make germination tests of seeds from which important crops are to be grown. This simple and inexpensive operation may be the means of avoiding considerable loss which always follow when seed that lacks in vitality is planted.

509 *bushels of* POTATOES *per acre*
on the Famous Trexlertown Farms



Above at the right of crate; is Mr. C. N. Parkinson, Manager, Trexlertown Farm. Mr. A. L. Hacker; Lehigh Co. Agricultural Agent, is at left of crate. Standing, at right, Mr. P. S. Fenstermacher, General Manager, of the Trexlertown Farms. Potatoes grown with AGRICO for Potatoes ("AA QUALITY") Fertilizer yielded 509 bu. per acre, placing this well-known Farm in the Pennsylvania 400-Bushel Club.

The famous Trexlertown Farms, located at Allentown, Lehigh Co., Pa., are known to farmers throughout the Eastern part of the United States. Last season these farms grew 109 acres of potatoes with AGRICO for Potatoes ("AA QUALITY"). Mr. C. N. Parkinson, Superintendent, tells about the crop in this letter:

On the Trexlertown Farms we planted 109 acres of potatoes this Spring, all of which were fertilized with AGRICO for Potatoes ("AA QUALITY") at the rate of 1000 lbs. per acre. It was our intention to make the Pennsylvania 400-Bushel Club, so this Fall our County Agent supervised the measuring of the areas and the digging and weighing of the crop. On one acre we grew 509 bushels and on another 486.6 bushels, so we are eligible to the 1928 400-Bushel Club by a generous margin and AGRICO has had its share in helping us make the record.

The average yield from our 109 acres was 375 bushels per acre and I believe this is 150 bushels more than the county average. We follow the four-year system of rotation and keep the land in good condition so that fertilizers will have every chance to do their best work. Your AGRICO is truly the "Premier Fertilizer."

Nov. 22, 1928 C. N. PARKINSON, Supt. of Trexlertown Farms, Trexlertown, Pa.

Mr. J. G. Nelson, of New Castle, Pa., has had 20 years of success with "AA QUALITY" goods. He writes:

I have used "AA QUALITY" Fertilizers for more than twenty years, and have never failed to get good results. This year I had nine acres in corn, on which I used 200 pounds of your Fertilizer to the acre. It was low ground, and due to the excessive wet weather I could only work it twice and many spots were entirely drowned out. However in the face of all of this, I got 1000 bushels of as fine corn as I ever saw.

From time to time I have been persuaded to try other makes of fertilizer, but they never produced the crops like "AA QUALITY" goods.

Another thing, "AA QUALITY" goods are always in good condition, and drill nicely, and if sometimes I have to carry a little over to the next season, it does not get hard or rot the bags. I will say that they please me year after year.

Oct. 14, 1928 J. G. NELSON

Mr. Conrad Meyer, of Pittsburgh, Pa., says "AA QUALITY" Fertilizer produces better crops than manure. He writes:

We applied 1250 lbs. of "AA QUALITY" Fertilizer on a half-acre of rhubarb and had the best rhubarb we have ever raised. This is our first year to use your Fertilizer on rhubarb. In past years we used at least 24 tons of manure on the same plot. The rhubarb grown with your Fertilizer had heavier stems and was more productive.

We also used "AA QUALITY" goods on our beans and our yield was 10% better than had we used manure alone. We received on an average $2 per bu. for our bean crop, which was a high price. Our other crops, especially our carrots and beets, were 15% above the average in yield and were of excellent quality. From our results the past three years, we recommend the use of "AA QUALITY" Fertilizers in preference to manure.

Nov. 1, 1928 CONRAD MEYER

Remember, please, that it isn't what *you pay* for a fertilizer that determines whether it is "dear" or "cheap" . . . it is what the fertilizer *pays you*. On that basis, "AA QUALITY" goods are by all odds the best and cheapest.

See the nearest "AA QUALITY" dealer at once or write us for quotations.

Our "Agricultural Service Bureau," under the direction of Dr. H. J. Wheeler, formerly Director of the Rhode Island Agricultural Experiment Station, will be glad to answer inquiries about crops, soil or fertilizers. Send for our Booklets. Please state the crops in which you are interested.

"AA QUALITY" FERTILIZERS

Look for the "AA QUALITY" seal on the back of every bag of fertilizer.

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The Vegetables or Flowers you would like to see growing in your garden—read all about them in Burpee's Garden Book, full of pictures and garden news. Write for your copy of this garden book today. It's free.
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23 other leading June and everbearing varieties described in our big free catalog; giving culture directions, and wholesale prices, that will save you dollars. Send for it today.
RAYNER BROS. Salisbury, Maryland
"Plants that Please."

Please Mention Pennsylvania Farmer When Writing to Advertisers

TIGHT BINDING TEXT CUT OFF



FERTILIZED PASTURES

cut the feed bill

RECENT investigations of pasture fertilization in this country and abroad show that top-dressing pasture land several times a year with a nitrogen fertilizer results in earlier grass, more luxurious growth, longer grazing periods and grass richer in digestible protein.

Protein is the most important—and the most expensive—ingredient in dairy feeding. Cows pastured on grasses rich in protein yield more and richer milk, and there is a welcome saving in the feed bill. Young stock makes better growth in less time.

Top-dressing good pasture land with Arcadian Sulphate of Ammonia increases the protein content and the yields of pasture grasses. Try it for yourself. Top-dress an acre of your best pasture land early—a month before turning-out time—with 100 to 150 lbs. of Arcadian Sulphate and watch the results.

ARCADIAN
Reg. U.S. Pat. Off.
Sulphate of Ammonia

The Barrett Company
AMMONIA-BENZOL DEPARTMENT
Agricultural Bureau

Atlanta, Ga. · New York, N. Y. · Cleveland, Ohio
Memphis, Tenn. · San Francisco, Cal.
Norfolk, Va. · Toronto, Ont.

Free Sample

We'll send you—FREE—enough Arcadian Sulphate of Ammonia to fertilize 25 sq. ft. of soil. We will also send you free bulletins telling how best to use Arcadian. Just fill in the coupon and mail it—today!

The Barrett Company (address nearest office) G-4-30 NG
Please send me sample package of Arcadian Sulphate of Ammonia. I am especially interested in.....
(Write names of crops on line above)
and wish you to send me bulletins on these subjects.
Name.....
Address.....
KINDLY PRINT NAME AND ADDRESS

DIBBLE'S *tested* **SEED OATS**



Thoroughly cleaned, screened and graded, that have produced on our own farms growing from 100-150 acres annually, over twice the average yield of the United States for a ten-year period as low as

85 Cents Per Bushel

New sacks free of course.

Dibble's Twentieth Century, extra early, thin hulled grain weighing 36-38 lbs. per measured bushel with tall stiff straw.

Dibble's Heavyweight, grain weighs 42-45 lbs. with stiff heavy straw and enormously productive. Our yield of stock seed on 70 acres was over 100 bushels per acre and customers in New England, report 117, in New Jersey 100 and in New York 92 bushels per acre.

Also full stocks of Alfalfa, Clover and Grass seeds, Barley, Peas, Spring Wheat, Corn, Seed Potatoes, etc. "Everything for the Farm." Dibble's Farm Seed Catalog and complete Price List FREE. Address

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Premier and Mastodon STRAWBERRY PLANTS

at greatly reduced prices
Also a large stock of new and standard varieties. Strawberries, Blackberries, Raspberries, Grapes, Asp., everything at wholesale prices—direct to growers.
OUR BIG MONEY SAVING CATALOG—tells everything. Mailed on request.
OLD RELIABLE NURSERIES
E. W. Townsend & Sons 19 Vine St., Salisbury, Md.

See Page 17, February 16th

MASTODON Everbearing Strawberry Plants. 100 for $2.75
250 for $4.25; 500, $7.50; $15.00 per 1000. Premier, 100 for $2.00. Progressive and Wm. Belt $4.50 per 1000; 5,000, $20.00. Lupton and Cooper $5.00 per 1000; 5,000, $22.50 collect. 500 at the 1000 rate. Order direct or send for free catalog.
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STRAWBERRIES $2.25 per 1000 and up.
Our 19th Annual Berry-tin Book of guaranteed berry plants, fruit trees, ornamentals and bulbs, including MASTODON Everbearing Strawberry, sent free. Wholesale prices SPECIAL—25th Mixed Gladiolus (Ballistic) postpaid for 25c. I. N. Raley & Son, Box 4, Bridgman, Michigan

Roadside Markets

I am deeply interested in your items in Pennsylvania Farmer concerning the operation of a real roadside market. Because every year or so we bought a small farm and had a roadside stand. I would like your advice as to what vegetables would be best sellers and make least trouble. I was thinking of planting sweet corn in between quite expected and cabbage. Would you consider this all right? Mrs. C. H. Adams.

I HAVE found vegetables of all sorts popular at the roadside market, each attracting great attention as it first comes on the market. However, there is a demand for many things throughout the season if you will make succession plantings so that you always have young tender products. Good sweet corn nearly always sells well, snap beans may be had from July first until frost by making plantings every ten days. Three plantings of peas should be made, the first as early in the spring as possible, the others at ten-day intervals. Carrots are enjoying increasing popularity and beets also move well if you can establish a reputation for having young ones.

G. S. W.

To Build a Hotbed

Would any one tell me through the columns of your paper how to build a hot bed? How many inches of manure and how many inches of ground to put in it and what kind of ground to use? Is good garden ground all right or should it be woods ground?

R. F. Bloom.

HOT BEDS ordinarily are made six feet wide and two feet deep from the bottom of the pit to the top of the frame at the south side and 2½ feet deep from the bottom of the pit to the top of the frame at the north side. Beds which are started very early in the season, before the tenth or February, should be slightly deeper as a rule.

Place 15 inches of well-tramped, even-heated horse manure in the bottom of the pit. This should be moist enough to pack but should not be soggy. Cover with six inches of good loamy soil that will not bake after watering. This will leave you a space of three or four inches to the glass on the south side, but the manure will settle and give you six inches or more inside of a few weeks.

Although woods soil is very fine for plant growing it is not essential. If the soil as it comes from the field or garden is not rich enough in organic matter mix in a quantity of thoroughly rotted manure.

G. S. W.

Shipping Point Inspection

SHIPPING-POINT inspection certificates were written on about 200 cars of apples in southern Ohio last year. So far these cars enjoyed an excellent marketing record. In talking with M. W. Baker, in charge of the inspection service, he told me that so far only two complaints had been registered by receivers against these cars and these were of a minor nature and referred to the tightness of the pack and not to the grading of the fruit.

There have been no rejections of cars carrying the shipping-point inspection certificate. There has been no reversal of the grade at receiving points on any of the cars carrying certificates.

This is indeed a splendid record and shows in a forceful way how confidence in the trade is linked with the use of recognized grades honestly packed by the shipper and backed up by a shipping-point inspection certificate.

Southern Ohio has made great strides in apple marketing in recent years and I really believe that the improvement has just made a small beginning. The future offers much of encouragement and hope in better marketing in this region. The use of recognized grades, honestly packed and the extension of the shipping-point inspection service will all be large factors in the improvement of the marketing of apples.

F. H. Beach.

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50 Mastodon Strawberry Plants $1.00

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100 Blackcap Raspberries 1.00
25 Blackberries, the old reliable one kind 1.00
100 Flowering perennials or shrubs, 2 yr. 1.00
1 Pyramid Dark Red Cut Leaf Maple, 3 year 1.00
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10 Hydrangeas, 2 yr. old, snow white 1.00
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100 Choice Privet or Barberry hedging, 12 inches 1.00
4 Climbing Roses, 2 yr. mixed colors 1.00
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100 Red Raspberries, Plants Only 1.00
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25 Flowering Shrubs, mixed, planting plans 1.00
1 Pyramid Plum, Bud used White 1.00
Good 2 yr. 4 ft. branched trees all planted 16 ft. apart, 25 trees, assorted 1.00
Above collection, 1000 plants, 10 trees, 25 shrubs, 100 berries, 100 hedge, 50 bulbs, 12 grapevines, 1 Pyramid Plum, 4 Roses, 1 Pyramid Dark Red Maple, 3 Abundance Plums, 3 Wolfe Plums, 2 Shipper Plums, 1 Yellow Plum, 1 Pyramid Plum, 1 Pyramid Dark Red Maple, 1 Pyramid Plum, 1 Pyramid Dark Red Maple, 1 Pyramid Plum, 1 Pyramid Dark Red Maple



Get the Grip of Steel...

WEED CHAINS



SCIENCE APPLIED TO POULTRY RAISING

This is one of the screened pens used by **Master Farmers O. A. Mumma & Son**, Sussex county, Delaware. When this picture was taken in December the pen contained Barred Rock chicks being raised for the broiler trade. The Mumma tons follow a very intensive campaign to keep their poultry free from all kinds of disease and parasites. They also trapnest several hundred of their best pullets and from them raise cockerels for the breeding flocks. The cockerels shown in this picture are backed by hens with records of 275 to 300 eggs per year.

Poultry Problems

By R. L. SCHARRING-HAUSEN

The Goose Industry

I am thinking of going into the goose business. Could you tell me if the government issues a bulletin on geese? Have 35 acres of land which is stony and inclined to be wet in spots. Am doing fairly well with chickens. Will fence in one or two acres for geese. J. L.

THE goose business offers a very interesting side-line to poultry keeping, but as the income from it is largely limited to the fall and winter when the birds are sold it is not so good as a main proposition. It works in very well with keeping chickens of the heavier breeds such as Rocks or Reds which are good sitters, as the worst trouble with geese seems to be to get the eggs hatched. Sometimes the female goose will not get broody when you want her to, and if she does she can be "broken up" to lay a second lot of eggs, so that by using chicken hens to hatch the combination works out very well. Goose eggs do not seem to hatch well in incubators.

The best way to get started would be to get a few mated trios of geese. I prefer the Toulouse, although many like the Embden or white geese. If you get good pure??bred birds you can probably get a little extra for your geese as breeding stock.

Farmers' Bulletin No. 767, U. S. Department of Agriculture, Washington, D. C., gives full information about goose raising.

An Oats Sprouter

I recently made an oats sprouter holding fourteen trays 21x24 inches. It is built like a cupboard, 7 trays on each side, is heated by two lamps, has two 3x25-inch vents at the top. When I first started it for a week I had no trouble, but now I am troubled with a mould on top of the oats. I soak the oats about five hours. My pans are one and three-fourths inches deep. I keep about six quarts of water to each pan, making the oats about an inch thick. I keep the temperature around 70 degrees. Can you tell me how to get away from this mould?

John E. R. Kline.

MOULD is troublesome in an oats sprouter of the type you have. It would be a good idea to scrub out the interior with a good strong disinfectant solution and also to add formaldehyde to the water in which you soak the oats. You can buy formaldehyde solution at a drug store, and add about a teaspoonful to the water, increasing the quantity if it does not control the mould. Mouldy feed of any kind is liable to set up disturbances in the digestive tracts of the birds.

Many poultrymen now feed sprouted oats instead of sprouted grain. Take four or five wooden pails or tubs, and put the oats in the first one, covering the grain with water to soak over night. Next morning pour off the water and turn the oats out into another tub, starting a second batch in the first tub, and continue turning the oats into another tub once or twice a day, adding a little water if necessary until the oats have little sprouts about a half inch long, when they are ready to feed. This will take four or five days, depending on conditions. Sprouted oats probably do not contain Vitamin A such as is found in green sprouted oats, but in other respects are excellent for layers and breeders.

Some poultrymen feed grain to the oats in the litter the same as when feed in the morning, others scatter them on top of the mash in the hoppers, while a third method is to feed them in a wet mash which is fed at noon.

A Leghorn Record

I AM sending you a report of a flock of S. C. W. Leghorns which may be of interest to others if you care to print.

I bought 200 head of day-old chicks April 28, 1928, just when we had the biggest snow of that winter. Succeeded in raising 84 pullets and 84 cockerels to maturity. I culled the flock down to 70 head for my winter layers.

Following is expense and return to date. Ten months.

Expenses

200 day-old chicks	
Mash feeds	
Scratch grains	
Cod-liver oil	
Alfalfa hay	
Grit and shell	
Vet. test for white diarrhea	
Total	

Returns

Cockerels sold at wholesale	
16 cockerels sold for breeding	
346 dozen eggs (four months)	
15 dozen used at home	
Total	
Balance returns above costs 10	

W. Va. Millard A.

Danger of Infection
Among Baby Chicks

Success in raising baby chicks is dependent upon proper care and management. Readers are warned to exercise every sanitary precaution and beware of contaminated drinking water. Baby chicks must have a generous supply of pure water. Drinking vessels harbour germs and ordinary drinking water often becomes contaminated and may spread disease through your entire flock and cause the loss of half or two-thirds your hatch before you are aware. Don't wait until you lose half your chicks. Take the "stitch in time that saves nine." Remember that in every hatch there is the danger of some infected chicks—danger of diarrhea in some form and other loose bowel and intestinal troubles. Don't let a few chicks infect your entire flock. Give Walko Tablets in all drinking water for the first two weeks and you won't lose one chick where you lost dozens before. These letters prove it

Mrs. Bradshaw's Remarkable Success in Raising Baby Chicks

"Dear Sir: I see reports of so many losing their little chicks, so thought I would tell my experience. I used to lose a great many of the little downy fellows from bowel troubles, tried many remedies and was about discouraged. As a last resort I sent to the **Walker Remedy Co., Dept. 500, Waterloo, Iowa,** for their Walko Tablets for use in the drinking water of baby chicks. I used two 50c packages, raised 300 White Wyandottes and never lost one or had one sick after using the Tablets and my chickens are larger and healthier than ever before. I have found this Company thoroughly reliable and always get the remedy by return mail." —Mrs. C. M. Bradshaw, Beaconsfield, Iowa.

Never Lost One After First Dose

Mrs. Ethel Rhoades, Shenandoah, Iowa, writes: "My first incubator chicks, when but a few days old, began to die by the dozens. I tried different remedies and was about discouraged with the chicken business. Finally I sent to the **Walker Remedy Co., Waterloo, Iowa,** for a box of their Walko Tablets to be used in the drinking water for baby chicks. It's just the only thing to keep the chicks free from disease. We raised 700 thrifty, healthy chicks and never lost a single chick after the first dose."

You Run No Risk

We will send Walko Tablets entirely at our risk—postage prepaid—so you can see for yourself what a wonder-working remedy it is when used in the drinking water for baby chicks. So you can prove—as thousands have proven—that it will reduce your losses and double, treble, even quadruple your profits. Send 50c for a package of Walko Tablets (or $1.00 for extra large box)—give it in all drinking water and watch results. You'll find you won't lose one chick where you lost dozens before. It's a positive fact. You run no risk. We guarantee to refund your money promptly if you don't find it the greatest little chick saver you ever used. The Pioneer National Bank, the oldest and strongest bank in Waterloo, Iowa, stands back of our guarantee.

WALKER REMEDY CO., Dept. 500 Waterloo, Iowa



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Black Leaf 40
Kills Poultry Lice

FAIRMONT'S BETTER PURE FLAKE BUTTERMILK
WHOLESALE DISTRIBUTORS CARLOADS WEEKLY. ALWAYS FRESH. WE QUOTE DELIVERED. DOUBLE BROS. GREENCASTLE, PA.

Turkeys and Geese

We quit raising turkeys on account of blackhead, but think we will try again this spring under the confinement plan. Now how should we keep the breeders? Let them have the run of the farm or shut them up? And what size pen for, say, three hens and a tom? Also what size brooder house and size of outside runs should the young ones have so we could keep them in each pen for one week, then in another? Which are the best breeds for central Pennsylvania?

E. G. Bratton.

TURKEYS can be successfully raised in confinement. The same principles which are employed in rearing chickens under this method are adaptable to turkey production. It is important that a sun porch be constructed in front of the house and that this be wire screened so that the poults may not have access to the ground. Frequent cleaning is very desirable. In fact, the houses and sun porches should be cleaned twice a week.

It is wise also to feed the turkeys from hoppers which are so constructed that the turkeys cannot enter them. Clean feed and clean houses are most essential in the successful production of turkeys. Never scatter feed on the ground or in the litter.

The mature breeders can be allowed to run if they so desire, but the yards should be changed frequently so that the ground does not become contaminated.

If you have only three females and one male, it might be better to raise your turkeys by allowing an old hen to do the brooding. She and her brood could be moved each week to fresh ground.

Some of the more common breeds of turkeys are the Bronze, Narragansett, White Holland and Bourbon Red. The Bronze is the largest variety and the Narragansett and Bourbon Red are next in size. Any one of the four named varieties can be successfully reared in confinement or by weekly rotation of yards.

* * *

I intend to try to raise some geese this year and would like to have help in regard to hatching same. Can I hatch geese in an incubator? Which is better, a mammoth or a small machine? I have both. Can I brood under chick brooder? H. B. Shadburn.

WHILE it is possible to hatch goose eggs in an incubator, considerable practical experience is necessary for the best results. According to Lamon & Slocum, the incubator should be operated at a temperature of 101½ to 102½ degrees Fahrenheit when the thermometer is placed so that the bulb is on a level with the top of the eggs. The eggs should be turned twice daily beginning with the third day. On the tenth day the eggs should be cooled, and this practice should be continued until two or three days before hatching.

Considerable moisture is needed when goose eggs are hatched in an incubator. This may be added at the end of the first week and should be repeated two or three times during the second week. A convenient method of adding moisture is to sprinkle the eggs liberally with water which has been heated to about 100 degrees Fahrenheit. Beginning with the 15th day and until two or three days before hatching, the eggs may be soaked in warm water for about one-half minute once every two or three days.

I think it would make little difference if you decide to hatch your geese by artificial methods whether you hatch them in the mammoth or the small machines.

Goslings can be easily brooded by artificial means. The same methods which are used in brooding chickens should be employed with one exception and that is that during the first few days the heat in the brooder should be in the neighborhood of 100 degrees, and after a week or so, the temperature may be reduced to 90 degrees and then later to 85 or 80 degrees.



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Free Poultry Bulletin

How to Raise Chicks Without Loss and 100 Other Poultry Secrets

RECENT discoveries will save thousands of dollars to poultry raisers this season. This new bulletin tells just what to do. The next few months is the time to make poultry pay big. There was never a brighter future for the poultry business than right now. But you must start your chicks right. Save chick losses. Save on cost of feed. Get more eggs. Avoid Chick Bowel trouble, Diarrhea, Coccidiosis, leg weakness and worms. Know how to feed from start to finish. How to get Vitamins and Minerals into your mashes. Grow better, huskier, quicker maturing chicks this year than ever. This Bulletin tells 100 secrets you should know. Write today to **Prof. T. E. Quisenberry, American Poultry Experiment Station, Dept. 60, Kansas City, Mo.,** and this Bulletin, also a big poultry book, will be sent you absolutely FREE by return mail. Mention variety poultry you like best.—Adv.

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S. C. Blk. Minorcas, Wh and Sil Wyandottes, Bf Orpingtons, R. I. Whites	4.25	8.50	16	77	144
R.C. Anconas, Col. Wyandottes, S.C.Wh. and Bf. Minorcas Blk. Langshans	4.50	10.00	18	90	175
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HERE: NEARLY EVERYONE RAISES Full Blooded "AMERICAN" Quality Chicks.

	50	100	500	1,000
American or English S. C. Wh Leghorns	$6.75	$13.00	$62.00	$120.00
Hollywood White or Brown or Buff Leghorns	7.25	14.00	67.00	130.00
Tancred White Leghorns, Anconas, Barred Rocks	7.75	15.00	72.00	140.00
R. C. or S. C. Reds, White Rocks, Parks Rocks	8.25	16.00	77.00	150.00
White Wyandottes, Buff Orpingtons, Black Minorcas	8.25	16.00	87.00	170.00
Brahmas, Columbian Rocks, Blue Andalusians	11.25	22.00	105.00	200.00
Light Mixed $9.00 a hundred. Mixed, any breeds, our selection, $10.00 a hundred.			Heavy Mixed, $12.00	

Get our NEW CATALOGUE.—It proves to you the SUCCESS our Customers have with our chicks. Breeders culled and Bred for High EGG PRODUCTION in Winter when eggs are demanding large premiums. Reference Curwensville National Bank. 100% Live Arrival. Dependable Service. Order Early.

AMERICAN CHICKERIES, Box 216, Grampian, Pa.

WOLF SELECTED CHICKS



BABY CHICKS C. O. D. Send Only $1.00

Don't miss this chance to get a start with Wolf's extra quality pure-bred high producing stock. Every breeder produced on our own farm and health of stock guaranteed.

GET OUR CATALOG AND PRICE LIST

Tells about prizes won by our birds. Read about Mary Hoover who made over 11,000 profit in one year with birds of our breeding. All leading breeds. Prices very attractive. Chicks shipped C. O. D. Write today. The packing stopped instantly with Wolf's "No Pick." Order box today. $1.00 prepaid. Satisfaction guaranteed or money refunded.

WOLF HATCHING & BREEDING CO., Box 43, GIBSONBURG, OHIO

Chicks (Investigate before you Invest)



GET OUR BIG POULTRY MANUAL. Get all the information before you buy. Saves money. Plan chicks with special breeding and pedigreed males behind them. If you want real producers we have them. We can fill your requirements if you will let us know what you want. Catalog is Free if you have a poultry problem and we will give our best advice and help.

Write Today—We Can't Tell the Whole Story Here.

COOPERATIVE BREEDING & HATCHING CO., Box 126, TIRO, OHIO

Maryland Poultry and Turkeys

Buy your stock eggs and baby chicks from breeders whose flocks have been culled and certified to Standard qualities as well as production. Send for list of breeders and hatcheries.

MARYLAND STATE POULTRY ASSOCIATION, INC., Bethesda, Md.

LANCASTER QUALITY CHICKS



Our Chicks come from flocks culled for Egg Production and Standard Quality by poultrymen trained at the Ohio State University. OUR CATALOG is chicken from cover to cover. Write for it.

Lancaster Farms Hatchery, R 33, Lancaster, O.

Hillside Quality Chicks

Will Ship C. O. D.

S. C. W. Leghorn, Wyckoff and Tancred Strain, $12.00 per 100, $57.00 per 500 lots, $110.00 per kind lots. Rocks and Reds, $14.00 per 100. 100% live delivery. Postpaid. All free range stock. Light Mixed, $9.00 per 100. Heavy, $12.00 per 100. 100% live delivery. Postpaid. All free range stock. T. J. Ehrenseller, Prop., United Phone. Box 11, McAllisterville, Pa.

BABY CHICKS

	25	50	100	500
Wh., Bl., Br., and Bf. Leghorns..	$2.75	$5.50	$10	$48
Rocks, Reds and Wyandottes.....	3.50	7.00	13	61
Heavy Broilers	3.25	6.50	12	59
Light Broilers	2.75	5.50	8	39

Twenty four page catalogue free. 19 years in business. Hogan tested flocks. Postage paid. 100% delivery.

JOHNSON'S HATCHERY, ICKESBURG, PENN'A

BABY CHICKS

From Heavy Laying Free Range Stock

	50	100	500
Wyck. & Tancred Strn..	$	$	$
S. C. W. Leghorns			
S. C. Brown Leghorns,			
S. C. Rocks & Reds ...			
S. C. Buff Orpingtons..			
Assorted Chicks			

100% prepaid safe delivery guarantee. From this ad or write for circular.

J. R. NACE POULTRY FARM

BABY CHICKS

Free Range bred

White and Brown Leghorn	$1.75	$3.25	$
Anconas & Black Leghorn	1.75	3.25	
White and Barred Rocks	1.75	3.25	
Rhode Island Reds	1.75	3.25	
Heavy mixed broilers	1.25	2.25	
Light mixed broilers	1.25	2.25	

Full count and quality guaranteed. Circular free. For Greater Profit Utah Poultry Farm, Box 14, Fort Pierce, Utah

ULSH'S Superior Chicks

White Wyandottes ..... $
White Rocks ..... $
Barred Rocks ..... $

Special prices on 500 and 1,000 lots. 100% live delivery guaranteed.

JAS. E. ULSH, Beaver Springs, Pa.

Baby Chicks

From Free Range Selected Flocks

	50	100
S. C. White Leghorns ..	$4.50	$8.00
S.C.B. Rocks & Reds ...	7.50	14.00
Light Mixed	4.50	8.00
Heavy Mixed	6.00	11.00

100% Prepaid Safe Delivery Guarantee. Fair View Poultry Farm, R. 3, Bethel, Pa.

WHITE WYANDOTTES

Rose 47-Hicks, Hatching Eggs and Chicks. Ohio State Fair Winners. Big type, A.P.A. Certified and Accredited. Sherman Bowden, Box 1064, Mansfield, O.

Kline's Barred Rocks

Blood-tested stock. Penna Blood-Tested Accredited. Hatches every week. Low prices. Write for circular.

B. W. KLINE, Box 30, Hillsdale, Pa.

70 BREEDS Chickens, Ducks and Geese

northern raised, profitable and pure bred. Incubators at low prices. 36th year. Large new 160-page poultry book free.

R. F. NEUBERT Co., Box 816, Mankato, Minn.

Hatchery Chicks FOR GREATER PROFITS

CHICKS FROM JANUARY TO SEPTEMBER, 1929

Barred and White Rock, White Wyandotte, Rhode Island Reds, White Leghorns. Anconas and Heavy mixed. Our flocks have been culled by Mr. Lloyd Baker a graduate of Pennsylvania State College, also having several years practical experience. Write us your wants.

L. R. WALCK HATCHERIES
Dept. G. Greencastle, Pa.



S. C. W. Leghorns, $11—100. Barred Rocks and Reds, $13—100. White Rocks, $14—100. Mixed $10—100. My stock is culled for heavy layers. 100 per cent live delivery. Our breeders are selected for size, type and production. Will ship C. O. D. Circular free. Meadow View Poultry Farm, Box 4, McAllisterville, Pa.

JACOB NEIMOND.

BUFFER WONDER LAYERS



E. Flr. N. Y., writes Nov. 22: "Will get 1,000 chicks in April. The 2,000 I got did fine. They were a dandy bunch. I have not seen any pullets that grow up to ours. 40% are now laying." Dec. 16 Mr. Flr. wrote again: "They are improving every day. Laying fully 50%." Sunbeam Chicks are bigger when matured, healthier and quicker growers. Get 11 to 12 lbs. per box at 100 when 2 Ohio Rigid Accreditation bred. Guaranteed 100% alive. Prices offered to buyers. BIG DISCOUNTS. Delivery when wanted. Big illustrated catalog. Prices Low. Ship C. O. D.

SUNBEAM HATCHERY
Box 2720, Findlay, Ohio

100 BUFF CHICKS, JUST REAL STANDARD QUALITY.

Thousands of customers. Order your after year. A satisfied customer says "Best hatchery I ever dealt with." Write for catalog. Tells about 16 years' satisfactory service cuts down expensive advertising. My customers reap the benefit by ordering from me. Buff S. C. WHITE and BROWN LEGHORNS and S. C. WHITE Leghorn Pullets. Order direct from this ad. Or write for free circular.

CHERRY HILL POULTRY FARM,
Wm. Nace, Prop. McAllisterville, Pa.

Ferris Strain W. Leghorns

Our breeders are selected for size, type and production. Having long, deep rectangular bodies, the commercial egg farmer wants. For 16 years customers reaps the benefit by ordering from these men, they know a good thing when they see it. Write us for our literature, it is free.

PRICES: $12.00 per 100, $57.50 per 500, $110.00—1000

JUNIATA POULTRY FARMS
Box P. BIGLERVILLE, PA.

Baby Chicks from High Egg Laying Flocks

21 years reliability. Satisfied Customers our best advertising. Prices Reasonable. Write for catalog and price list.

BUCYRUS HATCHERY CO.,
Box 415. Bucyrus, Ohio

Penn'a State "Supervised" CHICKS

Flocks inspected by officials from the Penna Dept of Agri. Our 19th year—established 1910. Get our low prices on Reds, Rocks, Leghorns and Minorcas. Members I. B. C. A. Write for free catalog.

THE KEYSTONE HATCHERY,
(The Reliable Plant). Richfield, Pa.

BARRON LEGHORN CHICKS

From Large Type Barron English S. C. White Leghorns direct. Pullets mated to pedigreed cockerels. Extra Quality chicks from free ranged, selected stock. 14th year. Circular free. 100 per cent live delivery guaranteed. Postpaid. Catalog free.

HURST L. GLAUSER, Box N, Kleinfeltersville, Pa.

Clear Spring Quality Chicks

	25	50	100
S. C. White Leghorns	$3.00	$5.50	$10.00
Tancred and Wyckoff Leghorns	4.00	7.50	14.00
Barred Rocks and R. I. Reds	3.50	6.50	12.00
Light Mixed	2.50	4.50	8.00

Heavy Mixed $3.00. Prepaid. Delivery guaranteed for March and April. 100% live delivery. Postpaid. All breeders free range. Catalog full details of all breeds.

CLEAR SPRING HATCHERY,
R. E. Linder, Prop. Box A, McAllisterville, Pa.

PENN'A CHICKS

have vim and vigor—hatched by men with 18 years experience, from culled flocks. Prepaid and 100 per cent guaranteed. S. C. White and Brown Leghorns, Lt. Rocks, 12c, Reds and Minorcas 14c. Mixed Broilers, 8c each. $6 per 1,000. Circular free. Our Ogean Service after Delivery.

PENN'A HATCHERY, Liverpool, Pa.

BABY CHICKS

Tancred Str. Wh Leg'hns.	$12 per 100
White Leghorns	11 per 100
Barred Rocks	14 per 100
R. C. Reds	14 per 100
Heavy Mixed	12 per 100
Light Mixed	9 per 100

10 lots 1c less. 1,000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for free circular.

D. F. LEINTER, McAllisterville, Pa.

BUCKLANDS HUSKY CHICKS

	25	50	100
Barred Rocks R. C. White Leghorns	$3.50	$6.50	$12
Buff Lay Rocks Brown Leghorns	3.50	6.50	12
R. C. Buff Rocks Barred Rocks	4.00	7.50	14
R. C. Black Island Reds	4.00	7.50	14
Light Mixed	3.00	5.50	10

Heavy mixed $4.00 a hundred. Prepaid. Delivery guaranteed. Order from this ad. Or write for free circular.

BUCKLANDS HUSKY CHICKS, Cowlesville, Penn'a

CHICKS Pure bred, Blood tested, Free range breeders Leghorns, Anconas, 12c. Rocks, Reds, 14c. Wyandottes, Orpingtons, Minorcas, 16c. Black Giants, 20c. 100% live delivery. Catalog free.

Hillcrest Poultry Farms, Mountain View Farm, Washingtonville, Pa.

CHICKS from leading strain. Postpaid.

	100	500	1,000
S. C. W. Leghorns	$11	$52.50	$100
R. I. Reds	12	57.50	110
S. C. Reds	8	40.00	80

J. E. STRAWSER, Box 30, McAllisterville, Pa.

Hampton's Black Leghorn DAY OLD CHICKS

The kind that lay. Circular free.

A. E. HAMPTON, Box F, Pittstown, N. J.

RIVERDALE CHICKS

Leghorns, Wh. Wyan., Barred and White Rocks, R. I. Reds, S. C. Reds, Buff Orpingtons. Write for price list.

Riverdale Poultry Farm, Riverdale, N. J.



Big Chicks from Big Eggs

HEAVY WINTER LAYERS—BEST STRAINS IN AMERICA
PEDIGREE TRAPNEST RECORDS 306 EGGS

Flock 400 hens average 208 eggs per hen. Leghorns laying 4 mo. 2 days, heavy breeds 5 months. Paid $50.00 for males and females. Foundation stock. Prize winners. Hatches off every Monday and Thursday. Prepaid 100% Alive.

"Good Luck Chicks" are hatched in BRAND NEW INCUBATOR PLANT. INVESTIGATION: Baby chicks as large and strong as hen hatched. FREE 32-90 Chart with each order, answers 1,000 vital questions on poultry. Beautiful Natural Four Color Art Book FREE upon request. WRITE TODAY.

	100	500	1000
Wh., Br., R. I., and S. C. Br. Leghorns, Anconas ..	$7.00	$33	$65
Barred and Wh. Rocks, R. I. Reds and S. C. R. I. Reds	8.00	38	75
Blk Minorcas, W. Wyan., Bf. and Wh. Orpingtons.	8.50	40	78
Buff and Wh. Minorcas, Buff and Partridge Rocks.	9.00	42	80
S. L. Wyandottes; Jersey Giants	9.00	42	80

Assorted Light breeds $8.50 per 100 straight. Assorted Heavy $11.50 per 100 straight.

NEUHAUSER POULTRY FARM & HATCHERIES, Dept. 46, NAPOLEON, O.

HILLPOT Quality Chicks

Leghorns-Rocks-Reds-Wyandottes



SEND FOR THIS USEFUL CHICK BOOK

You will find it a valuable guide in selecting your chicks for the coming season and a constant help in rearing them. The book, which is illustrated in color, describes my breeds fully; tells of my careful methods of mating and rearing; discusses the most profitable sizes for broilers; contains many helpful and practical hints and rearing charts. Send for your copy to-day.

W. F. HILLPOT, Dept. 128, FRENCHTOWN, NEW JERSEY

YOU NEED THIS CATALOG!



Big Poultry Manual Given Free to All Buyers of Chicks

Write for details. Every chick buyer should know about Hoyt-ville Chicks. Our beautiful illustrated catalog tells all about them. Your copy sent on request. Guaranteed chicks.

OHIO ACCREDITED CHICKS — ALSO BABY DUCKS

Every bird in our breeding flock inspected and passed by our flocks are inspected and approved by experts trained and authorized by Ohio Poultry Improvement Association. Find out about our guarantee plan 16 breeds. We have limited number Chicks to offer from Ohio R. O. P. pedigreed stock. Write today.

HOYTVILLE ACCREDITED HATCHERY, 117 MAIN ST., HOYTVILLE, OHIO

NATIONAL "SUPER-BRED" CHICKS



500,000 Super-Quality Chicks for 1929

INSURE NEXT WINTER'S POULTRY PROFITS BY ORDERING NATIONAL "SUPER-BRED" CHICKS NOW

We breed and hatch 13 of the leading Breeds. Send for our FREE Illustrated catalog with prices on our utility and special mated chicks. All chicks sent prepaid. We guarantee 100% delivery of good lively chicks. Member of International Baby Chick Association. You will save money by writing us now.

NATIONAL CHICK FARMS, Box 404, MIFFLINTOWN, PENNA.

BUY EARLE CHICKS . . .

and you have made the first step in making poultry to you from the best of parent stock, bred to lay and guaranteed to please. We offer the following popular breeds and best strains at the lowest prices, considering our quality supreme.

	100	500	1,000
Leghorns and Anconas	$13.00	$62.00	$120.00
Barred and White Rocks	14.00	68.00	130.00
R. Reds (Brown and Tompkins)	14.00	68.00	130.00
Jersey Black Giants	20.00		

Reference: National Bank. Book today on chicks that lay. You may order direct from this Ad. or will mail literature. We ship C.O.D. or upon receipt of 10% will send C. Post prepaid with 100% live delivery guarantee. EARLE F. LAYBER, Prop., Richland Poultry Farm & Hatchery, P. O. Box 7, Richland, Pa.

Truslow Chicks

Breeders for 47 years



Wonderful egg and meat producers. Nothing like them in the East. Poultrymen recognize the superior quality of this strain. The demand is generally ORDER MARCH AND APRIL CHICKS NOW. Write for FREE Catalog and state number of Chicks wanted so we can quote special prices. Leghorns mated to pure Mediterranean Cockerels. Barred Rocks and R. I. Reds—all Thoroughbreds. Send at once for particulars.

TRUSLOW POULTRY FARM, Inc. Box 40 Chestertown, Maryland

WRITE for this Chick Catalog



Our Hollywood White Leghorns are headed by cockerels (dams' records 300, 300 eggs per year) direct from Hollywood or sons of above. English and Tancred Leghorns direct from proofer. We also hatch Barred and White Rocks, Reds, Wyand., Anconas, Bf. Orp., Dark Br. and Buff Leghorns. L. V. Caldwell of Mesopotamia, Ohio, made $182.80 on 200 chicks last year. E. E. Williams, Dover Center, Ohio, says, "I can't recommend New London Chick Hatchery too highly." Write for catalog which tells all about our stock. Prices are attractive. Write today.

NEW LONDON CHICK HATCHERY COMPANY, Box 2, New London, Ohio

ERLAY CHICKS



Ohio Accredited Leghorns—Rocks Wyandottes—Reds. Leghorns—Well bred selected females mated to only Pedigreed cockerels from official R. O. P. hens producing from 200 to 290 eggs. Rocks—Barred, Columbian Breeding with both our pens. Wyandottes—From stock bred by Canada's best breeders. Reds—Rosey Tan's—Kansland type and color. Every chick Ohio Accredited. Ten Free Chicks with each 100 ordered. Write for interesting today.

ERLAY POULTRY FARMS, Box 2, Delaware, Ohio
F. G. Retzer A. L. Everitt

Peerless Chicks C.O.D.

Send $1.00 per 100 with order. Pay balance when chicks arrive. Let us supply you with our big, strong Pewious Chicks from flocks that have been carefully bred and culled and contain the blood of such leading strains as Tancred, Barron, Wyckoff, Thompson, Fishel, etc., They are real money makers.

Prize—Post Paid. 100% live arrival.

	50	100	500	1000
WHITE, BUFF & BROWN LEGHORNS ANCONAS	$4.50	$12.00	$57.50	$110.00
R. I. REDS, S. C. REDS, WH. & BARRED ROCKS, WYANDOTTES & BUFF ORPS.....	7.50	14.00	67.50	130.00
Assorted Chicks, Heavy Mixed		12.00	57.50	110.00
HEAVY ASSORTED $10.00 per 100. We want you for a customer and will do our best to please you.				

PEERLESS CHICK HATCHERY, Box 197 LEIPSIC, OHIO

HUBER'S RELIABLE CHICKS



Make Extra Poultry Profits with Huber's Reliable Chicks

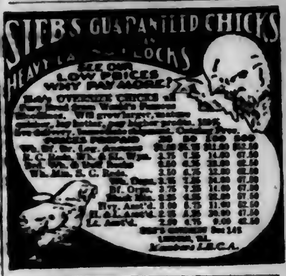
When we say RELIABLE—we mean RELIABLE in every way. Breeding stock of highest quality of 19 years of careful development. Special attention paid to health of flocks and records kept. CATALOG FREE—CHICKS SENT C. O. D. IF YOU WISH. Write for details—get our illustrated catalog which tells all the story. Our prices reasonable. A book on Raising Chicks worth many dollars given free with each order of $10.00 or more. Big discount for early orders.

HUBER'S RELIABLE HATCHERY, N. Main St., FOSTORIA, OHIO



You Get the LIVELY BABY CHICKS—and so easy to get them. Merely do a little advertising in your community for us and we will ship you some of the finest baby chicks you ever saw, without cost to you. Large, peppy, and fluffy Leghorns, Anconas, Rocks, Reds, Minorcas, Wyandottes, Orpingtons and others—take your choice. Many are taking advantage of this liberal offer and you must hurry before the advertising has been finished in your community. You Must Act at Once!

SIEB'S GUARANTEED CHICKS



Baby Chicks Hatched from Selected Flocks

	25	50	100	500	1,000
S. C. White Leghorns	$3.00	$5.50	$10.00	$47.50	$90.00
Barred and White Rocks	3.50	6.50	12.00	57.50	110.00
S. C. Reds	3.50	6.50	12.00	57.50	110.00
Wh. Minorcas, S. C. Buff Orpingtons	4.00	7.50	14.00	67.50	130.00
Wh. Wyandottes	4.00	7.50	14.00	67.50	130.00
Light Mixed	2.50	4.75	9.00	42.50	80.00
Heavy Mixed	3.00	5.50	10.00	52.50	100.00
Assorted Chicks	2.50	4.75	9.00	42.50	80.00

Light Assorted $8.00 per 100. Heavy Assorted $10.00 per 100. Prepaid. Live delivery guaranteed. Circular free.

SIEB'S HATCHERY, Box 146
Manheim, R.F.D. 4

Ohio Accredited Chicks



Quality higher and prices lower. Breeders selected all over hundred flocks. Members Ohio Poultry Improvement Association and authorized accredited inspectors. White Wyandottes, White Plymouth Rocks, Black Minorcas; Pekin and Indian Runner Ducks; $12.00 per 100 up. Live Delivery guaranteed. Parcel Post prepaid. Hatching eggs $7.00 per 100 up. Several breeds rabbits. Circular free. Shipments will be made from our assorted hatchery nearest the buyer.

THE WHARTON HATCHERY CO.
Wharton, Ohio

QUALITY CHICKS

Chicks from winter laying, farm raised, massive stock. S. C. White Leghorns, R. I. Reds, Barred Rocks, White Orpingtons, Anconas, Black Jersey Giants, White Wyandottes. White Plymouth Rocks, Black Minorcas; Pekin and Indian Runner Ducks; $12.00 per 100 up. Live Delivery guaranteed. Parcel Post prepaid. Hatching eggs $7.00 per 100 up. Several breeds rabbits. Circular free. Shipments will be made from our assorted hatchery nearest the buyer.

GLEN ROCK HUSBERY & STOCK FARM,
705-B Edgewood, R. 3.

BABY CHICKS C.O.D!

Send no money, just mail your order. We ship C. O. D. and guarantee live delivery of chicks. From purebred, inspected and culled flocks.

Prices on	25	50	100
S. C. Wh. and Br. Leghorns	$3.00	$5.00	$10.00
Bd. Rocks and R. Reds	3.50	6.00	12.00
Wh. Rocks and Wh. Wyandottes	4.00	7.50	14.00
Broiler Chicks	2.50	4.50	8.00

Bellefonte Poultry Farm, Bellefonte, Pa.

EWING'S English White Leghorns

are the product of 75 years of breeding from directly imported Barron strain stock, with the addition of 250 to 300 eggs. Records from farm and hatchery. Hundreds of chicks fertile runs. Fully guaranteed. Free mating list.

E. T. EWING, Atlantic, Penn'a

LIVABLE CHICKS sent C.O.D. from our own big, healthy egg-bred stock, 300-egg blood. Big type Tancred White Leghorns, $14 per 100; $67.50; 500; $65, $200. "Big Indian" Rose Comb R. I. Reds. Rich dark color, $16, 100; $80, 500; $75, 400. Parks Bred-to-Lay Barred Rocks. (Reg. Permit) $17, 100. Free circular.

WILSON'S POULTRY FARM, Nottingham, Pa.

LOOK—QUALITY CHICKS

This quality is bred in the chick through rigid culling and breeding. Guaranteed satisfaction. 13 varieties, light breeds, 12c. Heavies, 14c. White Wyandottes, 15c. Send for our instructive catalogue. MILTON POULTRY FARM



Plan now for Summer Profits!

WINTER evenings on the farm offer splendid opportunities for planning next season's work.

Has fertilizer been ordered? Are farm implements repaired? Is every acre scheduled for the greatest productiveness? Isn't it possible to increase that legume acreage?

Intelligent answers to these questions will be turned into profits next summer.

To look and plan ahead is as essential to successful farming as it is in the operation of a railroad. New York Central Lines are always preparing for the future. Their task is to have cars ready to move your products to market as your need demands.

More than this, the purpose of the Agricultural Relations Department is to study your problems and cooperate in the interest of more successful farming. By working closely with you this department hopes to help you make 1929 more prosperous than 1928.



New York Central Lines

Boston & Albany—Michigan Central—Big Four—Pittsburgh & Lake Erie and the New York Central and Subsidiary Lines

Agricultural Relations Department Offices

New York Central Station, Rochester, N. Y. — 68 East Gay St., Columbus, Ohio
La Salle St. Station, Chicago, Ill. — Michigan Central Station, Detroit, Mich.
466 Lexington Ave., New York, N. Y. — 902 Majestic Bldg., Indianapolis, Ind.

ROHRER'S SURE PAY SEEDS

QUALITY through and through!

Every package of seeds that carries the Rohrer name is a package of 100% quality seeds. Carefully recleaned and tested for purity, vigor and high germination. You are assured of the finest crops possible when you sow Rohrer's Sure Pay Seeds. Send for samples.

We make no charge for bags and pay all freight expenses.

Alfalfa	Seed Oats
Clovers	Seed Corn
Grasses	Field Peas
Timothy	Garden Seeds
	Seed Potatoes



To the left is pictured our Spring 1929 Catalog. From cover to cover it is full of facts that will interest you. Write for it today!

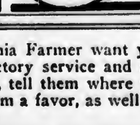
P. L. ROHRER & BRO.
Box 2, Smoketown, Lancaster Co., Pa.



PROFITS Follow The CULTOR

Cut crop costs and make more money. Use CULTOR power for all light draft field operations. The CULTOR plows, plants, cultivates and harvests, and does it better, faster and cheaper than horses. Costs less to own and operate. Ideal for all work on small acreages or as companion to tractor on larger farms. Built for service, thoroughly tested, widely used. Ford powered.

Let us tell you how the CULTOR can make money for YOU.



Continental Manufacturing Co.
Dept. 241. Springfield, O.

ADVERTISERS in Pennsylvania Farmer want your business. They want to give you satisfactory service and aim to please you. When writing advertisers, tell them where you saw their advertisement. You will do them a favor, as well as help yourself and Pennsylvania Farmer.

Readers' Views

A Weighty Woodchuck

I WAS much interested in the Maryland hog story, but I think I have them beat on groundhogs. A few winters ago, about this time of year, one of my neighbors on his way to the woods saw an animal and killed it. He called in some neighbors to view it and found it to be a groundhog. After they dressed it it weighed 40 pounds.

The next day he went to town and told his story there. A man was present from Springfield who had also killed one similar to it, only his weighed 40 pounds to the quarter. I am well acquainted with both men and know them to be honest men.

I can't sweat to the truth, as I didn't see the hog. The man who told the first story said he had no chance after the second one told his story.

A. Douglas

The Whipping Post

CRIME in America has reached a point where it has become a menace and a challenge to American civilization. Prison sentences are a small matter in the sight of a criminal. While he is serving his term he and his other prison mates are planning and scheming what they will do when their term expires. The same convicts have served from one to three terms either in the reformatory or in jail. They are an expense to the county or state. I believe that a more severe punishment should be dealt to all who are convicted of crime by a court of justice.

The state of Delaware has less criminals and less crimes are committed in that state than in any other state in the Union. Why? Because they do not arrest their convicts and sentence them to jail to have a good time and feed at the expense of the county. There the judge imposes a sentence upon the convict by giving him the number of lashes according to the crime committed.

This is the only way to subdue crime—a whipping post in every jail yard in the state of Pennsylvania is what we need. Very soon our jails would not be needed and less crimes committed. This would be a warning to the criminal. He would hesitate before committing the crime, thinking of the punishment that would be meted out to him, if he committed the crime. No criminal wants to return for the second punishment.

One of our noted judges of the state of Indiana said, quite recently, in sentencing several convicts, "A whipping post is what all criminals should have and deserve." That is what we need in the state of Pennsylvania. It will help reduce our taxes. The cost of harboring criminals in our state and county prisons is great and should be considered. This is the only way to bring about reformation. H. S. B.

• • •

A NUMBER of years ago a bill was introduced in the Delaware legislature to do away with the whipping post as a relic of the past or as a relic of "barbarism." There were some very warm arguments both pro and con. The bill was finally so overwhelmingly defeated that no attempt has since been made to discontinue use of this punishment.

The citizens in general regard it as one of our best crime deterrents. Most of the lashings are now not public and I understand not severe, but the disgrace and the fact that it carries disfranchisement seem to be the real cause of fear.

The habitual chicken thief and the gentleman robber seem to be the ones dreading it most. I recall a few years ago that a city adept took a diamond stud from the shirt front of a spectator when our state house was crowded. He was caught and though every effort was made to have the lashes remitted he was lashed and on completion of the sentence remarked, "We will give Delaware a wide berth hereafter." We also attribute our freedom from bank robberies largely to this same cause.

F. C. Bancroft

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SURE CROPS

Both Kellys' guarantee and the certification of the Massachusetts Fruit Growers' Association assure you the kind of fruit you will get from the trees you buy.

Propagated only on whole root imported seedlings Kellys' trees are healthy, most productive and disease resisting.

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Est. 1880

KELLYS' 'Certified' True-to-Name Fruit Trees





"New Coulters Make An Old Acme As Good As New"

If you have an Acme Harrow or XL ... that's standing idle because the coulters are out, listen to this:

Your implement dealer can furnish you with coulters which will make your old Acme Good As NEW.

It makes no difference if your Acme is 20 ... old for present day Acme Coulters fit Acme ... ones beside them 1913.

And we don't have to tell YOU that nothing ... Acme coulters for penetrating fine seed ... quicker and cleaner than any other implement ... bridging ruts, crushes subsoiling and ... these shares double-cultural Acme Coulters.

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100 APPLE TREES or PEACH TREES

Our customers have been satisfied for ... years. Write for circular describing trees ... for landscaping your home.

CHAMPION NURSERIES, Box 9, ...

For Cat Improvement

I HAVE read both sides of the cat question. I think it should not be considered the cat in general, but every individual cat for itself. There are good ones and bad ones.

We all know that every cat which is of any account will kill a bird once in a while, but not very often. I have had cats that killed chickens and were a general nuisance, but that kind of cat did not live long where I was. I also had cats that killed their weight or over in mice and rats every month. Such cats were priceless.

The difference between the damage a cat does and the good it does measures its value or worthlessness.

If you raise only kittens from your best cats and cull out all that are not right, I don't see why our cats can't be improved as well as our horses, cows and other farm stock. I have been a breeder of stock nearly all my life, but never bred from a scrub or undesirable stock of any kind.

Why condemn all cows because some are what you call boarders that never did pay their way? The same applies to cats. Why not try to bring their breed up to a high standard?

Peter Mort

A Bouquet

ALTHOUGH it may compel the editors to buy larger hats I wish to say a few words of appreciation for the Pennsylvania Farmer. When we meet a farmer we slap him on the back and say, "Bill, you've got a dandy field of corn." This makes us forget some other crop failure. So I suppose a little flattery makes ye editor forget some of the knocks he receives. I know when some brother shakes my hand and says he enjoyed reading my last effusion it salves over some of the cussings I sometimes get.

In the late fifties and early sixties my father was a subscriber to the American Agriculturist. It taught the best method of clearing land of stumps and stone, of burning brush or piling logs to burn, etc. Live topics of that day, but obsolete today. It had a puzzle corner offering a handsome picture to the solver. I solved one and received a card, 3x4 inches, of a farmer sharpening his scythe, a dog lying at his feet and a jug—supposedly of water—standing in the shade. I thought and it was for that day a fine souvenir, but can be duplicated at any 5 and 10 cent store now at two for a nickel. I have it among my old time relics. Later I was sometimes a contributor and subscriber to the National Stockman and Farmer. My first acquaintance with the Pennsylvania Farmer was when it was published at Meadville and my neighbor Homer C. Crawford was editor. With the exception of a few years I have read it ever since. Now when the two papers are combined with a battery of very efficient editors and correspondents I think it the best paper published for Pennsylvania farmers. For years I have read its editorials and have listened to some of its editors in institute work and when I open it on Saturday evening it seems like a Methodist love feast.

Now Brother Kester, don't be too proud of your two grandkids. I have thirteen and three great-grands and all but a few have either grown up in my home or I in theirs. The man or the woman who has topped the hill and is on the shadowed side and has no grandchildren to ask a hundred questions and to tell what a great person he was has missed a lot of life.

May the shadow of the Pennsylvania Farmer never grow less.

O. C. Sigworth.

Venango county, Pa.

Your car and truck aren't specially adjusted racers—



Your tractor isn't a laboratory—

But they are the best places in the world for you to prove that the amazing New Mobiloil can save you money every day.

We announce the New Mobiloil—an oil so startling in its performance that the superlative statements we are ready to make about it are actually conservative.

For example, repeated road and laboratory tests prove that this New Mobiloil commonly assures from 10% to 30% more power than other oils sold for the same purpose. Which means a saving of as much as 16% in gasoline consumption. Our tests have consistently bettered these figures.

Under high speeds or full load you will find, as our road tests have repeatedly shown, that this New Mobiloil consumes more slowly than any other oil of equal body . . . and it is an established engineering fact that the oil which lasts longest at high speed also lubricates best at any speed.

This amazing New Mobiloil's wearing quality will save you anywhere from 15% to 50% in oil consumption. And the fact that it does a better lubricating job means fewer repairs and less time lost through costly breakdowns.

Substantial quantity discount

For a season's supply it is cheaper to buy in the 55-gallon and 30-gallon drums with convenient faucets. On these large containers your Mobiloil dealer will give you a substantial discount. His complete Mobiloil chart tells you the correct grade of Mobiloil for your car, tractor and truck.

Make this chart your guide

It shows the correct grades of Gargoyle Mobiloil for certain prominent cars. If your car is not listed here, see at your dealer's the complete Mobiloil Chart, which recommends the correct grades for all cars, trucks, tractors, etc.

NAMES OF PASSENGER CARS	1929 Engine Summer	1929 Engine Winter	1928 Engine Summer	1928 Engine Winter	1927 Engine Summer	1927 Engine Winter	1926 Engine Summer	1926 Engine Winter
Auburn, 6-66	...	...	...	...	...	...	A	A
" 6-cyl.	Arc	Arc	BB	Arc	BB	Arc	A	Arc
" other models	A	Arc	A	Arc	A	Arc	A	A
Buick	BB	Arc	BB	Arc	BB	Arc	A	Arc
Cadillac	BB	Arc	BB	Arc	BB	Arc	BB	Arc
Chandler Special Six	...	...	A	Arc	A	...	...	...
" other models	A	Arc	A	Arc	A	Arc	A	Arc
Chevrolet	A	Arc	A	Arc	A	Arc	A	Arc
Chrysler, 4-cyl.	...	...	A	Arc	A	Arc	A	Arc
" Imperial	BB	Arc	BB	Arc	A	A	A	A
" other models	A	Arc	A	Arc	A	A	A	A
De Soto	A	Arc	...	...	...	...	...	...
Dodge Brothers	A	Arc	A	Arc	A	Arc	A	Arc
Durant	A	Arc	A	Arc	...	...	...	...
Erskine	A	Arc	A	Arc	A	Arc	...	...
Essex	A	Arc	A	Arc	A	Arc	A	Arc
Ford, Model A	A	Arc	A	Arc	...	...	...	...
" Model T	—	—	—	—	F	F	F	F
Franklin	BB	Arc	BB	Arc	BB	BB	BB	BB
Gardner, 8-cyl.	BB	Arc	BB	Arc	BB	Arc	A	Arc
" other models	...	...	...	...	...	...	A	A
Graham-Paige	BB	Arc	BB	Arc	A	Arc	A	Arc
Hudson	A	Arc	A	Arc	A	Arc	A	Arc
Hupmobile	BB	Arc	BB	Arc	A	Arc	A	Arc
La Salle	BB	Arc	BB	Arc	BB	Arc	...	...
Marmon, Six	A	Arc	A	Arc	A	Arc	...	...
" other models	—	—	BB	A	A	A	A	A
Maxwell	A	Arc	A	Arc	A	Arc	A	Arc
Nash, Adv. & Sp. 6	BB	Arc	BB	Arc	BB	Arc	A	Arc
" other models	A	Arc	A	Arc	A	Arc	A	Arc
Oakland	A	Arc	A	Arc	A	Arc	A	Arc
Packard	A	Arc	A	Arc	A	Arc	A	Arc
Pierce, 72, 90, 91	BB	A	BB	A	BB	A	BB	A
" other models	A	Arc	A	Arc	A	A	A	Arc
Plymouth	A	Arc	...	...	...	...	...	...
Pontiac	A	Arc	A	Arc	A	Arc	A	Arc
Reo	A	Arc	A	Arc	A	Arc	A	Arc
Stearns Knight, 6-66	BB	Arc	BB	Arc	A	A	...	...
" other models	BB	A	BB	A	BB	A	BB	A
Studebaker	A	Arc	A	Arc	A	Arc	A	Arc
Velie, 8-cyl	BB	Arc	BB	Arc	...	...	...	...
" 6-cyl	A	Arc	A	Arc	A	Arc	A	Arc

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Makers of high-quality lubricants for all types of machinery

the New Mobiloil

GARGOYLE

TIGHT BINDING TEXT CUT OFF

One Fifth of American Potato Crop Ruined by Disease



Seed Treatment this quick easy way controls important diseases and produces larger and better crops.



AT LEAST half of all seed planted by American potato growers carries disease; even certified seed is often infected. Dr. Wm. H. Martin, of the New Jersey Experiment Station, writing in the *American Produce Grower*, warns: "There is no state that does not permit at least 10% of scab and Rhizoctonia." That's your handicap—right from the start! You can never be sure that you have planted disease free seed. But you can *control* the more important seed-borne diseases if you will do just one simple thing. Treat all seed with Du Bay Semesan Bel—the *instantaneous* dip disinfectant.

An Easier Safer Treatment

Semesan Bel is effective against surface-borne Rhizoctonia, black leg and scab, and protects the seed piece against soil-borne organisms. Harmless even to sprouted seed, which other treatments often injure. Surface-borne black rot and scurf or soil stain of sweet potatoes are also controlled with this treatment.

What Users Say of Semesan Bel

"Treated potatoes matured 5 days earlier, giving me the advantage of a higher market that netted me an increased profit of $1125." "I am much impressed with the ease, economy and simplicity of Semesan Bel treatments." "Treated acreage yielded 25% more potatoes, with 28% increase in firsts, over the untreated plot."

Just Dip and Plant

Semesan Bel is *instantaneous!* One man can treat 200 to 400 bushels of seed a day. No long soaking or costly equipment. A pound treats 22 bushels of whole or large seed, or 16 bushels of small or cut seed, at cost of only 5c to 8c a bushel.

Diseases of many other crops can be controlled with Du Bay Seed Disinfectants. Mail the coupon below for information, or ask your seedsman, druggist, hardware dealer or general merchant for pamphlets on Ceresan, for seed grains; Semesan Jr., for seed corn; and Semesan, for vegetable and flower seed and bulbs.

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Ground Burned
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Our lime, burned from Western Pennsylvania high-calcium grey limestone and sold in these three forms for the past 18 years, represents the standard, unfailing and economical method of sweetening the soil. The wonderful results enjoyed by our many customers over this period of time prove these facts. Can anyone afford to waste both time and money by using substitutes? If your dealer cannot furnish our Agricultural Lime write to us for prices.
Reco Feder Stone & Lime Co., New Castle, Pa.

Farm Practice

By W. D. ZINN

Rye for Green Manure

MR. AGEE refers to my article relative to turning down rye, but I hope he did not feel that I was criticising him since I knew he had recommended it in former years. The writer is possibly more guilty than he is, but we and everybody else were recommending the best we knew at that time. The point I tried to make was that just because we advised farmers to plow down rye thirty years ago was no reason why we should continue to do so.

• • •

Sand for Filler

HAVING read what I said in regard to mixing fertilizer a correspondent who sells sand writes and asks what the chances would be to sell sand to the farmers who mix their own fertilizer. In the first place he would not have a great volume of business, because not many farmers are going to mix their own fertilizer and the few who do it have learned that if they buy the proper ingredients and make a high-grade fertilizer they do not need any filler. In former days certain companies made and sold as low grade fertilizer as 1-3—3—1-3, and this formula was sold in several states at from $30 to $40 per ton and had a plant food value of only $5.40. The fertilizer manufacturers who would put that kind of fertilizer on the market have gone out of business or have reformed. I believe there is just as large a percentage of honest men among the manufacturers of fertilizers as there are among the farmers, and like most farmers they want to give every one a square deal. Of their own accord they have agreed to discontinue the making of a low-grade fertilizer. Years ago many farmers insisted on buying a cheap fertilizer whether it had much plant food or not and it was business for the manufacturer to cater to their demand.

Take the above named formula and the manufacturer was forced to apply a filler, but there is little or no filler in such a fertilizer as 4-16-4 goods. Why should there be? If that formula was made from nitrate of soda, superphosphate and muriate of potash it took 500 pounds of nitrate of soda, and 420 of that was filler; it took 1,000 pounds of superphosphate, and 680 of that was filler, and it required 160 pounds of muriate of potash, half of which was filler. I do not think our correspondent can find a market for his sand either among the farmers or the manufacturers of fertilizers. He might have done so in the dark ages, but not in the year 1929.

• • •

About Burning Grass

I have a field which I cut wheat from this past summer and have it sowed in grass. The clover and grass was up to the top of the stubble this last fall and now has died down. I wish to know if it would be a loss to set it on fire and burn it over. J. R. Springs.

BY all means never burn anything off the land that you can put in the soil. Why are our wood lands always productive though it takes more plant food to grow the trees in the woods than our crops take from the soil? The answer is easy. The trees shed their leaves every year and thus keep up the organic matter and plant food in the soil. When you burn grass or any vegetation on the land you lose the nitrogen in it and you have destroyed the organic matter and you have left only the ash which contains a little lime, phosphoric acid and potash.

A good way to keep thin land thin is to burn it over every year. A few years ago a friend of mine bought a farm on which was a field covered with broom-sedge waist high. He had rented this field to a man to put in corn and the renter insisted on burning the broom-sedge. The landlord objected and during their argument over the question they agreed to leave the matter to the writer. Of course I said do not burn it but turn it down in October or November. The renter was still displeased because he could not burn the broom-sedge off. The landlord finally agreed to let the renter burn half the field over, but required him to plow the other half in October. The result was that the half plowed in October yielded ten bushels per acre more than did the half burnt over and plowed in the spring. A little of this difference might have been due to the early plowing, but much of it was due to the broom-sedge that had rotted in the ground. Had this sedge been turned down in the spring the difference might have been the other way.

The Maryland Experiment Station scattered two tons of straw over an acre of ground and turned it under in the fall and this produced an increase of 25 bushels of corn over the acre on which no straw had been scattered. The plant food value of straw is only about $2.30 per ton, but its value as organic matter in the soil is much higher.

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Kill the disease and insects that are boarding with you. Spray early and often, and use your sprays use Bell Mine Rotary Kiln Pulverized Lime. It is pure, effective, economical and easy to use. Will not clog nozzles.

GREATER YIELD

Test crops of potatoes increased 166.7 bushels per acre by spraying. Rome Beauty Apples yielded 90% Grade A fruit when sprayed. BELL MINE LIME is an important part of any spray—use it in your formula.

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with a
FARQUHAR "ALL-STE…

Here is our new, modern Th… Embodies all the best ideas … from hundreds of successful … men. It is so easily operated … little power because equipped … Roller Bearings. Does a nice, clean … of threshing any kind or condition … grain. Has large capacity and … endure the heavy strains of long, hi… usage.

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Six Days

THIS is a timely subject, as some want Saturday to be made a legal holiday. And Mr. Zinn's concluding paragraph has a world of argument in it. The latter part contains a reason for Saturday holidays. Thousands of women, and men too, but they are in the minority, break the Sabbath day because they must work six days at the factory, mill, desk, etc. They wash, mend, iron and do all sorts of house work because there is no other time in which to do it. Married women most of necessity work despite the arguments against it, and to hold their job they must work six days if it is so decreed.

While some need the Saturday holiday it is altogether uncalled for, even detrimental to others. The farmer would be woefully handicapped should Saturday holidays become legal. Often farmers have a perfect right to be in town on a Saturday morning too, as that is the day many farmers take to do their weekly shopping. If it suits them best in the morning, all right. It does not inconvenience any one else. Personally I like morning best, because the shops are less crowded and one gets better service. Who knows how much work one does on Saturday afternoon after attending to his affairs in town, which is really work too, as it is something that must be done?

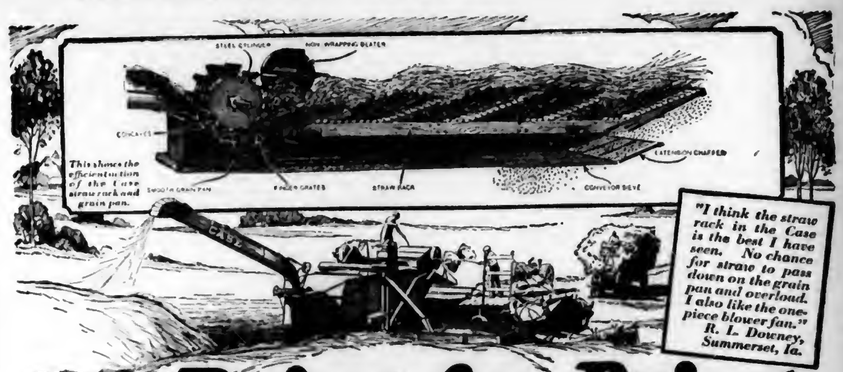
Of course there are poor farmers. The majority of them are poor, as the majority in the city and town are and always will be. There are many types of farmers as there are of city people and business men. Some are gifted with the ability to succeed while others are not. They are—well, just "funny that way".

There was a time when farmers neither tried nor cared to dress neat and up-to-date like city folks, even derided and called all well-dressed people "city dudes." We have tried to educate our children away from these ideas. This has added to the farmer's expenses, and the children's discontent when the necessary money is not available for the desired clothing.

The complainers are numerous, seems to be a habit acquired since the general unrest of the whole country resulting from the war. If we all, not only farmers, would read more scripture and apply its teachings to our own lives, especially the verse which tells us, "Godliness with contentment is great gain," we would cease to be filled with over much discontent.

S. M. V.

"The agricultural population produces the bravest men, the most valiant soldiers and a class of citizens the least given of all to evil designs."
—CATO.



"I think the straw rack in the Case is the best I have seen. No chance for straw to pass down on the grain pan and overload. I also like the one-piece blower fan."
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Separation is the third of the four fundamental threshing operations: (1) feeding; (2) threshing; (3) separating; (4) cleaning. Better separation is assured by a Case because of these distinct advantages:

1. All-steel perforated concaves—non-clogging spring steel finger grates—four-wing steel beater. More than 90% of the grain is removed from the straw at the concaves and grates.
2. Straw rack and grain pan are mounted on the same rocker arms, swinging from the thresher frame below the rack. The inside is smooth and there are no obstructions to interfere with the free movement of the straw.
3. Rack and grain pan are counterbalanced, without weights, in a rigid steel frame which holds all working parts in line. Result: less power needed, and vibration and friction largely eliminated.
4. Smooth grain pan which causes the chaff to rise to the top as the grain moves toward the sieves. Here the chaff is easily blown off. An exclusive Case feature and a great aid to fast and thorough cleaning.

Point for point a Case thresher offers you more exclusive and profit-making advantages than any other machine. It is so exceedingly simple that any farmer can operate it. Our free books, "Bigger Profits by Better Threshing" and the new Thresher Catalog, illustrate and explain everything. Write for both.

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Mount Gilead Power Sprayers have electric welded steel frames—no bolts to work loose. Stainless steel cylinders guaranteed to outwear two sets of porcelain lined cylinders. These better sprayers cost no more than ordinary rigs. Write for catalog 67 and prices.
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10 Pkts. SEEDS FREE
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Our Catalog of Bargains in high quality Seeds, Plants and Shrubs is free. A whole page of farm seeds free to customers. Send today.
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MITCHELL'S NURSERY, Beverly, Ohio

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Northern Ohio grown seed corn. Choice vegetable and flower seeds. 1929 catalog free. Greenfield's Seed Store, 1051 W. Main St., Wellington, Ohio.

TIGHT BINDING TEXT CUT OFF

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PENNSYLVANIA

Name of Association	Secretary-Treasurer
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Allegheny Co.	Henry S. Bepler, Wexford, RD1
Armstrong Co.	G. H. Burns, Jr. Burns Bldg., Kittanning
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Bucks-Lehigh Co.	Linford Foulke, Quakertown
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Cambria Co.	Ivan J. McKendrick, Ebensburg
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Franklin Co.	(Included in Cumberland Co.)
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Wyoming Co.	R. E. Frear, West St., Tunkhannock
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WEST VIRGINIA

Name of Association	Secretary-Treasurer
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Berkeley-(Potomac)	J. T. Nadenbousch, Martinsburg
Braxton Co.	(Included in Calhoun)
Brooke Co.	(See Pan Handle)
Cabell Co.	L. M. Boothtle, (Day & Night Bldg., Huntington
Calhoun Co.	Elliott Chenoweth, Grantsville
Clay Co.	(Included in Calhoun)
Doddridge Co.	(Included in Ritchie Co.)
Fayette Co.,	(Inc. in Summers & Greenbrier)
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Ohio Co.	(See Pan Handle)
Pendleton Co.	H. M. Calhoun, Franklin
Pleasants Co.	(Included in Ritchie Co.)
Pocahontas Co.	F. T. Ward, Marlinton
Preston Co.	L. F. Everhart, Terra Alta
Putnam Co.	(See Jackson Co.)
Raleigh Co.	G. C. Hedrick, Beckley
Randolph Co.	C. E. Walker, Webster
Ritchie Co. (inc. Doddridge, Wetzel, Tyler & Pleasants)	B. F. Patton, Harrisville
Roane Co.	G. F. Hedges, Spencer
Sommers Co. (inc. Fayette),	E. R. Allen, Hinton
Taylor Co.	G. W. Ford, Grafton
Tucker Co.	W. K. Pritt, Parsons
Tyler Co.	(Included in Ritchie Co.)
Upshur Co., Will T. Burnside, Buckhannon	
Wayne Co.	C. E. Walker, Wayne
Wetzel Co.	(Included in Ritchie Co.)
Wirt Co.	Hugh Prather, Elizabeth
Wood Co.	A. D. Ireland, Parkersburg

AT YOUR SERVICE is the attitude of every advertiser in this paper. Write them about your needs. Mention Pennsylvania Farmer.



Your farm *may be the landing field*

A big cash award may wing its way to your farm. If you are doing any building before May 31st get into the Lehigh Farm Building Contest.

There's a grand prize of $1,500 —and 242 other cash prizes—a grand total of $3,075!

Start today by going to your nearest Lehigh dealer for all details and an official entry blank, or write the Lehigh Portland Cement Company, Allentown, Pa., or Chicago, Ill.

LEHIGH CEMENT



So It's Come to This!

"Gus," said Bill, as he caught up with him on the way back to Camp, "are all the rest of the boys out of the woods yet?"

"Yes," said Gus.

"All six of them?"

"Yes, all six of them."

"And they're all safe?"

"Yup," answered Gus; "they're all safe."

"Then," said Bill, his chest swelling; "I've shot a deer."

• • •

Free speech is something that was originally intended for persons who had something worth saying.—Toledo Blade.

• • •

Model Husband

Wife—"Don't you think I have put too much salt in the soup, dear?"

Husband—"Not at all, darling, there is, perhaps, too little soup for the salt, that is all."

"It ain't sanitary," protested the traveler, "to have the house built over the hog pen that way."

"Well, I dunno," replied the native, "We ain't lost a hog in fifteen years."—De Laval Monthly.

• • •

She—"Haven't I seen you somewhere else?"

He—"Perhaps. I've been several other places."—Sniper.

• • •

Plenty of Ambition

"And are you really content to spend your life walking the country begging?" asked the old lady severely.

"No, lady," answered the tramp, "many's the time I've wished I had a car."

• • •

About the only person who gets paid for being disagreeable is a traffic cop. —Sutherlin Sun.

• • •

Dentists Know How

"Did you ever see a $75 bill?"

"No, I didn't know they made 'em."

"Well, here's one from my dentist."

• • •

A Bit of Scotch

Sandy was a leader of the kirk. The increasing redness of his nose very much alarmed his brother elders and they appointed a delegation to wait upon him and ascertain the reason. Says Sandy, "That's easy to explain. Y' see, it's a-glowin' wi' pride at never a-puttin' itself' in anither's business."

• • •

The boss employed two colored men. One morning one of them failed to show up.

"Where is Sam?"

"In the hospital, boss."

"In the hospital? How did that happen?"

"Well, Sam, he done been tellin' me eve'y mo'nin' foh ten days he gwine lick his wife cause o' her naggin'."

"Well?"

"Well, yistiddy he tole me again an' she done overhea'd him, das' all."

• • •

Jamboree

A Jacksonville Negro was seen driving a flivver round and round a tree out in the woods recently. Asked what he was doing, he replied: "I'se makin' jes' as many lef'-han' turns as I pleases widout gettin' called down by a cop."—Florida Times-Union.

• • •

Here Too

"Let poets sing their lilting song
And gaily smite the lyre;
Give me the man who whistles while
He's putting on a tire."

• • •

"How many fools are there on earth?"

"Just one more than you think there are."—West Virginia Moonshine.

Mechling's Calcium Caseinate

THE Perfect Spreader and Sticker for Fruit Trees. Makes the spray stick better, spread more evenly, go further. Use in summer sprays with concentrated lime sulphur solution and arsenate of lead are used together. To prevent burning.

Results in better worm control. Experiment Stations Recommend it as the best and cheapest spreader that can be used.

You Should Use It

FREE Write for our Free Spraying Guide and other diseases

Mechling Bros. Chemical Co.
Philadelphia Camden, N. J.

Why Burn Coal

or Wood in Your Cook Stove or Range when you can have heated heat with Installing a Del Mar Kerosene Burner in five minutes' time!

For a limited time we offer to send C O D this $15.00 burner complete — including flexible feed supply tubing, regulating valves and preventive trap tank, ready to install, for only $12.00.

Fits Any Stove or Range

Fully guaranteed against all defective work manship and material for one year. Any part that proves defective, if returned, will be replaced free of charge.

Improved eNew 1929 Unit

No pressure kerosene or distillate, mixes it with air before an intensely hot, clean, blue flame burning flame. Heat can be regulated to any degree by controlling valves. Improved rotor slots have been manufacturing oil burning burners for years. We make this offer for a limited time only. Specify if for range or heater.

ECONOMY BRASS MFG. COMPANY
114 Economy Building Chicago, Ill.

HOT WATER WITHOUT PLUMBING



Runs off ordinary kerosene lamp in farms, cottages, camps, schools, stores and offices without connection. Simple, economical, compact; inexpensive to run. No installation cost. Provides hot water at any hour day or night.

County Agents Wanted

We want reliable men in every county. Tremendous demand. Big money commissions. Write for details.

Consolidated Distributors, Inc.
First National Bank Building Detroit, Michigan

METAL ROOFING



CONSUMERS MFG. & SUPPLY CO.
Dept. F. Moundsville, W. Va.

Money-Making Farms
STROUT'S
Catalog 1000 Bargains, Just Out

FARMING HOMES, Auto Tour, Business Stand- and Farms in 21 States, all priced for quick sale. 551 pictures. In one issue Mr. Hess' STROUT SPECIALTY farm earns over $4,500 in year.
$4,745 Income On This
120-Acre farm last year; basement barn, cheery 7 room house, near depot town, 1 mile, 6 cows and heifers, 9 hogs, horse, tools, etc., included, only $5,000, part cash. Details in Strout's new 1929 Catalog. Write today for FREE copy. Strout's new 1929 page catalog. It will save you time and money. Specify states you prefer.
STROUT AGENCY
1402-BE, Land Title Bldg., Philadelphia, Pa.

BARNETT LIGHTNING ROD

Barnett Pure Copper Rods protect lightning best, last and longest. Installed on money back guarantee. Have life-time connection at low cost. Don't take chances with Lightning. Write today for book "Lightning."

AGENTS WANTED! Work all or spare time. We have sold $1,975.00 worth of Barnett Rods in a few days. Write now for free samples and Agency plan.
JOS. P. BARNETT & CO., Cedar Rapids, Iowa

The "E-Z" SHOCK ABSORBING SEAT SPRING

will make the farm machines, tractors, etc., you are driving absorb the shocks and jars so injurious to the health and prevent fatigue. Will add greatly to the machine's efficiency and lengthen its life. Will feed or remove cattle, horses, hogs, sheep, etc., from pasture, corral, barn, etc., in shortest time and with least effort. Will make the farm machines, tractors, etc., you are driving absorb the shocks and jars so injurious to the health and prevent fatigue. Will add greatly to the machine's efficiency and lengthen its life. Will feed or remove cattle, horses, hogs, sheep, etc., from pasture, corral, barn, etc., in shortest time and with least effort.



Agents wanted. GEO. J. HAUB, Gen'l Mgr., Dayton, Ohio

FARM LOANS Per Cent
OHIO-PA. JOINT STOCK LAND BANK
304 Yeoho Building Norristown, Pa.

Champion gives dependability

A NEW MEANING



CHAMPION owners have always recognized in Champion Spark Plugs, exclusive superiorities which make for greater dependability in trucks, tractors and engine-driven farm equipment.

Today farmers will be vitally interested in the striking new Champion improvements which give to Champion even greater reliability than ever before.

Designed to give faultless and unfailing service in every farm engine, the new improved Champions set a new high standard of spark plug performance. Moreover, through improvement of the basic Champion features, they exact improved performance with a greater measure of economy than ever before.

Wherever and whenever there is a hard task to be done by engine-driven farm equipment these new improved Champions meet every need for sustained power and dependability.

The exclusive sillimanite insulator with a remarkable new glaze is practically impervious to carbon and oily deposits. Specifically designed to meet all conditions of the most advanced engineering, the new improved Champions combine the ability to withstand excessive pressures and temperatures.

Special analysis electrodes have been greatly improved to resist pitting and burning, and through intrinsic design assure a maximum spark, and a fixed spark gap under all operating conditions.

Absolute dependability, such as has never been obtainable before, makes it advisable to install the new improved Champions in your farm engines.

There is a dependable Champion for every farm engine and every operating condition.

Champion SPARK PLUGS
Toledo, Ohio • Windsor, Ont.

Tri-State Sheep Growers

THE 17th annual meeting of the Tri-State Sheep and Wool Growers' Association, held at Washington, Pa., March 7-8, brought out the largest crowd that has attended this event in recent years. About 275 breeders and others interested in the sheep industry sat down to a roast lamb dinner in the George Washington Hotel Thursday evening. With Abel Browning of Maryland lending the old time fiddlers and I. F. Walker, Buckeye globe trotter and sheep breeder, officiating as toastmaster, the banquet was both entertaining and inspiring. Dr. C. G. Jordan, Secretary of Agriculture for Pennsylvania, was the chief speaker. He stressed the importance of sheep on Keystone farms, lamenting the decline in sheep population during the last half century and pointing out that thousands of more or less waste acres in the state are adapted to the support of this animal.

Due to the growing importance of the market lamb and the recent preference for medium and light-shrinking wool in the wool markets some observers feel that the fine wool industry in this territory is somewhat at the crossroads. In order to obtain facts to displace opinions regarding the matter the Tri-State organization went on record as requesting the experiment stations in Ohio, West Virginia and Pennsylvania with the cooperation of the U. S. Department of Agriculture, to make a survey of the business with a view of finding costs of production, profits, market trends and any other information which will be of use to breeders in their future operations.

Cooperative Marketing

In a plea for cooperative wool marketing J. F. Walker pointed out that American sheepmen have the best market in the world, that American consumers are the best wool buyers, but producers have not taken full advantage of this market by keeping in mind mill requirements when offering wool. He is of the opinion that we need to know more about handling wool, preparing it for sale, breeding and selling. Comparing our methods with the high ly specialized merchandising of the Australian and New Zealand breeder he pictured the American sheepman as a pretty slipshod fellow placing his faith in fate and tariff when he might take the lot in his mouth by wholesale cooperative selling to meet the increasing concentration in buying.

A meat cutting demonstration by C. V. Burge of the Pennsylvania State College, similar to that mentioned on another page of this issue, held a large audience in close attention, indicating that the matter of mutton and lamb consumption on the farm is of interest to farm folks.

Importance of Feed

Feed took first place in discussions of production problems. The "golden heat" which turns blackberry briars and poverty grass into coin of the realm is important with sheep specialists whose observations have led them to believe their profit from sheep are measured by what is put into them and not be what is saved in scanty subsistence. D. S. Bell of the Ohio Experiment Station gave figures from five years tests on that state which showed that a good ration with proper gram, combined with mixed pasture and legume has maintenance ration, paid for the extra cost in the extra number of lambs raised. Increasing average weight of lamb at weaning time, extra wool produced on yearling lamb, decreased mortality of ewe and increased length of ewe's life he showed that it pays to feed enough.

State Sheep Problems

I. A. Kaufman of the Ohio State University in discussing sheep prob-

continued on page 424

15 days and nights without cooling down

...that's dependability



Mr. C. E. Broadhurst, Gruver, Texas, who uses his OilPull more in one season than many farmers do in five years, writes: "We recently ran our OilPull 15 days and nights without letting it have time to cool down. It has given no trouble . . . and we are very much satisfied."

That's *dependability!* The kind of dependable, economical power that OilPull owners expect from their OilPulls. The kind that means *everything* when farm work is a race against time. The kind that avoids layup losses at critical times.

OilPull dependability and economy are direct results of Rumely ideals and experience. Nearly 100 years of specialized power farming experience are back of OilPull design and construction. OilPull has always been a successful tractor. It has always met the needs of farmers. It has always offered:

1. Most work per day
2. Most labor saved
3. Largest fuel savings
4. Lowest upkeep costs
5. Fewest layup losses
6. 10 year life and longer

The *new* OilPulls more than ever *meet the needs* of farmers for dependable power at low cost. With 30% more power . . . 20% more speed . . . lighter weight . . . and greater ease of handling . . . they combine famous OilPull qualities of husky strength, care-free operation, and long life . . . at a new low price.

PRICE—The 20-30 hp. OILPULL
$1095 Cash
F. O. B. Factory
Terms can be arranged if desired

ADVANCE-RUMELY
Power Farming Machinery

Write for complete OilPull literature. Or see your Advance-Rumely dealer. Do it now. Delay may mean buying a less efficient tractor. Address Advance-Rumely Thresher Co., Inc. (Incorporated).

Columbus, Ohio
Harrisburg, Pa.
BATEMAN BROS., Philadelphia, Pa.

Advance-Rumely Thresher Co., Inc.
Dept. A-Y., Address nearest branch office.
Serviced through 30 Branches and Warehouses.

Gentlemen: Please send literature describing the Rumely OilPull Tractor.

Name .....
Address .....

Clean Fruit

Why not enjoy the advantage of growing good clean fruit? A really dependable sprayer makes all the difference in the world. A "Friend" sprayer is as dependable as a true friend.

"FRIEND" MFG. CO., 133 E. Ave., Gasport, N.Y.



Alba Marl Lime

NATURAL SOIL SWEETENER

Not Ground—Natural Precipitate

Fine as flour.

Granulated for easy sowing.

Highest Analysis. Quick Acting.

Will not burn anything.

LOW COST.

Write for guaranteed delivered prices to

ALBA MARL LIME COMPANY
Charles Town, Jefferson Co., W. Va.

the huber dollar buys far more power and years of dependable, trouble free, all around **FARM SERVICE**

Mail Coupon for Descriptive Circular and Prices



the 20-36 HUBER LIGHT FOUR TRACTOR

Here is real farm power—plenty of it for every power job. The Huber 20-36 Light Four is built light—yet heavy enough to pull four plows at a high rate of speed. Gets around quickly and easily and is very moderately priced. Be sure to send for descriptive circular and prices.

THE HUBER MANUFACTURING CO.
72 E. Center St., Marion, Ohio

The Huber Mfg. Co.,
72 E. Center St.,
Marion, Ohio.

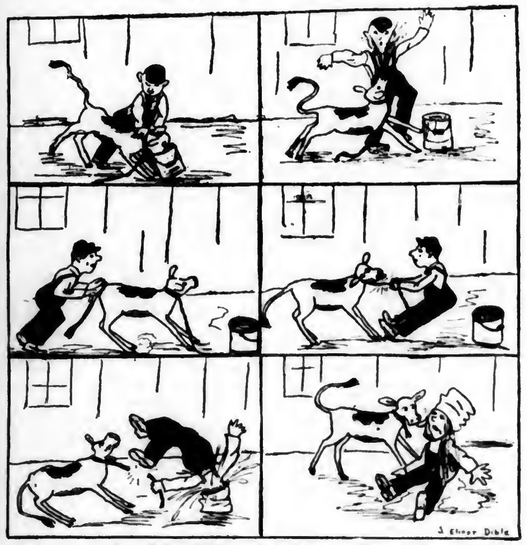
Send me descriptive circular and prices on the Huber Light Four Tractor.

Name .....
Address .....
City .....
State .....

TIGHT BINDING TEXT CUT OFF

THE YOUNG PEOPLE

Teaching the Calf to Drink



First Prize, J. Elinor Dible, Indiana County, Pa.

How Some Would Use $500

First Prize

I HAVE been a member of the 4-H Club for three years and I am interested in livestock and farming.

If I suddenly came in possession of five hundred dollars I would rent a small farm near my father's farm and then proceed to spend my money to the best of my knowledge, which would be as follows:

Would add to my flock of three Hampshire sheep

7 ewes @ $18 per head	$126.00
1 ram @ $30.00 per head	30.00
2 Jersey cows @ $100 per head,	200.00
15 Plymouth Rock hens @ $1 per head	15.00
Rent on the farm for one year,	100.00
Total investments	$471.00

Of course the ewes will not produce any lambs this year but I can sell the wool for at least thirty-five dollars and lay this aside for feed for next winter. My cows will bring two calves and I will separate the cream from the milk and sell the cream every week, and will feed skimmilk to my calves and hens. The hens if fed well will lay near fifteen eggs per day. I will set them and raise all the chickens I possibly can and have some eggs for home use.

From the farm I will get some fruit, a garden, pasture and hay enough to winter my sheep and cows.

I still have twenty-nine dollars of my five hundred left. I will use one dollar and fifty cents to renew my subscription to the Pennsylvania Farmer for a period of three years, so I will be sure to keep well posted on the best method of farming.

I hope to be right busy with all the work I have to do on my farm and maybe I won't have time to write just how I will spend my next five hundred dollars. I will keep the twenty-seven dollars and fifty cents to buy feed for my stock till I get some raised. And will join the Farm Bureau.

If you think best make it a thousand dollars next time then I can buy something worth while, and go to college.

Henry A. Taylor.

Upshur county, W. Va.

• • •

Second Prize

IF, by chance one day, some good fairy should drop $500 in my lap to spend as I wished, I would use some for myself and some for others.

First, I would invest $200 in some heifer calves from some outstanding Holstein herd and then join the calf club. There is a vocational school connected with our high school, which I enter next term, and there I would learn to care for them in the best way. Our community has a fair each fall and for 1928 there were 99 pure-bred cattle entered. I had a fine Jersey bull but was unable to take it, as it was not registered. But I could take these calves, and also to the County Fair a few miles from here. With these calves as a nucleus, I would have a nice dairy herd started by the time I was through vocational school where I shall also learn to cook and sew.

Then I should send $5 each to Senator Arthur Capper and to "The Farmer's Wife" magazine for their Crippled Children's Hospitals.

I should get myself some books, shoes and clothing and some for my five little brothers and sisters, see that mother visited her dentist, and what was left would give to daddy, because on account of unfavorable seasons, high taxes, sickness, the loss of two horses, etc., since we have started to farm again we have had an uphill job.

By the time I finished high school I would have a few cattle I could sell and get some money to pay my way to State College and maybe have a few left. Alice Sybrant (Age 14.)

Crawford county, Pa.

• • •

What Others Say

"I can't draw a cartoon 'Teaching the Calf to Drink' but if I had $500 I would buy a calf and sure could make it drink." Bruce Button.

• • •

"If I had $500 I would buy a poultry farm of 25 acres and go to work making money. I am a little crippled boy eleven years old. I cut my leg nearly off on a mowing scythe. I would like to get a high school education so I can teach to make my living." Raymond Cross.

• • •

"The first thing I would do would be to go to the bank and find out if it were real or counterfeit." Earle H. Long.

• • •

"I heard there was a bank in Pittsburgh paying four per cent interest. I would put my $500 in the bank. I am satisfied with four per cent interest." Steve Hanayik, Jr.

• • •

"I would go to see the Yellowstone National Park, the Grand Canyon and the Panama Canal. Then Europe, Spain and Switzerland." Jessie Switzer.

• • •

"I think chickens the best investment. I would build a yard big enough; would put in a pond where the chickens could get a drink and would have several trees for them to sit under." George Mikesell.

• • •

"The only thing that keeps me from having a successful chicken business is that little word 'if' I had the $500." Clair B. Measner.

• • •

"..... each year I'd improve my flock, always putting the balance of money in the bank and then I would have a big account when I get old enough to get married with which to buy a modern home for my bride." Russell Smith. (Age 13).

• • •

"I would get my mother labor-saving devices." Emma J. Spahr.

• • •

"I would join the Crime Club or some such organization, and get three detective stories each month." Paul E. Williams.

One Week to Go!

"USE YOUR HEAD" drawings must be in the office of Pennsylvania Farmer on or before MARCH 23rd. Use black or India ink and white, unruled paper.

A short, snappy story on "WHAT I FIND OUTDOORS" with camera picture, if possible, is the subject for your letter. Three prizes for each contest.

Address Young People's Editor, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Note: Lack of space prevents printing the third prize letter. Watch for it next week.

Prize-Winning Cartoons

In addition to the three prize winners on this page, honorable mention is due the following for their good cartoons: Veronica Kirsch, Cambria Co.; Ruth Ball, Potter Co.; Clarence B. Hollinger, Dauphin Co.; Dale Games, Schuylkill Co.; Faith Dederick, Crawford Co.; Minnie Carvell, Jamison Co., Donald Garrett, Lawrence Co.; LeRoy Person, Northampton Co.; Philip Earl Rimel, Chester Co.; Hamilton Wagner, Mifflin Co.; Hazel Woodside, Cambria Co.; all of Pennsylvania.

SECOND PRIZE



Isabelle Gilmore
Butler County, Pa.

THIRD PRIZE



Fred Pollock
Miffin County, Pa.

Little Folks' Corner

Were You Right?

WHEN you read Margaret's letter, you will have to admit it deserves first prize.

"I am ten years old and have made out the list of Chinese-looking words. The winter ailments are as follows:—bronchitis, diphtheria, colds, la grippe, pneumonia, tonsilitis, chilblain, mumps, whooping cough, scarlet fever, small pox, cold-sore, chapped hands, chicken-pox.

"The word tonsilitis has only one 'l' and in the jumbled word has two, which is not correct. I like to go to school; am in fifth grade and get 100 per cent every day in my spelling. My teacher is very strict about our spelling and writing. Margaret E. Clark.

Clearfield county, Pa.

• • •

The next best paper came from a little girl in Maryland. Here is her letter:

"I am a girl eleven years old and have been in bed since last July with rheumatism. For pastime I have been trying to work the funny word puzzle which I hope is correct."

Ruby Zucsinberry.

Frederick county, Md.

Perhaps some of the boys and girls would like to write to Ruby and give her some puzzles to work. Send your letter to this office.

There were so many good letters it was hard to decide, but we want to mention a few of the best:—Hazel Hollinshead, Wilda Hare, Rosella and Alberta Morrison, twins, who kindly sent their pictures, Ruth Byers, Sammy Flint, away off in Georgia, whose letter was so nicely decorated with pine trees, John Throchuk, Betty Thompson, Olive Younker, Dorothy Zwick, Cora A. Haight, Pauline Zacek and Samuel P. Mogrogan, Jr.

• • •

Since our new puzzle is a little difficult, we will give you another week. The answer to the first question is "chest". Who will be the prize winners this week? Send your letter to Little Folks' Corner, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

A Narrow Escape

(Continued from last week.)

Imagine her mother's horror when one evening, Virginia coming home from church with some little neighbor girls in their father's car, got out, and coming into the yard began to scream that Dan was after her!

He had rushed up at her with his mouth open and his eyes had such a strange look in them. He did not bark but made queer little noises in his throat. Her mother quickly opened the door and Dan tried to run in after Virginia. Thoroughly alarmed, her mother got the door closed ahead of him.

(To be continued.)

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1. Art Goebel, winner of the Dole flight and former holder of the cross-country flight record encircling the globe over the route he plans to fly. With seven special re-fueling planes stationed at strategic points, he plans to leave Wichita, where his plane is being built, and fly around the Arctic circle for a distance of 18,000 miles back to Wichita (Kansas). The attempt will be made in the fall.

2. Paris.—How trees are dwarfed—perfect miniatures caused by "surgical operations" and "semi-starvation". This little tree is 75 years old, although it is but 18 inches high. The branches appear so realistic because of the weights which were tied to them.

3. Miami, Florida.—Little Futch Cypress (left) and Pauline Charley, are the best behaved youngsters on the Seminole reservation, a committee of judges found recently. They never cried or demanded the extra attention a white child expects. The Seminole youngsters have no toys and as very small tots, they are left to their own amusement much of the time. Photo shows Ruby Billie (left) with her Little Futch Cypress and Maggie Billie with Pauline Charley.

4. The giant liner "Berengia" has been in the floating dock at Southampton, England, for almost a month undergoing an extensive overhauling prior to the summer season. One thousand men are at work on the "interior", while 100 men are engaged in dismantling the old rudder and reboring the stern-post in preparation for the installation of the new rudder which weighs 55 tons. Here is a view of the massive rudder.

5. Cooperstown, N. Y.—A group of girls of the exclusive Knox School who donned native Dutch costumes for their annual Winter Carnival and Pageant, which was produced and directed by Miss Hazel Nickerson, Director of Physical Education.

6. An odd sight in Switzerland, near Davos,—a bass violinist on skis lugging his huge bull fiddle to a party at the tavern shown in picture beneath a majestic Alpine peak. It is hoped he was asked to play.

TIGHT BINDING TEXT CUT OFF

Pickett's Gap

By HOMER GREENE

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Originally Published in The Youth's Companion

Dannie and his grandfather, Abner, are the only Picketts remaining on the old homestead. Dannie's father, Charlie, has quarrelled with Abner and has not been seen for years. His mother lies in the Pickett graveyard at the mouth of the Gap, with all those others dear to old Abner. The Delaware Valley and Eastern Railroad engineers have surveyed and placed stakes for the new road through the Gap and the graveyard during Abner's absence. He declares no better deed could be done than to pull their stakes from the ground and fling them in the brook. Dannie takes him at his word and removes the stakes that night. On his way back to the house he is overtaken by engineers of another road and detained by them while another survey is made. They believe they are first in the Gap and the transitman, to whom Dannie is attracted, places his stakes around the graveyard. The boy begins to feel remorseful and afraid of the consequences of the night's work when old Abner signs an agreement with the Delaware Valley and Eastern giving them the right of way, in the belief that the road will not touch his graves. They are saved when the sheriff serves a writ of injunction issued at the instance of the Tidewater & Western Railroad Company that the Delaware Valley & Eastern Railroad desist from grading through the gap. The suit is now being tried in court and Abner Pickett has been subpoenaed. Dannie confesses to Aunt Martha and is now on his way to the Courthouse despite a raging snowstorm.

"I'M not afraid any more, Aunt Martha," he replied. "Nothing on earth can keep me from doing what I ought to now. I only hope I won't be too late. There's the stage at the gate. Good-by!"

"Good-by, Dannie! God bless you and comfort you!"

He went down the path by the light of the lamp held in the kitchen doorway. Then he climbed up to the front seat with the stage-driver, and in another moment was off on his fifteen-mile journey to Mooreville, the county seat.

It was still very dark, and the snow was falling steadily, although it was not so deep but that the horses could trot along at their usual monotonous gait until they reached the foot of the long hill leading to Oak Ridge.

Here the driver stopped to extinguish the light in his lantern, for it was now daybreak. But with the coming of day the snow fell faster, the wind rose, and long before the stage and its occupants had reached the summit of Oak Ridge the horses were plunging through drifts that reached to their knees.

At High Rock post-office they stopped for ten minutes to receive and deliver mail. From there to Lawrence the road was mostly through the woods and was not badly drifted. Then came the two-mile drive down the northwest face of the hill range to the poorhouse.

It was a tedious, toilsome journey. They were obliged to break down fences and go through fields to avoid deep drifts in the roadway.

Many a time it seemed as if the horses, exhausted by their efforts, would never be able to break through the high banks of snow that enveloped them. And constantly the storm beat down upon the travellers, driving into their faces, blinding their eyes, chilling them to the bone. When, at last, the stage-driver drove up to the poorhouse gate, he gave a great sigh of relief.

"Those horses don't go no further today!" he declared.

"But," exclaimed Dannie, while his teeth chattered with the cold, "I've got to get to Mooreville, you know! I've just got to get there!"

"Well," was the response, "if you've got to go, you and I can try to foot it for the next stretch; mebbe we can get along; but those horses stay here. I can't afford to lose 'em yit."

He unhitched the animals and drove them into shelter. Then, in spite of protests from the occupants of the house, he and Dannie started out to face the storm on foot; the one with the mail-bag flung over his shoulder, the other bearing no burden but the ever-present, ever-growing fear that he might reach Mooreville too late to accomplish his purpose.

Had it not been a self-imposed task, it would have been a most cruel one for either man or boy. Hour by hour the storm grew fiercer, the drifts deeper, the journey more desperate. Now and then the travellers dragged themselves along by the rails of the roadside fences, and many a time they searched in vain for well-known landmarks to guide them on their way. There was but one relieving feature in the situation; it was not severely cold. Had it been, both man and boy would surely have perished.

When they reached Keene's, the stage-driver gave up the task.

"I don't go no further," he declared, "Uncle Sam or no Uncle Sam! Me an' this mail-bag stays here till it's fit for man an' beast to be out. Come on into the house."

"I'll go in for a few minutes and get warm," Dannie agreed; "then I'll push ahead. Oh, it's no use," as the driver began to protest. "I've got to get there, whether or no. It's only four miles farther, and there are plenty of houses on the way."

When old Ezra Keene heard that Dannie intended to continue the journey to Mooreville, he shook his head emphatically.

"Can't be done," he said. "Never see such a storm since I've been here, and that's nigh on to forty year."

Still Dannie insisted. "I've got to go," he said. "I've got to get there. If I don't, something terrible may happen!"

"And if ye start out in this storm, suthin terrible's sure to happen," said the old man. "So there ye are."

But Dannie was already buttoning up his great-coat and pulling his cap down over his ears. Then the stage-driver, who had been crouching over the fire, rose and added his protest in no uncertain terms.

"No man but a born fool," he declared, "would think of undertakin' such a thing! Be decent and sensible, and stay where you're well off."

But Dannie was not to be deterred or swayed from his purpose. Neither abuse nor ridicule nor the power of the storm was sufficient to keep him from doing what he could to right the wrong for which he had been responsible. He opened the farmhouse door and started out into the tempest.

The stage-driver rammed his hands into his trousers' pockets and turned away in disgust at what appeared to him to be the inexcusable foolhardiness of the boy. Old Ezra Keene, looking from a window, saw the lad struggle through a huge drift at the roadside, and then disappear in a whirling cloud of snow. He threw up his hands and dropped his head as much as to say that it was all over, and coming back, sat down by the stove.

Ten minutes later the stage-driver, unable to repress his grim forebodings and the natural impulse of his kind heart, yet with words of anger on his lips, flung himself into his greatcoat, and started out to drag the boy back from what seemed certain death. A farm-hand from Keene's accompanied him, and together they faced the storm and buffeted the drifts for hours without success. At dusk they returned to the house and reported that they had found no trace whatever of the missing lad.

WHEN the court convened at Mooreville on that Monday in December the court-room was crowded. The celebrated equity case of The Tidewater & Western Railroad Company vs. The Delaware Valley & Eastern Railroad Company, involving the priority of right to build a railroad through Pickett's Gap, had roused great public interest and curiosity.

Besides the local counsel engaged, there were eminent lawyers in attendance from New York and Philadelphia. There was bound to be some sharp legal sparring, and the people wanted to see and hear it.

The battle began soon after the case was opened, when the Tidewater & Western offered in evidence their paper title to the route acquired by them from the old Lackawanna Company.

The Delaware Valley & Eastern people had not expected this, and it provoked a prolonged contest between counsel. Indeed, the better part of the afternoon was occupied in the effort to get this title in evidence. When it was finally admitted, another struggle was immediately precipitated by the offer of the minutes of the meeting of the board of the Tidewater & Western directors, at which the route through Pickett's Gap was formally adopted. And when this contention was settled in favor of the Tidewater & Western, it was time for adjournment.

Just enough evidence had been taken to whet the appetite of the public for more, and when court was opened at nine o'clock on the following morning, the court-room was again crowded, notwithstanding the fierce snow-storm that was raging outside.

Pickett, the Tidewater & Western engineer, and his assistants were put on the stand to identify the map of the route, and to testify regarding the night location through Pickett's Gap. There was very little cross-examination. The defense were evidently saving their ammunition.

Then the plaintiff rested, and the Delaware Valley & Eastern took up its side of the case. Its ... was admitted without objection; but ever the ... mony showing the adoption by the board of ... Pickett's Gap route there was a lively tilt.

Indeed, it appeared from the evidence in the ... that the directors of both companies had held ... meetings on the same day for the purpose of ... ing the report of the engineer and adopting the ... recommended by him. And while both ... had been called for the same hour, it appeared ... the evidence, that as a matter of fact the Tide... & Western meeting was the first in point of ... and that the action of its board on the Pickett's ... route preceded by at least half an hour the ... of the Delaware Valley & Eastern.

There was also a long contest over the ... of the route map and profile, and when these ... finally admitted, the court adjourned for the ... recess.

The wind was playing wildly with the ... snow, and across the paths through the court-... square great drifts had already formed. La... witnesses and spectators set their faces against ... storm, pulled the collars of their greatcoats up ... their ears, and struggled to their hotels and ... At two o'clock they all struggled back again ... the still driving, drifting snow. Indeed, the ... was even greater than at the morning session.

Nicholson, the Delaware Valley & Eastern ... gineer, and every member of his corps were ... on the stand to testify to the setting of the ... through Pickett's Gap on the afternoon of Sep... ber 27th. No severity of cross-examination ... shake the testimony of any of them on that point.

Nor could any of them explain why the ... were not still in position—if they were not—... Pickett made his survey some six or eight ... later. Nicholson declared, however, in answer ... question on direct examination, that the ... removal of the stakes would benefit no one ... might be The Tidewater & Western Railroad Com... pany. But this objectionable answer was, on ... of counsel for the Tidewater & Western, ... from the record.

TEMPLETON, the Philadelphia lawyer, took ... the cross-examination.

"It appears," he said to Nicholson, "from ... map which I have before me, that you located ... route directly through the Pickett grave-yard, ... that true?"

"It is."

"And in making your relocation, did you ... pass through the graveyard?"

"We did."

"Is there any other practicable route by which ... reach the entrance of the gap except the one ... pied by the Tidewater & Western, running to ... south side of the brook?"

"There is no other," Nicholson replied.

"If, then, it should turn out that your ... has no legal right to occupy this graveyard ... site for a railroad, you would find it difficult to ... fect an entrance to the gap from the west?" ... tioned the lawyer.

"Yes, sir, practically impossible."

"And did you not know when you projected ... line across that graveyard that your company, ... virtue of the laws of Pennsylvania, had no ... to occupy it with a railroad?" Templeton's tone ... impressive.

"I knew that we had no right without the ... sent of the owner," was the reply. "That ... however, has been obtained."

"In what way?"

"By fraud!" here interrupted a thundering ...

It was not Nicholson, on the witness-stand, ... made this thunderous accusing answer, "By fraud" ... to the lawyer's question; it was Abner Pickett, ... ed on the front row of benches, he had ... the testimony with intense interest. Now ... eye in the courtroom was turned on him, but ... cared little for that. A tipstaff came up and ... his not to repeat the offense, and then the ... tion of witnesses was resumed.

Abner had sat that morning and listened to ... own son, Dannie's father, as he gave his ... on the witness-stand. Handsome, manly, frank ... all his answers, Charlie Pickett created a most ... able impression both in the mind of the court ... in the minds of the spectators.

Long before he had finished there was not an ... prejudiced person in the court-room who was ... to believe Nicholson's insinuation that the ... ware Valley & Eastern stakes had been ... under Pickett's direction for the benefit of the ... water & Western.

And when, on cross-examination, Charlie Pick... was pressed to give his reason for going around ... stead of across the Pickett graveyard, he re... simply that he understood the right of eminent ... main, conferred by the Commonwealth of Pen... sylvania upon railroad corporations, did not ... the right to occupy burial-places.

Abner Pickett, who knew of his son's far ... reason for not crossing the graveyard, listened ... bowed head, appreciating the delicacy which ...

... avoided thrusting personal and family secrets ... and secrets before the court and the public. ... was the first time in thirteen years that Dr. Lad... had spoken upon Charles Pickett. He was ... mainly the boy Dad... admire his stalwart ... his graceful bearing ... a feeling of pride ... and heard his quick ... This is your boy," ... ing to him: "the ...

And yet, although for ... the same room, brushed ... have reached out his arm at almost any ... and touched him, the old man gave no sign ... hint that he desired a reconciliation.

GABRIEL, called to the witness-stand, testified ... that he had seen Nicholson and his men set ... stakes from the mouth of the gap westerly on ... afternoon of September 27th.

"Yes," he replied, in answer to the lawyer's ques...

"I seen 'em. They come straight from the ... across the graveyard an' up into the potater ... where I was workin'!"

"Saw them set their stakes, did you?"

"Every one of 'em especially the one they ham... ... into the middle of the graveyard."

"Did you see any stakes in the gap that day?" ... the lawyer.

"Not a stake. Wasn't through the gap till the ... mornin'. Then they was a plenty of 'em there, ... not a sign of a stake in the graveyard."

"Did you see any one remove any of these stakes?"

"Not a person."

"Did you remove any of them yourself?"

"No, sirree!" Gabriel was emphatic.

"Was any one with you in the potato-field when ... engineers came up?"

"Yes, Dannie."

"Dannie who?"

"Dannie Pickett; Abner Pickett's grandson."

"To be in court?"

"I reckon he ain't. He didn't come yest'day; an' ... should say he'd find it pretty tough sledd'n' to ... here today."

"Now, then, did you or Dannie Pickett threaten ... engineers with any harm?"

"Ho! ho! ho!" laughed Gabriel. "Well, I reckon ... told 'em it wouldn't be healthy for 'em if Abner ... Pickett was on deck; and Dannie, he 'lowed they ... wouldn't never run any railroad through his grand... ...pa's graveyard. Ho! ho! ho!"

The recollection of the circumstance seemed to ... amuse Gabriel very much.

"Funny, was it?" asked the lawyer.

"Funny ain't no name for it," replied Gabriel.

Then the lawyer put on an air of severity.

"Now, sir," he demanded, "did you hear any one ... at any time, threaten to destroy or remove the stakes ... set by the Delaware Valley & Eastern engineers?"

Gabriel waited a moment before answering. He ... was evidently pondering the matter deeply.

"Why, I can't say exactly," he replied. "As I ... heard anybody threaten to pull up them stakes."

"Well, what threats did you hear concerning those ... stakes?"

"Why, I didn't hear nobody threaten to pull 'em ... out, or hammer 'em in, or chop 'em down, or burn ... 'em up. No, sir, I didn't."

Gabriel looked beamingly down on the array of ... counsel, feeling that he had covered the ground ... that time, at any rate. He did not know that he ... had simply whetted the lawyer's appetite for information.

"Come, now, answer the question. You heard ... threats; what were they?"

"Why, I can't exactly say as I heard any threats."

Marshall, the lawyer, was becoming annoyed. He ... rose to his feet and shook his forefinger at Gabriel.

"You know more about this matter than you're ... willing to reveal!" he shouted. "Now, sir, I want ... you to tell this court what you know and all you ... know, about the removal of those stakes."

Gabriel looked smilingly down upon the ... "Well," he replied, slowly, "as ol' Isra'l Pidgin used to say, ... 'If ye don't know a thing, better let somebody else ... tell it.' So I'd a leetle ruther somebody else'd tell it."

"And who is Isra'l Pidgin?" asked the irritated ... lawyer.

"Oh, an ol' feller I used to know up in New ... State."

"Confine yourself to Pennsylvania and answer my ... question. Did you at any time hear any person ... make a threat to remove those stakes or express ... a wish to have them removed. Yes or no."

This question was getting dangerously close to ... Abner Pickett. Gabriel recalled, with startling distinctness, that night on his employer's porch, when ... the old man declared with such terrible emphasis ... that no person could do a better deed than to pull ... out all the stakes and throw them into the brook. ... And there was Abner Pickett now, sitting on the ... front bench, head and shoulders above the crowd, ... piercing him through with those clear blue eyes. ... The hired man was in a quandary. He hesitated long ... before replying.

"Well, he said, at last, 'I can't say that I heard ... exactly what, no, I can't.'"

The lawyer followed up his chief methods. "Did ... ... any one at any time say that it would ... and prudent to remove or destroy those ...

Let us imagine Gabriel answering. Templeton, the ... lawyer, was on his feet.

"A second forgets," he declared, "that this is his ... witness whom he appears to be cross-examining. ... I demand the enforcement of the rule and the ... protection of the witness."

Judge Moore removed his glasses and poised them ... between his thumb and forefinger.

"The witness appears to be unfriendly and evasive," he declared. "We think counsel is within his ... rights in pressing the question. Proceed."

The incident gave Gabriel time for thought, but ... if he had had a year in which to think, he could ... not have framed a successfully evasive answer to the ... question. And it added not a little to his discomfiture that Abner Pickett's eyes were still piercing ... him.

"Well," said Marshall, impatiently, "answer the ... question. We can't wait all day."

"Why," stammered Gabriel, "I—well, I—"

"Tell the truth, you idiot!"

Abner Pickett spoke again, standing his full six ... feet two, and pointing his long forefinger at the ... disconcerted witness. Again every eye in the court-room was turned on the speaker. His arm was ... grasped roughly by a tipstaff, who hurried to his ... side.

"Don't remove him," said Marshall. "I shall want ... him on the stand in a moment."

"The sooner the better," replied the old man, ... shaking off the grasp of the officer and dropping ... into his seat.

Marshall turned to the witness. "Answer my ... question!" he demanded, sharply. "Yes or no."

"Yes," replied Gabriel.

"Who said so?"

"Abner Pickett."

"When?"

"The same night the stakes was set."

"What did he say?"

"He said nobody could do a better thing than to ... pull 'em up an' throw 'em in the creek."

"That will do. Abner Pickett, take the witness-... stand."

Things were moving rapidly now. Before Gabriel ... fairly knew it, he was out of the witness-box and his ... employer had taken his place and been duly sworn.

"Are you the Abner Pickett of whom the last ... witness spoke?" was the first question asked by the ... lawyer, and the answer came promptly.

"The same man exactly."

"And is it true that you declared a person could ... do no better deed than to remove the stakes set by ... the Delaware Valley & Eastern engineers?"

"True as gospel."

People in the court-room craned their necks and ... listened intently. This witness promised to be interesting.

Back, near the main entrance to the courtroom, ... there was some noise and confusion. A door had ... opened and a boy had stumbled in. Numb and ... stiff and faint with cold and fatigue, he had tripped ... awkwardly over a constable's staff, and had fallen ... to the floor. People in that part of the room turned in their seats to see what the noise was about, ... and those near by looked curiously at the prostrate ... boy. He was helped to his feet by the constable, ... duly admonished, and given a seat on the last row ... of benches but one.

It was Dannie Pickett. How he had ever managed ... to force his way, in the teeth of that terrible storm, ... through the great drifts that blocked the country ... roads, down into the deserted streets of the town, ... and thence to the county court-house, no one was ... ever afterward quite able to make out, nor was he ... himself ever able fully to explain. It was one of ... those feats of physical endurance made possible only ... by the splendid power of determination.

As Dannie breathed the warm air of the court-room he began to regain his strength, and except ... for the aching in his limbs and the pricking sensations over his entire body, he suffered no pain.

When the mist had cleared away from before his ... eyes he saw that his grandfather, whom he had ... intended to search out, and to whom he had resolved to make his confession immediately, was in the ... witness-stand, undergoing examination. And down ... to his ears, through the intense quiet of the court-room, came the lawyer's question:

"Don't you know that the law of Pennsylvania ... makes it a crime punishable by fine and imprisonment to remove stakes set by a surveyor or engineer?"

ABNER PICKETT glared at his questioner. "I ain't here," he replied, "to tell you what I know or don't know about the law of Pennsylvania. If you've got any questions to ask about the facts, ask 'em, and I'll answer to the best of my ability."

Consciously or unconsciously, he had placed himself within the rules of evidence and the protection of the law.

Marshall saw that he had lost a point, and he started out on a new track.

"Very well, Mr. Pickett. We will get down to facts. This celebrated declaration of yours, as testified to by the preceding witness—where was it made?"

"On my side porch in the evenin' of September 27th, the evenin' of the day the stakes were put in."

"Very good; who were present and heard it?"

"Well, David Brown was there for one. No, he wasn't either. He'd gone home. There wasn't anybody there except my grandson Dannie and that hired man."

"Gabriel?"

"Yes, Gabriel?"

"Where did he go then?"

"He went to bed."

"Where did you go?"

"I went to bed."

"And the boy?"

"Why, we all went to bed. It was after ten o'clock. Do you s'pose we sit up all night down at the gap?"

"Really, I didn't know, Mr. Pickett, without inquiring."

The witness was losing his temper, the lawyer was getting sarcastic, and the spectators were anticipating a still greater treat in store from the continuance of the examination.

In his seat at the rear of the court-room Dannie sat, dazed motionless, listening and hearing as one in a dream; in his breast the imperious demand of his conscience urging him to confess; in his numbed limbs no power to move.

Then Marshall took up a new line of examination. He handed a paper to the witness, directing his attention to the name at the bottom of it. "Is that your signature, Mr. Pickett?" he asked.

The old man looked at the paper carefully.

"Yes," he replied, "it is. I wrote it myself."

"This paper is an agreement to sell to The Delaware Valley & Eastern Railroad Company a right of way fifty feet in width through your property on the line located by their engineers on September 27th last. You signed that paper voluntarily, without any coercion, naming your own price for the property."

"Let me tell you about that paper, young man."

"No, answer my question, yes or no."

"Then I say yes. A hundred times yes. I was neither bullied nor bought, but I was deceived and defrauded. When I signed that paper the only line of stakes I knew anything about was the line that went across the brook and around the graveyard. I supposed that was the route I was sellin', I said so to the man who brought the paper. He didn't undeceive me."

(To be continued.)



The Cheerful Plowman

THE ICELESS REFRIGERATOR

I [illegible] be stark extravagance to buy this thing. I s'pose, the price of it would buy a stock of fall and winter clothes, would buy one hundred head of fowl or twenty head of cows. The neighbors feel it is a crime to blow that pile of cash, they say. I'm on the road to debt, to poverty, to ... they say. I'll soon go up in smoke, soon ... a week and crash.

... neighbors said: "Sir, buy a coat, a pair of ... but don't buy a thing that can't be worn out, ... and eat, go buy a good cow, pass them all the ... and drink, but don't be buying that can never wear ... or eat, or drink, or be worn out, or eaten, or ... drunk, or burn up, or wash away, or rot away, ... rust away, or [illegible] away, or be stolen away, ... pull away, or [illegible] away."

I thought it over, then said: "But look! We ... have a cold and severe winter, so we have to ... coal to keep the kitchen stove and iron out ... back account is good and healthy, so I'm told. ... we don't have some days when we are hot ... a cake of ice and the like. I want to get ... ice-box and the like. I want to get that ... thing is something like that."

"We've wanted not for [illegible] many ... many things we've felt the most things of life ... were meant for only kings, the sinecures rich and ... golfing links and fancy types of rings. But now ... though we don't mean to spend like sailors on a ... spree, nor do we plan to carry home each trinket ... that we see, some luxuries, you bet your life, are ... due for wife and me."

J. E. T.

Alfalfa . . .

. . Seed for the Farmer who knows

THE first and most important question for the farmer when he undertakes to start alfalfa is seed selection. Seed is the foundation of the crop. If it lacks in vigor, so will the crop. If it contains a high percentage of weed seed, the hay will bring a smaller price and will not last through many seasons. If it is not a hardy, northern strain it may winter-kill. A bargain seed may make a costly sowing.

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Farm Machinery Short Course and Display at State College

Farm Machinery School

By R. U. BLASINGAME

IN VIEW of the fact that the Department of Farm Machinery, at the Pennsylvania State College, is not provided with a building sufficiently large to house and exhibit farm machinery, it is necessary each year to ask one of the manufacturers to offer a three-day course.

Last year the International Harvester Company supplied the machinery and several of their experts to assist with the instruction. This year, during Farm Equipment Week, February 18-21, the Massey-Harris Company furnished the equipment and several of their experts to discuss the equipment.

On the evening of February 18th a general meeting was held with an attendance of about one-hundred and twenty-five Centre county farmers, many students and faculty.

The illustration shows a class of about fifty students receiving instruction in modern farm equipment. The short course was held in the Stock Judging Pavilion and as many of the machines were demonstrated as possible.

One of the unique machines of the exhibit was a new type plow which plows and prepares a seed bed in one operation. Behind each plow is placed a revolving cylinder containing blades which pulverizes the soil as it leaves the mould boards of the plow. These revolving blades are operated by the power take-off from the tractor.

Life of Tractor

It was interesting to note both in last year's course and in the one given this year that the pressure type of lubrication is being very rapidly adopted by the farm equipment manufacturers. In fact a special period was given over to the discussion of high pressure lubrication.

Another special feature of the short course was a new tractor displayed in comparison with a tractor of the same make which has been used on the College farm since 1919. The two tractors looked very much alike, and the old tractor, having been repaired, is ready for another season's work. The question is very often asked, "How long will a farm tractor last?" This will depend somewhat on the care the tractor receives. On the other hand, farm tractors are being manufactured at the present time with a great deal of care, and very fine material is being used in their construction. The present practice in cutting and heat treating of gears is common in farm tractor design and construction. The very finest anti-friction bearings are being used and the most recent and improved methods of lubrication and exclusion of dirt and dust is the general practice. In fact, a modern gas tractor has as fine material entering into its construction as that of the finest [illegible]. The power take-off is coming [illegible] demand for the operation of [illegible] corn pickers, corn snappers, potato diggers, potato and orchard sprayers [illegible] other equipment.

Agriculture seems to be geared [illegible] the farm tractor as a future [illegible] farming unit.

Ideal Batteries

I have a 32-volt farm lighting [illegible] battery that will not be used for [illegible] months or a year and would like to know the best method of keeping it in good condition. One party told me the best you can do is to do nothing with it and charge it very slowly the first time it is being used again. Another said the acid will eat the [illegible] out of the plates if left standing uncharged and said I should pour the liquid out of the batteries. These batteries were charged the last time in December 24, 1928, and have not been used since. Do you suppose they have discharged themselves by this time?

Wm. L. [illegible]

I UNDERSTAND that a battery loses its charge in time if it is idle.

It is commonly recommended by automobile people to place an [illegible] battery with a competent [illegible] dealer and have it charged every [illegible] days during the idle period. If the battery is left idle the charge will be lost and if it is left in a discharged condition long enough the plates have a tendency to sulphate. I think it would be a good thing for you to write directly to the manufacturer of your battery and ask them for their recommendations.

Concrete or Cinder Block

I want to build a garage this [illegible]. What kind of material would make the warmest and best garage, also cheapest to build? Arthur A. [illegible]

IF a concrete or cinder block manufacturer is close enough to you so that the freight rate will not be too high, and if you can secure a good mason to lay up the blocks, I am inclined to believe you can get an excellent garage which will not have to be painted every so often, by the use of these blocks.

I believe if you will place furring strips inside of the garage over the building paper next to the inside wall and plaster over the furring strips, you will get a warm garage. Of course, such a building should be sealed and doors should fit tight. A garage 16 by 20 feet should be ample in size and will allow sufficient room to walk around the car.

To Overseas Markets *via the* AMERICAN FLAG ROUTE

THE efficient transportation offered by the fast freight services operated for the United States Shipping Board provide an ever ready outlet for America's surplus farm products. Under the direction of experienced American operators, these lines have established an enviable record for dependability and on-schedule promptness.

The services consist of 22 lines with a total of 256 vessels. Sailings are scheduled regularly from Atlantic Coast and Gulf ports for all parts of the world.

PASSENGER SERVICES: Luxurious passenger accommodations are available on the fine liners of the United States Lines, which include the famous Leviathan, world's largest ship. The American Merchant Lines vessels, sailing weekly, offer comfortable passage between New York and London at reasonable rates.

For full information on either freight or passenger services, write for free illustrated booklet.



UNITED STATES SHIPPING BOARD MERCHANT FLEET CORPORATION
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SPECIALS: 1½-3 ft. peach trees 7c; 2-3 ft. by main trees 3 to 4 ft. 25c; best varieties prepaid. I have a full line of nursery stock at very reasonable prices. Write for catalogue.
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Quick, Easy digging for post holes, wells, prospecting and other earth boring. 3, 4, 5, 6 inch, $3.75 each, postpaid. 7, 8 inch, $4.95.
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are short-cuts to finding out truths. The truths about everything you want to buy. The names in advertisements are names of solid reputation. The labels in advertisements are symbols of satisfaction. It pays to read the advertisements, for then you know what is good. The products they tell you about are being bought, tested constantly. The fact that they're still being advertised is alone proof of their worth.

How to Market Rabbits

THERE is a fairly large and increasing business in New York City for live and dressed rabbits, more especially live which are mostly in demand by the Italian, Polish, French and Bohemian consumers, says the N. Y. State Department of Agriculture and Markets. The demand is best at festival seasons. These are Easter, Columbus day and Christmas. At Easter, baby rabbits, preferably white furred, are in large demand as gifts for youngsters. Heavier rabbits, weighing from five to eight pounds each, are used for eating purposes and are wanted at Easter, on Columbus Day and at Christmas. Do not ship long haired or Angora rabbits for eating purposes. They are hard to sell and bring low prices.

Throughout the whole year there is a fairly steady demand for two and one half to three and one-half pound rabbits for hospital and laboratory use.

Live rabbits should be shipped in spindle crates with food enough to last throughout the journey to New York City. Boxes or packing cases should not be used. Any merchant recommended by the Department will gladly send spindle crates on request.

Dressed domestic or tame rabbits have not been received in any large quantity up to the present and excepting at the festive seasons mentioned above, the day by day demand has been slow. The most salable weights are those of four and one-half pounds and over when dressed.

About Shipping

To kill and dress, stun the rabbit with a sharp blow on the back of the neck and then cut the jugular vein and hang up to drain out all blood, open up from neck to tail, take out intestines and lights, leaving heart, liver and kidneys. Sponge well and cool thoroughly before shipping. Leave skins on for the New York market. Pack in over when dressed.

Each box or barrel, as far as possible, should contain rabbits of the same weight. The net weight of each box and quantity should be marked on the outside. The furs or skins of rabbits are valuable in quantities only. They are used in the making of felt hats, imitation seal coats and the like.

Do not take chances by shipping to any one. Some merchants cannot sell rabbits at all and consequently do not want to handle them. Shippers before sending to New York City are advised to get in touch with the New York State Department of Agriculture and Markets, 53 Park Place, New York City, which will gladly give the names and addresses of commission merchants who make a specialty of handling live and dressed rabbits.

W. Va. Lamb Improvement

FOR the fourth year, West Virginia sheep growers are entering on a spring lamb improvement campaign, now broadened to include every phase of the production and merchandising of market lambs. Twenty-four counties are participating in the program this year.

Preliminary to a series of field demonstrations and meetings, leaders in the campaign will meet in Morgantown on March 28 and 29 to discuss plans and policies. From a program which had to do chiefly with docking and castrating, the campaign has been enlarged until it includes all the practices covering [illegible]

In direct line with this state's program, is a Native Lamb Improvement campaign among the native lamb producing states in which the states and counties showing the most improvement are to be awarded prizes. The contest is this, its first year, is emphasizing docking and castrating. The use of pure-bred lambs has been mentioned as a possible factor to be stressed next year.

Home Garden Collection of Vegetable & Flower SEEDS

Special Offer
50 Large 10c Pkts.
$1.00

50 LARGE PACKETS $1.00
All Are Full Size 10c Packets

Here's an amazing offer! Think of it! 50 large regular 10c size packets, all assorted, home garden vegetable and flower seed for only $1.00. A $5.00 value that you cannot duplicate elsewhere. All seeds reliable, fully tested and guaranteed.



Here's What You Get for Only $1.00

In order that you may have the opportunity of trying this most amazing collection of seeds, we give you this entire $5.00 collection for only $1.00. It is our method of advertising. We want to establish new regular customers who will buy from us year in and year out. All seeds are new and fresh and have been grown especially for us. Our money back guarantee protects you against risk. The collection consists of: Beans, Peas, Beets, Lettuce, Cabbage, Tomato, Radish, Onion, Cucumber, Parsnips, Endive, Sweet Corn, Turnip, Egg Plant, Parsley, Pepper, Squash, Flower Seeds: Nasturtium, Asters, Snapdragons, Cosmos, Zinnia, Marigold, Morning Glories, Four-o'clocks, Sweet Peas. Each packet is guaranteed to be regular full 10c size, thereby making this a very sensational offer. Order today while the supply for this introductory bargain offer lasts—Act at once, because this bargain is sure to be snapped up by many readers of this magazine.

Guarantee Entire satisfaction guaranteed. If you don't agree that this is big value and as represented, we will refund your money.

How To Order—Send No Money

Do not send a single cent now! Just sign your name and address (write plainly) to the coupon and rush it to us. We will send your big box of 50 large packets as described above by return mail. Pay postman only $1.00 plus postage on arrival.

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Dept. 1003, Tyrone, Pa.

I accept your offer. Send your regular $5.00 box of 50 packets of assorted home garden vegetable and flower seeds by return mail. I agree to pay postman $1.00, plus postage on arrival. It is understood that if I am not entirely satisfied you will refund my money.

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they keep you to the fore of modern life. Through advertisements you've laid down the shovel and the hoe. You can buy a whole harvest ready-to-eat in cans. You've hung up the fiddle and the bow, for a radio. There's little old-time work left in this age of amazing short-cuts. Read the advertisements carefully and when answering them, say you saw their ad in Pennsylvania Farmer.



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Frick Saw Mills are made in five sizes—a size for farm use—a size for custom sawyers, and larger sizes for use in lumber camps.

Frick Saw Mills are equipped with Timken Roller Mandrel bearings, Hyatt Roller carriage axle bearings, headblock ells with separate adjustable racks, improved patented belt feed, etc.

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He carries Zinc Insulated Fence, Banner or Ideal Steel Posts and Gates in stock. He has the kind of Fence that can serve you best and is able to help you get the biggest value at the lowest cost, quality considered.

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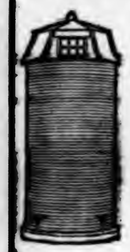
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HELPED COUNTY WIN JERSEY PRIZE

This is one of the herds that helped Bedford county win the Jersey ... tion's prize given to the most progressive and active Jersey county in P... vania. Mr. Ferry's herd made a cow-testing association average of 422.3 ... of butterfat per cow last year, and one cow produced 634 pounds of ... The owner of Keystone Jersey Farm was awarded one of the Master ... medals for the year 1928 at the last State Farm Products Show.

Farm and Dairy

By L. W. LIGHTY

MUCH is said about "good ole" seed, but the best seed will do poorly in an ill-prepared soil, as every practical observing farmer well knows. We also know how difficult it is at times to secure that important factor in crop production. How often my teams were worn out and over-heated trudging through the newly plowed earth. Brisk in the morning, worn well by noon and completely fagged by evening. Often in pity for my horses I did not finish my seed bed as I well knew it should be done. This was particularly true in the spring when the horses were soft and unused to heavy work. This same condition also at times delayed planting longer than I desired. Yet I kept five horses on an acreage where three were formerly considered sufficient.



The Blessings of the Tractor

Always I have been a lover of the horse and considered him the second greatest friend of man in his work and migrations. That doubtless accounts in a measure for my not forcing him to the extremity in work. I eagerly watched the development of the farm tractor. The first attempts were a joke, but when the first practical tractor was offered I at once invested, because I realized what I could do with it.

What a thrill I got out of it. That black iron horse with no nerves and no feeling racing back and forth over the field. While the driver may be a little tired the tractor is as brisk in the evening as in the morning. No more skimped seed-bed preparation, no more delay, no more worrying about over-worked horses.

Two horses were retained for such work as the tractor was not adapted to and because a farm is no farm without horses. New implements have been brought forth, such as will do more work and more thorough work which the tractor will handle, but horses hardly could. Of course the tractor does the plowing and does it more rapidly than the teams could do it, but plowing never fagged the horses as did the work over the plowed ground. By the wise and practical use of the tractor, in first-class seed-bed preparation in seasonable time and seeing to it that there is an abundance of organic matter in the soil, we have placed at least a 50 per cent crop assurance against ... or conditions.

In the Harvest Field

How often I had to find a ... shade tree when the mercury ... of 90 or higher in the shade wh... team was on that stoutly pull ... in operating the grain binder and ... dripping with perspiration and ... to pant because of the extreme ... How we often gave the horses ... in the middle of the day ... grain was in the best condition ... because the very life of the ... must be sacrificed by pushing ... Yet time is valuable at this ... the work should be pushed. ... look at that puffing, snorting pair ... wheels going at a lively pace from ... time the grain is dry in the ... until night, doing twice or three ... the work I could with the team.

I realize that my young friends ... did not have experience with ... "hand-rake-off" harvester and the early ... rake" harvester and the early ... blesome binder cannot appreciate ... thrill I get seeing the perfected ... binder go at a real rapid pace with ... tractor operating it with such ...

Then again I pulled stumps, ... and small trees with my team ... there were sore necks and ... shoulders and lameness as a result ... often. In later days I did the ... with the tractor for days. With ... tractor would occasionally run ... cut capers I hacked and hoed ... track and out came one obstruction ... another. Wonderful improvement ... come in farm equipment since I ... used it, but the tractor stands ... nearly at the head of it all.

Feeding Molasses

A few years back molasses was ... tensively advertised and tried as a ... but many objectors have appeared. ... is inconvenient and it is sticky. ... who tried it tell me the barn ... stock were sticky and messy ... ing it awhile. It surely may be a ... nuisance, yet I fed it in a small way ... years and after a little experience ... found it not troublesome and ... valuable. By tapping it from the ... rel into hot water and stirring ... could apply it and mix it with the ... I desired with little or no effort. ... It added palatability to feeds ... otherwise the animals partly ... and it added a digestible energy at the ... same time, so I found it profitable ... with cow, horse and swine feeding.

An inquirer says: "I have been ... a cow should I feed very little ... while dry, as it may induce milk fever. What do you think?"

My thinking comes from years' experience and I am sure the advice you got is not sound. A cow may be unwisely fed and fattened and constipated when calving and those conditions may bring trouble. But when a good milker has been milked ten months or more her system is depleted more or less and she needs a good supply of feed. The feed should be cooling and relaxing as much as is possible. Silage or root crops are a great help when there is no pasture.

The grain ration should carry an abundance of fresh sweet wheat bran. Another important ingredient is oats ground fine. Another is oilmeal. If the cow is thin in flesh she needs corn but if in good flesh not so much. By weight one portion of bran, one of ground oats, a half of oilmeal and from a half to one of corn, depending on the condition of the cow. Feed this liberally until close to calving time when it is always well to feed a little less and the same is true after calving. Increase the feed with caution.

He Wants to Change

"This year I had pork and potatoes to sell. The pork I sold below cost and most of the potatoes I can find no sale for. What line of production would you advise so I can make a living?" asks a reader.

I can see into the future just as far as the politicians in our national capital. Last autumn they said to hold the wheat as prices were sure to advance. I put my wheat into the bin and soon I had to add considerable carbon bisulphide to kill the weevil with the French name angumorse. Then some mice got in in spite of precautions. They ate some and destroyed more. Then it lost moisture, so I will take out ten to fifteen per cent less than I put in, and up to date the wheat did not advance a cent a bushel.

Of course I knew before I put the wheat into the bin that the Washingtonians did not know and that I did not know, but I laid a little bet that the wheat would advance, and why not? There was no horse race to bet on. So you see my prophetic advice on prices of products next year is worthless as is all the rest. But many years experience taught me to stay by my line of production. I had lean years and fat years as time went on, but I learned how to produce the best at the lowest cost and also how to market it to advantage and so in the bad years I did not lose as much as the greenie and in the good years I made out as well as the best. Picking potatoes never appealed to me, but taking a dozen years as they come swine made me good money.

Really my advice is "shoemaker stick to thy last."

Warts on Teats

I have a cow that has growths on her teats and udder, starting like warts. Sometimes they break open and bleed and they seem to be getting bigger. Is there any way to take them off. The cow is dry now and this would be a good time to remove them. She has had this trouble for about two years and it is getting worse. J. T.

I would try the application twice daily of powdered copper sulphate (blue vitriol). This is slightly more drastic than oil and in a good many instances will give very satisfactory results. You should keep in mind, however, that very large and spreading warts are difficult to remove at the best. If the wart is of considerable size it may be necessary to destroy a part of the growth by the use of the point of a regular firing iron which has been heated to a dull heat.

Pennsylvania State College officials have decided to admit to the Freshman class for September, 1929, not more than 1,170 students—1,000 men and 170 women. Preference will be given to applicants who rank in the upper two-fifths of their graduating classes in first-class high schools or approved preparatory schools of the state. Applications should be filed before July 31.

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combines a gentle, massaging action (a soft rubber liner takes the place of the calf's tongue), with a low-vacuum suction — just like the calf.

This is one of the reasons why so many thousands of the better farmers and dairymen use Universal Milkers.

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Are Farm Banks

WHEN you place your corn crop in a Marietta Silo it pays interest to the farm of increased beef, milk and better profits. It takes 17 years for $10 to increase to $20 in the bank at 6%, but a Marietta Silo will pay for itself in 2 years—that's 50% a year. A 2c stamp brings you our free book, "How to Make Money Out of Your Marietta Silo". It also tells you all about Marietta Brooder Houses and Pig Farrowing Houses with life-giving violet-ray windows. Mail the coupon, you'll be glad you did.

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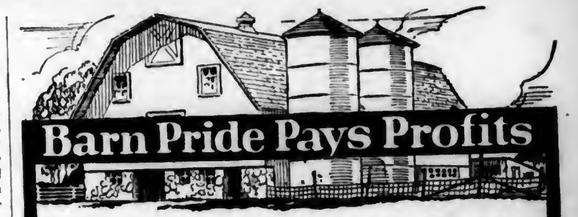
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Every Economy Silo is equipped with Anchoring System that makes it absolutely *permanent*. It can't blow over. Every convenience. A-1 material. Also silos of Tile and Cement Stave. Catalog and manufacturer's prices on request.

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EQUIPPING your barns with modern, efficient Mitchell fixtures means a lot more than the mere personal satisfaction of having good looking, sanitary, up-to-date premises. Cattle stabled the Mitchell way will bring you bigger returns. The handiness of Mitchell equipment saves a lot of time and needless labor.

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Double Folding Sure Stop Stall

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Built for big, heavy loads. Easily raised and lowered. Patented Sovereign Brakes hold any load on level or slipperiest track. Strong carrier box locks and dumps at either end.

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Built with only 3 parts; quick detachable, non-air sucking, frost-proof. Works with either High or Low Pressure Systems.

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Those cream checks and the butter money are such a wonderful help to farmers and dairymen everywhere.

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If you are not using a De Laval you ought to. They cost so little in proportion to what they do—a De Laval can soon pay for itself in cream you may now be losing.

In every way they are the world's best separators—that's why there are more in use the world over than all other makes combined. Now two lines of De Lavals—"Golden" Series and "Utility" Series—for every need and purse.

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There are now two complete lines of De Laval Separators: the De Laval "Golden" Series for the man who wants the best—the De Laval "Utility" Series, equally good in skimming efficiency and service, but selling at a lower price. There is now no reason why everyone should not enjoy the advantages of a De Laval.

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TIGHT BINDING TEXT CUT OFF

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The NEW *Sharples*

The greatest Sharples separator in 46 years of business! Wonderful improvements make this new Tubular model easily the most serviceable of all cream separators. Hip low supply can. Ball bearing. Self-balancing, suspended Tubular bowl. No Discs! Easy to clean; so easy to turn. Highest skimming efficiency—larger cream checks. Now *direct from factory on 30 days trial* at lowest prices ever made.

Free Catalog *Send Coupon*

Stop losing cream with a worn-out separator. Wonderful opportunity now to get the best of all separators on a liberal trade-in offer direct from factory. Find out about the amazing *NEW* Sharples. Catalog and full details sent free and without obligation. Send coupon below now.

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The Sharples bowl has no cumbersome unsanitary discs. Only 3 parts instead of 30. Highest skimming efficiency and still so simple.

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Light weight, self-balancing bowl; ball bearing; special gears make Sharples the easiest running of all separators.

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Now direct from factory on 30 days' trial—your word decides. ANY at new low cost prices. Send coupon now for full details of our amazing offer.

Greatest *Sharples* in 46 Years

Sharples Separator Co., Dept. F106, West Chester, Pa.
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Please send absolutely free and without obligation, your new catalog of the Sharples Separator and details of your 30-day trial offer.

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28 years of satisfactory service. A practical door frame, selected material, strong hoops.

Special Factory Prices NOW

Wood Tanks—Barn Equipments

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Jim Brown's *Farm and Poultry* FENCE



Less Than 3½ cts. Per RUNNING Foot

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Dairy Topics



By A. G. HUMPHREYS

THE cows have stood up under the strain of producing milk all through the winter months and a part of the fall months when it was beginning to get cold; now they are getting tired of dry feed. No wonder either. We have provided them with as wide a variety as possible, but with all that it is dry feed, and they long for something green.

During March a few spears of grass will shoot up in favored places and the cows will get a taste of it and refuse to eat dry feed any longer. What is one going to do? We have been told to keep them away from all green things till the pasture gets a good start, but too often we are a little short on hay, and the spring work is pressing and we want to let them out of the stanchions, and for various other reasons we let them run on the pasture field. Perhaps it does not pay, but we cannot split hairs on dollars and cents at a time of the year when every day counts on crops.

We have always felt that it will do little good to advise something that the individual dairyman cannot do conveniently, so we have quit advising him to keep his cows penned up and buy feed for them. Those who have practiced keeping the cows penned up till the grass gets a good start know without telling, and those who have not and have no desire to practice such proceedings will pay no attention to the advice anyhow.

Early Pasture

If one wants something that will take the place of grass and will tide him over that time of the year which is so important in getting the pasture started no crop quite comes up to rye. One of its good qualities is its hardiness. When other crops planted in the fall freeze out rye comes through in fine shape, and if the season is at all favorable it will be ready for use about the middle of April in latitude as far north as the Mason-Dixon line.

After the cows have done all they can for the field it may be turned under and the ground put to corn. This rotation of corn followed by rye year after year will tell on the soil to be sure unless there is a liberal application of fertilizer to take care of the drain. But if consistently practiced it is a sure road to money by the way of the milk pail. I have tried it and know whereof I speak.

Alsike

Sometimes clover, the red variety, gets too high in price for my finances. I am not going to enter into a discussion of its merits, because I would raise it every year if I felt sure of a crop. I would just as soon have good clover hay for the cows as first crop alfalfa.

Lately I have been sowing alsike instead of red clover. It is not so good, but at the same time it is not so expensive and the crop is surer. It ripens early enough to cut with timothy just at the time timothy should be cut to insure a crop of good hay. The plant is not so course as red clover, and the way the cows stow it away on a cold night is good to see. I feel sure that for every dollar I have invested in alsike I have had ten returned in milk, improved land and satisfaction of seeing a crop of legume hay coming on merrily when other legumes look sickly.

Woodbine

Like many thousands of readers I am sorry to hear of the sale of Mr. Zinn's ancestral home, Woodbine. I have watched the growth of that farm



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for more than forty years and have grown to feel a sort of attachment for it. Lots of us feel the same way about it. We always read the Woodbine Notes in Mr. Zinn's column and felt a real interest in them because they were the result of ideals of my very good friend. If I a comparatively disinterested party, feel this way about the farm how must Mr. Zinn have felt in parting with it? Of course I am not sorry that he has got rid of the care and responsibility of the farm; I am sorry that we will get no more Woodbine Notes. We predict that the farm will continue to grow under the management of the new owner, and that it will be a monument to its former owner.

Churn Taints Butter

I have a new white cedar butter churn and the butter tastes of the churn. M. B.

SOAK the churn in a hot brine solution (ten per cent salt) over night. Follow this with a rinse of cold water. Then disinfect with a one to 1,000 solution of a good coal-tar disinfectant, follow this with a cold water rinse.

Use this procedure the day before churning until the flavor disappears.

Finally, always wash churn with an alkaline washing powder solution followed by a rinse of cold water and then a disinfecting wash and another rinse with cold water. A. A. Borland

Ration with Timothy

Will you send me information as to making up a grain ration for dairy cows in milking to be fed with timothy hay as fodder? This hay was about ten days over ripe. This is all the fodder I have and I have a lot of trouble keeping the cows' bowels loose enough. I am feeding at present a 24 per cent balanced ration. I can buy all kinds of feed and have it mixed at the feed mill for $2 per ton. Harold Dickerson

A GOOD grain mixture for your cows to go with timothy hay as a roughage would be: 100 lbs. of wheat bran, 100 lbs. of linseed meal, 100 lbs. of cottonseed meal, 100 lbs. of gluten feed.

Feed this grain mixed to Jerseys or Guernseys at the rate of one pound of grain to approximately three and a half pounds of milk, to Holsteins at the rate of approximately one pound of grain to four pounds of milk. A. A. Borland

Crops for Silage

Would like to know what crops can be used for making silage. J. W. M.

CORN appears to be the most satisfactory crop to grow for silage. Almost any green crop, however, can be successfully ensiled.

Other crops besides corn that have been successfully kept in the silo by the Pennsylvania State College include green oats and Canada field peas, soy beans, a mixture of corn and soy beans, sunflowers, a mixture of green corn and sunflowers, green clover, corn stover, green wheat and green rye.

Some other stations have successfully ensiled apple pomace, sorghum, beet leaves and tops. Attempts, however, to ensile cabbage and turnips have failed, since the silage is ill smelling and watery. The United States Department of Agriculture has made potato silage by chopping potatoes in a special machine and mixing with the potatoes two per cent of corn meal in order to inoculate the potatoes with lactic acid bacteria so that the material would undergo fermentation. Corn meal normally contains an abundance of these bacteria. This potato silage was about equal to good corn silage and was well liked by the cows after they became used to it. Ordinarily it is doubtful if potatoes would make good silage unless specially treated as just mentioned, in order to induce proper fermentation. A. A. Borland.

WHEN YOUR HOME-GROWN GRAINS RUN OUT

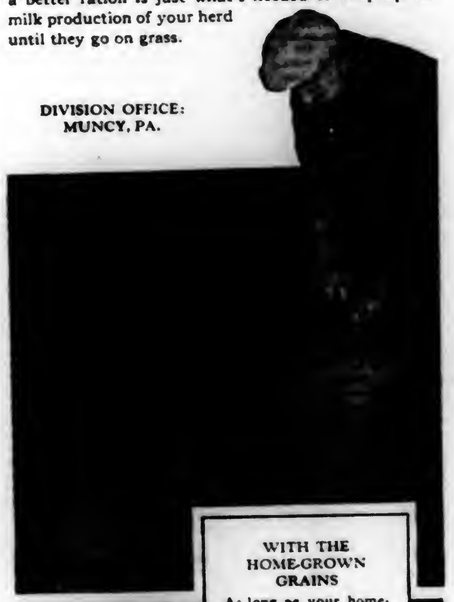
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TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

THE government report on farm reserves March 1 indicated 1,020,572,000 bushels of corn still on farms, or 36.3 per cent of the crop; 148,813,000 bushels of wheat, or 10.5 per cent of the crop; and 501,321,000 bushels of oats, or 34.6 per cent of the crop.

Last year's figures were 1,011,908,000 bushels corn, 130,944,000 bushels wheat and 373,000,000 bushels oats.

On the basis of farm reserves of corn it is possible to make out a very strong bull argument. Another year of close adjustment is indicated, similar to that of last year, when old corn was practically exhausted and the feeding of the new crop last fall started in October, about two months ahead of the usual time. We are now on a domestic basis with supplies barely adequate. Further export demand would tend to create a shortage.

Exports for the crop season to date total near 27,000,000 bushels against only 6,000,000 for the same time last year. Europe is dependent on this county until Argentina's new and short crop comes on. The surplus available there is estimated to be some 75,000,000 bushels short of last year. Europe's requirements are larger because of partial failure of native crops.

Visible supply in this country, at 33,000,000 bushels, is 8,000,000 short of a year ago. Corn marketing is always moderate as the spring farm work opens up.

Grain trade was quiet this week with a small net loss in wheat, corn and oats prices.

Spectacular Hog Trade

It was a spectacular week in hog trade, with a sharp advance carrying tops to $12 and a little above, then a smash at the close of the week, with prices as much as a dollar lower on some grades. On Friday the general average dropped 65 cents.

Chicago received only 164,000 hogs, the smallest run of the year, while eleven markets had 518,000 compared with last week's light run of 589,000. For the year to date eleven markets have received 6,635,000 hogs, against 8,048,000 at the same time last year. Average price of hogs this week was $11.45, against $10.85 last week and $8.05 the same week last year.

The fluctuation in prices is indication of the unsettled condition of trade. Fresh pork has been meeting with indifferent demand and packers declare that they are cutting hogs at a loss at present prices, yet they want hogs because they anticipate a shortage in the supply and higher prices. While storage stocks of pork products are very large, they are regarded as evidence of past liquidation and future shortage and so do not stand in the way of price advances based on unusually light runs for the time of year. Due to weather conditions during most of January and February there was considerable uncertainty in regard to the hog situation. Zero temperatures and impassable roads were supposed to have some effect on marketing, but no one knew how much. But with better weather and advancing prices marketing continued to decrease, and the conviction of a light hog supply became settled. Now there is something of a scramble for hogs, with no one knowing what to expect next.

Cattle Gain a Little

It is still pretty tough sledding for the beef producer. While in general the market shows a little strengthening, particularly on light stuff, such improvement as has taken place must be credited to light runs.

Chicago had 20,700 cattle this week, a gain of 3,000 over last week's extremely light run. Only a few loads sold at $14.25 or better, with an extreme top of $14.60 for 986-pound steers. Heavy steers had rough sledding last week and early this week, but gained a little during the closing sessions of this week and are now steady with a week ago but still about 50 cents below prices ten days ago. Yearlings have gained about 50 cents this week.

Bulk of steers this week are quoted at $9.75 to $14.60, against $9.25 to $14.75 last week. Average price of steers for the week, $12.35, compared to $12.30 last week and $13.10 the same week last year.

Supply of stockers and feeders is light, and a fairly good demand has advanced prices about a half dollar during the past two weeks. There is some call for light stuff to go on grass later on.

Lambs Gain

A light run of sheep and lambs advanced prices this week. Only 59,000 arrived here, a drop of 11,000 from last week. Best lambs were 40 to 60 cents higher, with top fed westerns at $17.85, and top natives at $17.25. The average price of lambs moved up from $16.45 last week to $16.70 this week, the latter figure being just 8¢ higher than a year ago.

What is known of the supply situation does not indicate excessive runs in the future, though prices are now obviously very high. There were about 1,020,000 lambs left on feed in the northern Colorado, Arkansas valley and Scotts Bluff sections on March 2, 1929, compared with 995,000 a year ago. Northern Colorado had about 685,000 lambs left on feed March 2, 1929, compared with 725,000 a year ago.

The early lamb crop of 1929 in the principal early lambing states was about as large as the early crop of 1928, according to a government report issued this week. As a whole the condition of the early crop this year early in March was below average and the outlook for a supply of good quality spring lambs was not as good as last year at that time and was considerably poorer than usual. Weather and feed conditions since Jan. 1 have been unfavorable in most western areas, both for saving a large percentage of lambs and for the growth of the lambs. The movement to market in volume will be later than usual. The total supply of spring lambs at eastern and middle western markets before July 1 this year will probably be smaller than last year and may be considerably below last year unless there is an early improvement in feed and weather conditions in the Pacific states and Idaho.

Sell Wisconsin Tobacco

The tobacco pool which controls the bulk of the Wisconsin crop has sold the major part of its 1928 stemming tobacco at a price which will be higher than the top prices listed so far this season on sales made by non-members to private buyers, according to an official statement issued at pool headquarters. Asked whether this means that the price will be more than 12 cents, the top price so far paid by private buyers, C. W. Murvin, the pool's publicity director, said: "Indeed it does. It is, of course, too early to announce the price as yet, since some of the crop is unsold, but it will be more than 12 cents."

Steal Chickens

An Illinois farmer and his family responded to a telephone call and went to town to meet a salesman. Arriving there, they were unable to locate the salesman making the appointment. Their suspicions were aroused upon reaching home to note fresh car tracks leading from the barnyard. Investigation revealed the henhouse bare of poultry. The sheriff was notified of the loss and of a personal marking each bird bore and which is hoped will aid in locating the thief.

Farming Handicaps

A group of Illinois farmers, after due deliberation, have set forth the following as handicaps that confront the farmer at this time:

High price of fertilizers; infertile soil; poor improvements and insufficient drainage; inability to finance an improvement program; lack of cooperation of landlord and lack of efficiency of tenant; lack of industry and economy in operation; lack of good judgment in the purchase and care of machinery; seasonal influences in production and corresponding market fluctuations; failure of the farm income to meet the present demands of wages, living, debt etc., difficulty in keeping the boys and girls on the farms and in the home community; the hired man problem; increasing and inequitable taxation; inability to perfect an effective organization; lack of inexpensive hard roads; not knowing how to say "no" to agents; unsatisfactory rural schools and impoverished churches.

Chicago, March 9, 1929. Watson.

LIVESTOCK

PITTSBURGH

Cattle

MONDAY'S receipts were very light, only 22 carloads. All steers sold promptly at higher prices, the better kinds advancing about 50c and the others more. Some light butcher steers looked 75c or more above the recent level. One carload of 1,214-pound steers brought $13.25, being fat but not top quality by a good deal. A load of 1,100-pound steers brought the same figure, but these were better in quality. Good handy butcher steers brought $12.50@12.75, a few a little more and some plain weighty steers went at $12.50. Good light butcher steers, under 1,000 lbs. but well covered, brought $12.25@12.50, fair kind $11.75@12 and only ordinary light steers below $11.50. Fair light and handyweight steers looked high as compared with the better kinds and as compared with recent prices. Heifers were few. An occasional good individual brought $11.50@12, no carlots on sale. A few bunches sold at $10.50@11. Fat cows were stronger, but few of choice quality were here. Tops should bring around $10 judging by the sales of other grades. Canners brought $5.75@6.25 largely, a few old shells below this range and better kind above it. Few bulls were offered, prices showing little change. No stockers or feeders were on sale.

Choice grain-fed steers, 1,200 lbs. or over	$13 25@13 50
Good to choice	13 00@13 25
Fair to good, do.	12 50@13 00
Plain heavy steers	11 50@12 25
Choice handyweight steers	13 00@13 25
Good butcher steers, 1,000 to 1,150 lbs.	12 50@12 90
Fair to good, do.	12 00@12 50
Ordinary to fair, do.	11 50@12 00
Common, do.	10 50@11 25
Good light butcher steers	12 00@12 50
Fair to good light steers	11 50@12 00
Common to medium, do.	10 75@11 50
Inferior light steers	9 00@10 00
Feeders	Nominal
Stockers	Nominal
Choice heavy bulls	10 00@10 25
Choice handy butcher bulls	10 25@10 50
Good handy bulls	9 75@10 25
Fair to good bulls	9 25@ 9 75
Common to fair bulls	8 50@ 9 25
Inferior bulls	8 00@ 8 50
Choice fat heifers	11 25@11 75
Good to choice heifers	10 50@11 25
Fair to good heifers	10 00@10 50
Common to fair heifers	8 50@ 9 50
Choice fat cows	9 75@10 00
Good to choice fat cows	9 25@ 9 75
Fair to good cows	8 50@ 9 25
Common to fair cows	6 50@ 8 00
Canners and cutters	5 50@ 6 50
Fresh cows, calf at side	50 00@150 00

Monday's Representative Sales

Steers

No.	Wt.	Pr.	No.	Wt.	Pr.	No.	Wt.	Pr.
21	1214	13.25	20	1100	13.25	18	1077	12.90
13	1234	12.50	5	934	12.50	10	911	12.35
8	1131	12.25	11	893	12.25	6	1115	12.00
13	1088	12.00	3	1056	12.00	4	1025	12.00
6	893	12.00	7	874	12.00	12	1208	11.75
3	1110	11.75	14	1132	11.65	5	774	11.50
			10	1050	11.40			

Hogs

Last week's hog market was full of action, prices advancing to $12.65 and then reacting to $12. Monday's receipts were light, only 25 double-deck carloads. Trade was active at an advance of 30@40c above last week's close. Sorted handy-weight hogs brought $12.40, with heavy weights at $12@12.25 and heavy mixed $12.25@12.35. Light Yorkers went in with handy weights if they weighed 140 lbs. or over and were fat. Good ones of lighter weight brought $11.50 and others on down to $11. Pigs ranged from $9.50 to $10, the outside figure taking fair killers. Sows brought $10@10.25 largely.

Heavy wts., 250 lbs. or over	$12 00@12 25
Heavy mixed	12 25@12 35
Medium wts., 180-200 lbs.	12 35@12 40
Heavy Yorkers, 165-180 lbs.	12 35@12 40
Light Yorkers, 125-150 lbs.	11 00@11 50
Pigs, 100-110 lbs.	9 50@10 00
Roughs	10 00@10 25
Stags	6 00@ 8 00

Sheep and Lambs

Monday's receipts were very light, only four carloads. Sheep were wanted again but orders could not be filled. One deck brought $11 per cwt., not of top quality, but it is doubtful whether better ones could have been sold for any more. Some medium mixed sheep went at $9.50. No clipped sheep were offered, but on the basis of recent sales they were rated at around $9 per cwt. Lambs were higher, the few of choice quality going at $18.25, with medium class $16@16 and culls $12 @15, the latter cor culls from good lots. Few clipped lambs appeared, selling at $15 @15.25 for good ones. No early lambs coming yet.

Good to best wethers	$10 50@11 00
Fair to good wethers	9 50@10 50
Good mixed	10 00@10 50
Fair to good, do.	8 50@10 00
Common to fair	6 00@ 8 50
Inferior sheep	4 00@ 6 00
Good to best spring lambs	18 00@18 25

THE COVER PICTURE

ON our cover page this week we pay tribute to [illegible] whose name lives thro[illegible] because he had the courage of his convictions. The old cathedral in Havana was the burial place of Christopher Columbus before its ashes were removed to Spain.

Medium lambs	15 00
Culls and throwouts	12 00

Calves

Monday's supply was 650 head. The market was active, though the price was a dollar lower than last week's high. Best veal calves brought $18.50 per cwt., medium kind $15@15.50 and culls down

LANCASTER

Cattle

Lancaster, March 11.—Today's cattle market was rather draggy. Best steers and yearlings sold at about steady prices, the bulk going at $11.25@12 and the best heavy being held at $13.

Good steers	[illegible]
Medium to good	10
Common to medium	8
Good to choice heifers	10
Medium and common	7
Good to choice cows	7
Common and medium	6
Low cutter and cutter	3
Good to choice beef bulls	9
Cutter, common and medium	7
Feeder and stocker cattle	7
Good to choice calves	10
Medium	10
Culls and common	7

Hogs

Hogs were steady to higher with top price and the bulk of 200 to 250 lb. hogs going at $12.25@13.

Heavyweights, 250-350 lbs.	[illegible]
Medium weights, 200-250 lbs.	12
Light weights, 160-200 lbs.	12
Packing sows (rough and smooth)	8

CHICAGO

Cattle

Chicago, March 11.—Receipts were to 17,000 head. Market steady.

Common to fair yearlings	[illegible]
Fair to good yearlings	11
Good to choice yearlings	12
Choice to prime yearlings	13
Common to fair steers	10
Fair to good corn-feds	11
Good to choice corn-feds	12
Choice to prime corn-feds	13
Common to good cows	7
Good to prime cows	9
Heifers, common to good	8
Heifers, good to prime	10
Canners and cutters	3
Inferior light bulls	6
Bologna bulls	8
Fair to choice butcher bulls	9
Stockers, common to fair	7
Stockers, fair to good	9
Stockers, good to choice	10
Fancy yearling stockers	11
Stockers and feeder heifers common to choice	8
Stockers and feeder cows	7
Feeders, common to fair	9
Feeders, fair to good	10
Feeders, good to choice	11
Fancy selected feeders	11
Milkers and springers	90
Common to best vealers	13

Hogs

Thirty-five thousand hogs were a Market about a quarter higher.

Heavy butchers, 270 lbs. up	[illegible]
Mediums, 225 to 265 lbs.	11
Lights, 190 to 225 lbs.	11
Selected, 160 to 190 lbs.	11
Mixed packing, 270 to 350 lbs.	10
Heavy packing, 350 to 500 lbs.	9
Roughs, 300 to 500 lbs.	9
Stags, subject 70 lbs. dockage	9
Pigs, best grades	10

Sheep

Receipts totaled around 26,000 head, 600 being shipped direct to packers. Markets steady to 25c lower.

Wethers, all ages	[illegible]
Yearlings	12
Western ewes	6
Native ewes	6
Fed western lambs	16
Native lambs	12
Feeding and shearing lambs	14
Shorn lambs	$2@2.50 below woo

CASH GRAIN

Chicago, March 11.—The following prices ruled here today: No. 1 hard wheat $1.20½@1.28½; No. 3 yellow corn, No. 3 mixed corn, 95½c; No. 2 yellow 50½c.

Produce Market Review

[illegible] growers in many of the west [illegible] and northern sections have appar[illegible] pin hope for any material ad[illegible] potato prices and as a result ship[illegible] increased and prices were generally [illegible] of shipping points. Potatoes sold [illegible] here on practically all eastern mar[illegible] while prices did not show any de[illegible] change they averaged somewhat [illegible]

[illegible] of new potatoes from Florida [illegible] Bermuda were still light but some [illegible] larger than last week. Weather con[illegible] have delayed planting in the East [illegible] here of Virginia, and in the North[illegible] section only about one fourth of [illegible] in the ground. In most years [illegible] in this section is usually complet[illegible] this time. Shipments of seed and [illegible] here received in Northampton are [illegible] smaller and growers believe [illegible] the acreage will be reduced about [illegible] per cent.

[illegible]ish round whites showed a [illegible]ange in quality and condition. In [illegible] prices ranged from $1.15@1.35 [illegible]Bermuda sack but there were occa[illegible] lots of fancy stock that brought [illegible] and some poorer stock that sold as [illegible] $1.00. Prices in Pittsburgh and [illegible] ranged from $1.00 to $1.75 per [illegible] sack.

Sweet Potatoes

The sweet potato market was firm for [illegible] stock in most of the eastern markets [illegible] last week. The situation shows but [illegible] change since last week and dealers [illegible] to report that ordinary stock is [illegible] hard to move while strictly fancy [illegible] sells readily. New Jersey yellows [illegible] $1@$1.25 per ⅝ basket in Phila[illegible] with reds selling at $1.15@1.35 [illegible] here extra fancy packs that brought [illegible] of 10c to 15c. New Jersey yel[illegible] sold at 72.25@2.65 per bushel in New [illegible] with extra fancy at $2.75@3 [illegible] new method of putting up sweet po[illegible] is being tried in the Arsenal sec[illegible] of New Jersey. It is called the "High [illegible] pack. An extra layer of sweet pota[illegible] is placed on the top of the package [illegible] the lid fastened by extra long tin [illegible] According to the growers it is [illegible] popular and commands a premium [illegible] about fifty cents a hamper. Reports [illegible] the Swedesboro section indicate that [illegible] will have a good many sweet potatoes [illegible] market. Some estimates run as high [illegible] 10,000 bushels yet to be sold. The [illegible] report that they expect to [illegible] sweet potatoes until July. Growers [illegible] moving around $2@2.20 per bushel [illegible] reported stock, which is about the [illegible] as this time last season. Some grow[illegible] are holding for higher prices while [illegible] are willing to sell at present price [illegible]

Apples

The apple market in Philadelphia and New York was steady with a fair demand for best fruit. Prices showed very little variation although there was a wide range in price on most varieties due to size and condition. Fancy Pennsylvania [illegible] were quoted at $3@6 per barrel in New York. Truck receipts of nearby [illegible] Delicious, Romes, Staymans and [illegible] brought $1.25@1.75 per bushel in Philadelphia and the best fruit sold at [illegible] Many of the nearby Delicious [illegible] in Philadelphia lack color and there [illegible] ready sale for good well colored stock. [illegible] revolution in Mexico is affecting all [illegible] the produce markets as shipments of [illegible] Mexican vegetables have been held up [illegible] report from the Los Angeles office of [illegible] Bureau of Agricultural Economics [illegible] that the principal American ship[illegible] in Mexico have suspended all packing [illegible] packing until conditions are more [illegible] There were seventeen cars of peas [illegible] crossing the border on the sixth [illegible] this month but these were loaded before [illegible] revolution. Very few peas were pick[illegible] after this and the State Department [illegible] does that all Mexican ports are closed [illegible] Hammonton growers in the Eastern Shore [illegible] are planning to improve the marketing of [illegible] their crop. A group of growers represent [illegible] an output of about 150 acres have sign[illegible] an agreement to market their crop un[illegible] the Eastern Shore trade-mark and [illegible] pack according to the grade. The stalks [illegible] to be packed in bundles and shipped in [illegible] crates according to definite rules and [illegible] grades. The association is planning to ad[illegible]vertise the crop in trade papers and to [illegible] prepare large posters for distribution at [illegible] wholesale and retail stores handling bruss[illegible]els. A similar plan is being considered [illegible] for the marketing of the asparagus crop. [illegible] The tomato acreage in South Jersey is [illegible] expected to be heavier this season as indi[illegible]cated by sales of hot-bed sash and hot-be[illegible] from growers. The larger acreage [illegible] is probably due to higher contract prices [illegible] for tomatoes. Some of the tomato seed [illegible] planted in hot beds this season has grown [illegible] poorly. This has been due largely to poor [illegible] growing weather resulting in damping off [illegible] in the seed bed.

Butter and Eggs

The butter markets were unsettled during the week. During the early part of the week the markets were steady but as the week progressed receipts were more liberal. Buyers were purchasing for their immediate needs and dealers were ordering in lower prices to avoid accumulation of supplies. Prices on 92-score butter dropped about one cent in Philadelphia and New York. Medium and lower grades of butter did not decline to the extent of top scores. Buyers have been in the market for something just a little cheaper than top scores in order to avoid advancing retail prices.

The egg markets in Philadelphia and New York were unsettled during the week. Receipts are still way below the regular supply and prices are very high for this season of the year. Prices fluctuated considerably from day to day as dealers are unwilling to allow any accumulation as they all anticipate price declines. Selected white eggs sold at 43@45c per dozen in New York with browns bringing 40@45c. In many cases instances extra fancy eggs brought a premium of 2@3c over regular quotations.

A shortage of express receipts of live fowls and broilers during the early part of the week in New York caused prices to advance. At the close the market was firm with Leghorn and colored fowl selling at 31@33c per pound and broilers at 40@47c. The supply of dressed poultry was light from nearby and western sections. The demand was fair and prices steady. Fowl ranged from 28c to 35c per pound, roasting chickens 29@45c and broilers 45 (@52c).

W. R. [illegible]

Miscellaneous Produce

New York

Butter. Creamery, higher than extras, 50@53c; extras 50c; seconds, 46½@49c.

Eggs. White eggs, current receipts average extras 46@47c; extra firsts 45; firsts 41@42c; seconds 40@44.

Poultry. Live, to express fowls 31c; chickens 31@36; ducks 34@36; geese, 28c; turkeys 29@40.

Apples. Eastern and Southern, bu. baskets, Romes $1@2; Wealthy $1@2; Delicious $1@2.25; McIntosh, $1.50@3 barrel; red stock No. 1 Spy $3@3.50; York Imperial, $2@2.25; mixed varieties $2.75@3.50.

Potatoes. L. I. 150-lb. sack, $1@2.50; Maine, $1.75@2.

Sweet potatoes. Jersey bbl. bskt., $2.75@4.25.

Lancaster

Butter. Country butter, 55@60c; creamery, 55@60.

Poultry. Chickens dressed, $1.25@2.50 each, springers, 75@$1.25 each, ducks, $1.50@2.75 each; capons 25@35c each.

Eggs. Fresh eggs, 37@40.

Vegetables. Beets, 8@15c per bunch; egg plants 25@75c each; string beans, 10@40c per ½ pk.; lima beans 40@45c per pt.; box cabbage 10@20c per head; carrots, 8@15c per bunch; Brussels sprouts, 25@30c per qt box; cauliflower, 25@50c per head; celery 10@25c per bunch; cucumbers, 10@30c each; spinach, 12@15c per ¾ pk; rhubarb 12@30c per bunch; peppers, 50@75c each; endive, 10@15c per head; lettuce 10@25c per head; radishes, $@10 per bunch; mushrooms, 25@30c per pt box; peas 35@40c per ¾ pk.; onions 20@25c per ¾ pk.; green onions 10c per bunch.

Potatoes. Per bbl., 65@75c.

Sweet potatoes. 20@25c per ¾ pk.

York

Butter. Country, 55c; separator, 60@65c.

Poultry. Hens, dressed 26@30c; Leghorns, $1@1.50 each.

Eggs. Fresh, per doz., 35@38c.

Vegetables. Potatoes, 65@70c per bu.; cabbage, 5@7c per head; lettuce, 8@15c bd.; spinach, 15@20c, ¾ pk.; turnips, 15c ¾ pk.; parsley, 2@3c; carrots, 8@10c bunch; celery 8@15c stalk.

Apples. Per bushel $1.25@2.

Baltimore

Butter. Creamery, fancy, 52@53c; rolls and dairy prints 50@52c; packing stock, 28@30c; butterfat lb., 49@50c.

Eggs. Md. Pa. nearby firsts (loss off), 38c, western firsts, 36c; southern, 37c.

Live poultry. Hens, old 4½ lbs. and over, 30@33c; small to medium, 25@30c; Leghorns, 26@28c; young chickens, 35@37c; broilers, small, 43@44c; Guineas young, 1½ lbs. or over, each, 85@90c; roosters, 17@20c; ducks 24@32c; pigeons pair, 30@35c; squabs 30@50c; turkeys 33@42c.

Apples.—Fancy pack, bu., $1@2.25, per bbl., $3@6.75.

Potatoes. Per 150-lb. sack, $1.50@2.10.

Sweet potatoes. No. 1 hamper $1@1.75; Yams, per bbl., $3@3.50.

Philadelphia

Eggs. Extra firsts, 41½c; firsts, 40½c; seconds, 38@42c; selected and candled fresh eggs, checks mixed in cartons, 50@55c.

Butter. Creamery, tubs, 92 score, 59½c; 88-90 score, 56@58½c.

Poultry. Live, 33@35c; Leghorns, 30@35c; young chickens, 35@38c; broilers, 42@46c; old roosters, 25@26c; ducks, 27@33c; turkeys, 30@40c; rabbits, pr., 18@20c; Guineas, per pair, $1.20@2.

Strawberries. Fla., auction sales, 32-qt. crate, mostly $10@15.

Apples. U. S. No. 1, per bbl., Maryland Black Twigs, $4.50; Pennsylvania Yorks, $4.75; New York Starks, $4.00; nearby ¾ bskts., Yorks, 75@85c; Staymans and Romes, 75c @1.

Celery. Fla., 10-inch crates washed 3 doz., $1.50@1.75.

Potatoes. Pa., round whites (per 120 lbs. $1@1.50; Maine Spaulding Rose, $1.40@1.50.

Sweet potatoes. Md. and Del. bu. hamper, No. 1 yellow $1.40@1.65; N. J. ¾ bskts., yellow yams, $3@$4.25.

Beets. Nearby ¾ crates, 65@85c.

Collards. Va., bbls., $1.25.

Carrots. Nearby ¾ bskts., $1@1.40.

Cabbage. Bbl. N. Y. South sack, Danish, $2.00@2.50; new Texas bushel crates, $2.75.

Lettuce. Calif. Iceberg crates, 4 to 5 doz., $3.25@3.75. Fla. ½ bbl. hamps. Big Boston, $1.25.

Onions. Orange South sacks U. S. No. 1, yellow, $4.50@5; Ind. 50-lb. sack, $2.50.

Mushrooms. Nearby, ¾ lb. bskt., 40@60c; 5-lb. boxes fancy, $1.15.

Parsnips. Nearby, ¾ bskt., $1@1.35.

Rhubarb. Mich., 5-lb. boxes fancy, 60@75c.

Rutabagas. N. J. ¾ bskts., 65@75c.

Peppers. Fla., crates, green, fancy, $2.50@3.

Field Crops. Eastern Shore, bu., 25@75c.

Pittsburgh

Butter. Creamery prints, 92 score, 57@57½c; tubs, 56@56½c; local tubs, 52@55c.

Eggs. Fresh, select white, 39@40c; brown, 37@38c; current receipts, 34@35c.

Poultry. Heavy hens, 30@32c; Leghorns, 28@32c; springers, 30@32c; roosters, 20c; duck, 28@30c; geese, 22@25c; pigeons, 40@50c per pair.

BOSTON WOOL MARKET

Boston March 8.—A fair demand has been received on the combing domestic fine wools at prices just about on the same level as during the previous week, says the U. S. Department of Agriculture Market News Service. The clothing merinos at the opening of the second series of sales at London has not affected fine wool prices in this market, for the concensus of opinion is that the decline was a readjustment to correspond with the easing that had taken place in Australia since the closing time of the previous London series. The situation in medium grade domestic wools has been very irregular and is still unsettled.

Fleece wools showed weakening tendencies. While some houses are still asking 45c in the grease, for 64s and finer Ohio delaine wools, concessions of a fraction of a cent to a cent, in the grease, were made. Quotations were slightly easier on the lower grades with sales mostly small and scattered. A fair weight of bright Missouri 48s, 50s, strictly combing wool was reported sold at 52c, in the grease, which was estimated at 92c scoured basis.

Domestic Wool Quotations

Grease Basis Ohio and Similar

64s, 70s, 80s, (fine) strictly combing	44@45c
64s, 70s, 80s, (fine) French combing	40c
64s, 70s, 80s, (fine) clothing	37@38c
58s, 60s, (¼-blood) strictly combing	50@51c
58s, 60s, (¼-blood) French combing	45c
58s, 60s, (¼-blood) clothing	43c
56s, (⅜-blood) strictly combing	54@55c
56s, (⅜-blood) clothing	49@50c
48s, 50s, (½-blood) strictly combing	53@54c
48s, 50s, (½-blood) clothing	45c
46s, (low ¾-blood) strictly combing	48@49c
36s, 40s, 44s (common and braid)	43@45c

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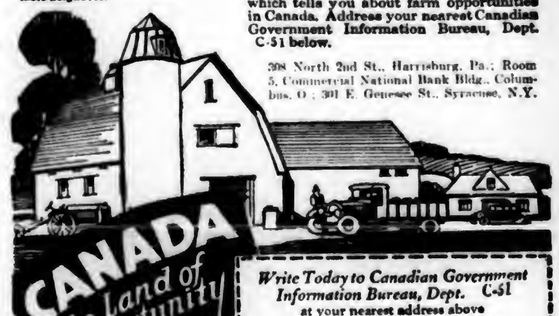
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Farm Conditions

Lehigh Co., Eastern Pa.

Feb. 27. March came with the usual trouble. We started with about 6 or 7 inches of snow. Rain and cold so all of the last few days have caused the snow to run and streams and lowlands flooded. The public sale season is at its height. Milk cows bring very high prices. Many changes in farm tenants. Potato market dull. G. H. R.

Lackawanna Co., N. E. Pa.

Feb. 22. Our pleasant winter weather has gone and we are having snow storms. Lackawanna County Pomona Grange met with South Abington Grange on Feb. 19th. There was a large attendance. P. H. Dewey, Past Master of the State Grange, was the speaker. S. E. Zeigler county agent, gave a good report on work being done in our county. In the evening Susquehanna county degree team conferred the 5th degree on 28 candidates. There has been lots of sickness throughout the winter. Eggs 50c, potatoes $1. V. V. K.

Mercer Co., N. W. Pa.

March 1. Farmers are beginning to get ready for spring plowing and cutting wood. Stock wintering well. Cold weather has reached the zero mark several times. Eggs cheap, selling at 35c. Butter 55c, potatoes $1, oats 60c. Several farms for rent.
M. F. M.

Juniata Co., Central Pa.

March 4. The corn crop has moved out with little delay as some farmers are planting already. Egg prices have dropped now 38c. Eggs are scarce. Wheat $2.25, bran $2.10. Some chicks hatched. Sales every day. Prices good. Cattle very high.
M. M.

Upshur Co., Central W. Va.

March 3. On February 21 largest show of season, 13 inches deep. Stock wintering well. Young stock bring good prices at public sales. Horses chief. Cows in good demand at from $80 to $100. Eggs 35c, chickens 22c, butter scarce at 50c, potatoes 75c, apples $1. Mines running two and three days a week. Some plowing done.
A. S. Conn.

Putnam Co., Western W. Va.

March 4. We are having some rainy weather, turned much every day last week. Everybody busy burning tobacco beds, getting ready to raise another big crop. Some people sowing land for tobacco. Roads bad. Had biggest snow for years on Putnam county some places 18 inches deep. Lots of corn in the field to be shucked. E. W. G.

News and Notes

¶ Creosote may be diluted with waste crank case oil and used to treat fence posts, silos, foundations, etc., to protect them from decay. Farmers Bulletin No. 744 F, "The Preservative Treatment of Farm Timbers" tells how. Copies of this new publication may be obtained free while the supply lasts by writing to the United States Department of Agriculture, Washington, D. C.

• • •

¶ During the month of February each of the following states shipped more than 1,000 forty-quart cans of cream to Philadelphia. Wisconsin, Ohio, Missouri, Minnesota, Indiana, Maryland, Pennsylvania.

• • •

¶ Eggs imported in the shell into Great Britain must have stamped on the shells an indication of the country of their origin.

• • •

¶ Pocket gophers, distant cousins of the woodchuck, have been interfering with airplane traffic in the Southwest. They throw up 2,000 earth mounds on one Arizona aviation field, making it very difficult for pilots to land. Finally they were eradicated in three days by a trap and poison crew supervised by the Biological Survey of the U. S. D. A.

• • •

¶ Uncle Mose says it's good to see through things but better to see them through.

• • •

¶ "An everlasting appetite with four legs to carry it around," is the western cattleman's description of jack rabbit, which is more destructive in some sections than our eastern cottontails.

• • •

¶ The freight bill paid annually by the American farmer for the delivery of the 7,000,000 tons of fertilizer which he purchases amounts to approximately $30,000,000. If the concentration of fertilizers should be increased twofold the freight bill would be cut in two and the annual bill of $12,000,000 for sacks would likewise be halved.—W. M. Jardine.



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Indiana County Sheep Meeting

SIXTY-TWO Indiana county farmers faced a disagreeable combination of sleet and muddy roads to attend the annual meeting of the County Sheep and Wool Growers Association, held at Indiana, Pa., on Tuesday of last week. The day's program started with a slaughtering and meat cutting demonstration in which A. U. Burge of the Pennsylvania State College illustrated correct and easy methods of slaughtering a sheep and retaining desirable cuts from its carcass.

Much interest was shown in this demonstration, as the farmers realize that they are among the slowest when it comes to per capita consumption of mutton. This desire the public to increase its consumption of this palatable and nutritious meat, yet they eat comparatively little of it themselves. This is due largely to habit, a habit formed by not knowing how simple it is to prepare a lamb for the kitchen.

British Methods

In an illustrated talk on sheep conditions in the British Isles "Bill" Henning, in charge of sheep investigation work at the Pennsylvania State College, brought out the fact that the success of the English and Scottish shepherds is due to minute pains and religious adherence to the best practices of production. He said in his visits to British sheep farms he did not see a single scrub or grade sire in service, and also that the attention paid to feeds through root and forage crops is striking when compared with some of the rather careless methods seen on American farms. The English and Scotch make this pay by producing breeding stock which commands high prices, 100 guineas (about $500) being a common quotation for a ram.

"Bill" Connell, as is his custom, spoke rather highly of the sheep, but less favorably of some sheep owners who expect sheep to thrive on air and timothy hay. While not minimizing the importance of combating internal parasites he stated that in his opinion 60 per cent of the sins laid to parasites are due to undernourishment. He believes in feeding sheep grain, and plenty of it. The audience showed their interest in this and other production problems by a flock of questions relative to kinds and amounts of feed and attention at lambing time.

Wool Pool and Ram Sale

The two commercial activities of the Indiana sheepmen's organization center around the wool pool and the ram sale. That they believe in the wool pool is proved by the fact that some 28,000 pounds was sold this way last year at 51½c, and plans are being made to continue the pool. The price is one inducement, but perhaps the chief benefit is in spreading information on wool quality, thus enabling farmers to produce that which the market wants—which is not tags, dirt, water and other material not wanted on the farm. It is not wanted in the wool mill either.

At the first county ram sale, held last fall, 27 rams brought an average of $39.47 a head. They went to growers in the county, thereby distributing good breeding stock locally and providing an outlet for those having such stock for sale. Another ram sale will be held this fall.

Indiana county has around 8,000 sheep mostly of the mutton type. Interest in the industry is increasing, due in a large measure to the efforts of the county agent J. W. Wirner, who feels that the industry in his county has a promising future if handled with discretion.

Officers for the coming year were chosen as follows: President, W. R. Thomas; Vice President, H. M. Brown; Secretary-Treasurer, Clayton Miller; Directors, Dick Stephens, Harry Neal, Eugene Ralston, C. A. Ethel, Ben Kinney, Clyde Bell, Roy M. Elkhorn, P. M. Hamil.

He Sold them Next day... by Telephone

A Bell System Advertisement

A FARMER whose address is Route No. 4, Ft. Atkinson, Wisconsin, was away from home when a stranger drove by. The stranger was from Beloit, fifty miles away. He was interested in a Guernsey cow and calf that he saw in the field, but the farmer's son did not have authority to sell. The next day the farmer got the man in Beloit on the telephone. He sold him the cow and calf—a cash transaction of more than $200.

The telephone promotes many a sale. It finds when and where to sell cattle, hogs, grain, fruit or produce—for more money. It stands always on guard in the home in case of accident, sickness or fire. It is never too tired to run errands to neighboring towns. The telephone pays for itself many times over.

The modern farm home has a telephone.



DAIRY CATTLE

FOR SALE. Jersey Bull Calf, dropped Dec. 11, 1928, by Reg. of Merit Sire Meridale Merry Prince, Grand Champion West Va. State Fair. Dam also show winner with R. M. record 7,500 lbs. milk, 5.6% fat. Imported in dam from Isle of Jersey and daughter of Imp. Golden Fern's Noble. This calf has large, long deep body and straight back a show prospect and blood tested. First check for $100 takes him. Fed Accr. Herd No. 47377. Highland Farms, Greensburg, Pa.

Just JERSEYS
Indiana County, Pa., Jersey Cattle Club offers good Jersey cattle for sale. Most of our herds abortion tested. Send for sale list.
J. M. RISING, Pres., Homer City, Pa.
W. S. Weitzel, Sec'y., Marion Center, Pa.

REG. JERSEY BULLS ready for service. Also younger bulls. Accredited herd.
C. F. & M. W. BIGHAM, Gettysburg, Pa.

PURE-BRED JERSEY HEIFERS
6 to 8 months old. Write or call.
E. J. HARSHBARGER, Mattawana, Pa.

REGISTERED JERSEYS.—Yearling bulls and younger, also heifers and calves.
D. J. KENEPP, McVeytown, Pa.

PURE-BRED OR HIGH GRADE HOLSTEINS
Heifers, Springers. Tuberculin tested Springers on hand at all times. Carload or less than carload lots.
STRUBLE & MARTIN,
Milford, Pa. Newton, N. J.

REGISTERED GUERNSEY BULLS. Three of service age, heifer and accredited herd.
JOHN C. SARVER, R. 1, Millerstown, Pa.

GUERNSEY BULLS, registered, 5 years old, 1 year old, three bull calves. Also two heifers, "Border Raider" breeding. Accredited Herd.
Raselea Farms, R. 2, Box 43, Coraopolis, Pa.

POULTRY

AYLESBURY and ROUEN DUCKS. Profitable to raise. Meat from prize winners. Eggs.
SHALLENBERGER FARMS, Amanda, Ohio

Reid's Turkey Farm No Blackhead for 15 years.
700 Bronze Birds FREEHOLD, N. J., Star Route.

Special Fall Prices on high class breeding Turkeys, Toms, hens and poults, write your wants and let us quote you. Pioneer Stock Farm, Telford, Pa.

SHEEP

25 REGISTERED CHEVIOT EWES
2 to 5 years old, bred to good rams for fall lambs. 50 Ewes also in bunch. Lots in lots of 5.
MYRON H. LOFFER, DeGroff, Ohio

SWINE

Durocs Bred yearling gilts, March and April farrow. Champion blood. Immuned and T. B. tested.
F. F. HELLER, R. 6, Easton, Pa.

REG. BIG TYPE POLAND-CHINA FALL BOARS
Prolific Easy feeders. Prices right.
R. A. Hunt & Sons, R. 3, West Alexander, Pa.

SPOTTED POLAND-CHINAS.—Spring pigs, Reg. Guernsey bull calves. Write your wants.
A. M. KENNEL, R. 2, Honey Brook, Pa.

REGISTERED SPOTTED POLAND-CHINA boars for sale at all times. Write.
BROOKSIDE FARM, Middletown, Va.

Reg. Berkshires Superior breeding stock. All ages. Both sexes. Cholera immune.
WOLF CREEK FARM, R. 2, Slippery Rock, Pa.

Large Modern Berkshires. Correct type and fashionable breeding. Dilts & Gorman, Rossville, Ohio

REGISTERED BERKSHIRE PIGS
From prize winning stock, $15.00 each.
FRED HILNER, R. 1, Millville, Pa.

REGISTERED BERKSHIRE BOAR PIGS
10 weeks old. Money makers.
W. F. McSPARRAN, Furnace, Pa.

CHESTER WHITES. Pedigreed big type Chester blood all ages. 13 sows farrowed 153 pigs, priced low, must please. C. E. Cassel, Hershey, Pa.

BEST GRADE CHESTER. Berkshire and Poland-China pigs, 8-8 weeks old, $7.00 each. Three months old, $12 each. Express paid. Bred sows and boars. C. E. Bosserman, York Springs, Pa.

O. I. C. OCTOBER SOW PIGS. True type, best quality with pedigree. Priced reasonable.
HOLLIS CALVIN, R. 2, Beaver Falls, Pa.

CATTLE

FAIRVIEW HEREFORDS. Bulls Heifers, Cows, Federal Accredited, bred right and priced to sell
OTTO O. COCHRAN, Dawson, Pa.

REGISTERED HEREFORD CATTLE. Breeding cows, heifers and bull calves for sale. A high-class herd of Woodford breeding.
FRED J. BROWN, DuBois, Pa.

BUCK & DOE RUN VALLEY FARMS
Registered Cattle, Poland China, Hog, Hampshire Sheep, Draft Horses. THE SAINT AMOUR COMPANY, Mortonville, Penna

Angus Cattle at reasonable prices
Write HAYARD BROS Waynesburg, Pa.

MILKING SHORTHORNS. Cows, heifers, and bulls for sale. Inspection invited. Visitors met by appointment.
C. M. Kennedy & Sons, Upper Bradford Co., Pa.

TIGHT BINDING TEXT CUT OFF

FARM LAND

PENNSYLVANIA

RARE OPPORTUNITY FOR DAIRYMEN OR Beef Cattle Feeders. For lease or sale, cheap, farm of 250 acres; a little over half under cultivation, balance in fine stand of timber, two houses, ample barn room, buildings to house 60 to 70 head of cattle and raise 70 to 80 hogs, several hundred acres of pasture fenced hog tight, stock within a short distance from farm. Farm located in western Pennsylvania, Lake to Sea Highway, railroad station and a small town with schools and churches within less than a mile. A city of 14,000 inhabitants six miles from farm. If further information is desired, write Box 111, Penn'a Farmer, Pittsburgh.

$1,000 SECURES 480 ACRES, $10,000 HOME. Income $9,000. Splendid home 11 rooms, oak finish, hot water heat, bath, electricity; modern barns, 8-room tenant house; rich soil, 200 acres tillable, 5,000 bu. certified seed potatoes in 1927 threshed over 1,000 bu. corn from 12 acres; abundance water, fruit, wood enough to pay for place; on State highway near fine town. House alone cost $10,000 and that is the price if you hurry; only $1,000 cash required. Fred Wandall, Strout Agency, Opp. Court House, E. 2nd St., Coudersport, Pa.

SEVERAL DAIRY FARMS FOR SALE in Erie County, Penna., for a trifle more than the first mortgages originally held against same. From 100 to 200 acres in each. Good buildings. Near improved highways. These farms are bargains as they must be sold this spring. Terms: only one-fifth cash required, balance in long time mortgages. Thos. W. Spofford, Agent, 512 Masonic Temple, Erie, Pa.

LANCASTER COUNTY FARM, especially adapted for poultry. House beautifully located. New Modern poultry house, 2,000 chick Stoneandoh hot water heated brooder house; other poultry houses and farm buildings. Running water, meadow, woodlot. New improved road. 57 acres, ten miles from Lancaster. Price $3,200. $1,200 cash. Flory, Pequea, Pa.

FOR SALE—Farm of 131 acres lying between two State Highways. Near city. Good soil and excellent buildings. Soft spring water piped to house and barn. Price $13,000. Easy terms. Write or see D. R. Fisher, Greensburg, Pa.

108 ACRES,—8-room modern house, stable, poultry house, fine orchard, strawberries, one half mile county seat, with factories and schools. $6,500. Easy terms. E. E. Wallace, Carrollton, Ohio.

EXTRA GOOD FARM and retail Dairy Business, city limits large town, Westmoreland County, Pa. Write particulars. Daniel J. Vinck, Jeannette, Pa.

COME TO LANCASTER COUNTY, Garden Spot of America. Fine markets; good prices year around. Suburban Real Estate, 400 Agricultural Trust Bldg., Lancaster, Pa.

DAIRY FARM.—Near Denton, Maryland, A-1 buildings, price very reasonable. C. C. Corpman, Harrisburg, Pa.

200 ACRES, 28 timber. Bargain. Mrs. James Diehl, Hampton, Pa.

MISCELLANEOUS LANDS

IN THE SAN JOAQUIN VALLEY of California general farming is a paying business, feeding millions of people in town and cities. Alfalfa combined with dairying, hogs and poultry, yields a good income. A small one-family farm, with little hired labor, insures success. You can work outdoors all the year. Newcomers welcome. The Santa Fe Railway has no land to sell, but offers a free service in helping get right location. Write for illustrated San Joaquin Valley folder and get—our farm paper—"The Earth" free for six months. C. A. Seagraves, General Colonization Agent, Santa Fe Railway, 815 Railway Exchange, Chicago.

DEL-MAR-VA—THE MARKET BASKET of the East. Three ten hours by motor truck to New York, Philadelphia, Baltimore and Washington markets. Pennsylvania Railroad permeates Peninsula. Splendid productive land, farms, towns and waterfront homes. Low prices. Good Schools, low taxes. Very little snow and freezing. Handsome descriptive booklet. Free. Address 103 Del-Mar-Va Building, Salisbury, Md.

FOR SALE.—Washington County, Ohio, stock and dairy farm 121 productive acres, tractor worked, excellent building, tenant house, edge of attractive village with bank, stores, churches, high schools. Electric power line by door, Telephone, R.F.D., All-year road; milk route. Fine farm. A money-maker. Owner's health reason for selling. Address J. F. Tresch, R.D., Vincent, Ohio.

COME TO THE BLUEGRASS.—A farm to suit you. Good roads, schools, churches and climate. Write us. Stuart & Watts, Lewisburg, W. Va.

SIXTY ACRES.—Fertile. Nearly new house. Twenty acres timber. Good barns, near school. J. I. Phillips, Delmar, Delaware.

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BAGS.—We buy your empty bags at good prices. We also manufacture and sell new or second-hand burlap bags. Write us for prices today. Sussman Bros., 125 Washington Place, Pittsburgh, Pa.

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EASTERN HERD, finest in America. California Pure-Bred Nubians, Toggenburgs; soon fresh, for invalids, babies. Fine bucks, kids. Pairs, trios, herds, wholesale prices. Goldsborough's Goatery, Mohnton, Pa.

AGENTS

WANTED.—Middle-aged man who knows farm life, to travel among farmers in the country. Steady work. Write Otho Whipple, West Salem, Ohio.

NEW HOUSEHOLD DEVICE.—Washes, dries windows, sweeps, cleans walls, scrubs, mops. Cleans, then brooms. Saves half profit. Harpers, 176 Third Street, Fairfield, Iowa.

MEN WANTED to canvass farmers, $100 monthly and expenses. Possibility for advancement. Bigler Co., F147, Springfield, Illinois.

MALE HELP

WANTED.—Man to farm 140 acres on half share basis. Owner pays all taxes and furnishes grass seed and lime. Tenant must have own farm equipment. Inquire D. R. Fisher, Huff Building, Greensburg, Pa.

WANTED.—Good farm man, with or without family. Wallstadt Dairy Farm, F. A. Walls, Harbison, Delaware.

WANTED.—Single man for general farm work, including milking. No beer or cigarettes. Give references and state wages expected. W. S. Biltner, R. 1, Weatherly, Pa.

WANTED.—Farm Superintendent. One who can keep books preferred. Address P. O. Box 228, Leetonia, Ohio, stating age, experience and salary expected.

WANTED.—Farmers to farm on share basis in Somerset and Cambria Counties. Write Wilmore Real Estate Company, Windber, Pa.

SEEDS AND NURSERIES

MEDIUM and MAMMOTH RED and ALSIKE Clover, $23.00; French Medium Red, free from Buckhorn, $16.00; Canadian Variegated Alfalfa, $25.00; Big Head Timothy, Idaho Alfalfa in sealed bags, bags free $8.00. Timothy $4.00, Alsike and White Mixture, $20.00; Yellow Blossom, $5.50; White Blossom Sweet Clover $6.50, Grimdy Oat, $5.50, Manchu soy beans $2.50, Imported Red Kaffir Corn, $4.00; Hulled and Dipped, $2.50; Sudan Seed Oats, $.85. The above seeds are all free from noxious weeds according to the Ohio State Laws and are high in purity and germination. Bags extra $.45 each. Inoculator for clover and alfalfa $.25 per can. Imshied Size, M. L. Stuller, Pandbling, Ohio.

EARLY VEGETABLE PLANTS. Frostproof Cabbage: Wakefields, Copenhagen Golden Acre, Flat Dutch, Bermuda Onions, Beets, Lettuce. Postpaid 100, 40c; 200, 75c; 500, $1.25. Express Collect: 1,000 $1.00; 5,000, $4.50. Tomato Plants: Earliana, Bonny Best, Baltimore. Postpaid 100, 50c; 200, 75c; 500, $1.50; 1,000 $2.50. Collect 1,000, $1.25; 5,000, $5.50. Write for prices on Potato, Pepper and Egg Plants. Carefully packed. Safe delivies Unlimited. Delivery Guaranteed. Piedmont Plant Co., Albany, Ga.

CABBAGE PLANTS, NOW READY. My frost proof Cabbage plants will head from three weeks earlier than home grown plants. Varieties: Jersey and Charleston Wakefield, Succession, Flat Dutch, Golden Acre and Copenhagen Market. Prices by parcel post, postpaid 200, $.75; 500, $1.00; 1,000, $2.25. Express, 1,000, $1.00, 5,000, $4.50, 10,000 $7.50. Bermuda Onion plants same prices as Cabbage plants. Roots wrapped in moss and shipped promptly. Satisfaction Guaranteed. P. O. Fallowell, Tifton, Ga.

FROSTPROOF CABBAGE PLANTS. The kind that will stand a freeze. Six leading varieties. Prices: 500, $1.25; 1,000, $2.25 postpaid. By express: 1,000 to 5,000, $1.00 per thousand. 10,000 and over at 75c. Bermuda Onion Plants same prices. Write for prices on Tomato, Pepper, Egg Plant, Cauliflower and Lettuce plants. Blue Ridge Plant Company, P. O. Box 583, Greenville, S. C.

TIFTON'S RELIABLE PLANTS.—Frostproof Cabbage, Bermuda Onion Plants, Wakefields, Dutch, Ballhead, Copenhagen, Golden Acre. Postpaid, 500, $1.50; 1,000 $2.50. Express paid 500, $1.25, 1,000, $2.15; 5,000, $9.40. Early Tomato, Pepper, Cauliflower, Egg Plant later, write Tifton Plant Co., Tifton, Ga.

1,000 STRAWBERRY PLANTS $3 up, 16 varieties, 100 Gooseberry, certified Mastodon, everbearing $1.85, 100 raspberry, dewberry or black berry, $2. 1,000 will rooted grape plants, $15 up. Bulbs, shrubs, asparagus. Quality stock guaranteed, state certified. Catalog free. Westhauser's Nurseries, Sawyer, Michigan

NUT CROPS.—The north's future soil production. Progressive farmers are planting groves of improved grafted nut trees. Learn why. Read "Save America's Nut Heritage" and "Nut Growers." John W. Hershey, Nut Trees, Downingtown, Pa.

HIGH GRADE SEED POTATOES.—Russets, Green Mountains, Gold Coin, Irish Cobbler, Banner, Walter Raleighs and Carman No. 3. Prices right. Catalog free. The Keystone Potato Farms, Richfield, Pa.

PRIVET, BARBERRY, PERENNIALS, ROCK Plants, Concrete Vases and Flower Boxes. Flowering plants 10c up. Hedge plants, 2c up. Very lowest prices. Send for list. John Grubb Box 127, Churchville, Pa.

FROSTPROOF CABBAGE, onion plants, best leading early varieties. Seeds, plants, treated for disease, insuring greater crop yield. Collect express $1.25, 1,000; over 5,000, $1.00, 1,000 cash. J. T. Councill & Sons, Franklin, Va.

RUSSET "CERTIFIED" SEED POTATOES, passed four state inspections, No. 1 grade and quality guaranteed, $2.50 per 120-lb. sack cash with order and shipped as directed. William S. Brown, Marion Center, Pa.

CLOVER SEED.—Northern Indiana grown, plump blue seed, reclaimed 1926 June. Finest quality obtainable. Also Alsike, Timothy, etc. Write for samples and prices. Syler & Syler, Nappanee, Indiana.

CERTIFIED SEED POTATOES.—Irish Cobblers and original strain Carman No. 3. Buy direct from grower. Write today for prices. S. A. Baker & Sons, Fairport, New York

FROSTPROOF CABBAGE PLANTS, 75c, 1,000; Bermuda Onion, $1.00; Collards, 75c; Tomatoes, $1.00; Ruby King Pepper, $2.00; Porto Rico Potato Plants, $2.00. Quitman Plant Co., Quitman, Ga.

C. O. D. FROST PROOF CABBAGE PLANTS. Leading varieties now ready. 500, 65c; 1,000, $1.00; 5,000, $4.50. Farmers' Plant Co., Tifton, Ga.

FOR SALE.—Wilson Soy Beans, $2.40 per bushel, F. O. B. sacks free. Immediate acceptance, early or later shipment. J. T. Vandenburg & Son, Bridgeville, Delaware.

MILLIONS CABBAGE, ONION and TOMATO Plants, $1, 1,000. Pepper and Potato Plants $1.75, 1,000. Gladiolus Bulbs, $1.00, 100. Clark Plant Company, Thomasville, Ga.

FROSTPROOF CABBAGE and Bermuda Onion Plants. Strictly first class, large size and well rooted. $1.00 per thousand f.o.b., here. Mention variety wanted. Guarantee Plant Co., Ty Ty, Ga.

SEND NO MONEY.—C. O. D. Frost Proof Cabbage and Onion plants. All varieties now ready. 500, 65c; 1,000, $1.00; 5,000, $4.50. Standard Plant Co., Tifton, Ga.

SEED POTATOES.—Russets, Green Mountains and World Wonder, that averaged 380 bushels per acre. All raised from certified seed. Prices right. M. R. Witters & Son, R. 5, Lebanon, Pa.

HARDY ALFALFA SEED, 98% pure, $10.00 bushel; sweet clover, 95% pure, $4.00. Return seed if not satisfied. Geo. Bowman, Concordia, Kansas

DAHLIAS.—12 for $1.00 postpaid. All different shades and types, including Cactus, Peony, Pompon, Collarette, Show, Decorative. 6 Gladiolus free. J. Miller Ulery, Acme, Pa.

PAY THE POSTMAN.—Send No Money. Frostproof Cabbage and Onion plants. Leading Varieties, 500, 65c; 1,000, $1.00. Albany Plant Co., Albany, Ga.

SPECIAL PRICES.—Pedigreed Mountains, Russets, Cobblers, Catalog. Roy Hastings, Malone, New York.

CERTIFIED SEED POTATOES.—Smooth, Rural type, High yielding strain. Grown by Appleton Bros., Canandaigua, New York.

CERTIFIED SEED POTATOES.—Cobblers and Russets, better than ever. Attractive prices. We pay freight. Irving E. Cook, Minnesville, N. Y.

SEED POTATOES.—Cambria County russet Russets, eighty cents bushel. J. A. Farabaugh, Sales Manager, Bradley Junction, Pa.

GLADIOLI'S 60, none alike, $1.25; 10 Dahlias, $1.25; evergreen trees, roses. Catalogue. Gladahlia Farms, Chicopee Falls, Mass.

RUSSET SEED POTATOES. Choice first grade, our own grown from certified seed. $1.25 bushel, bags free. C. E. Cassel, Hershey, Pa.

IRIS.—The world's most beautiful flower. Write L. W. Lighty, East Berlin, Pa.

Tri-State Sheep Growers

(Continued from page 27)

lems in his state stressed the importance of adequate feed. Since a large part of the returns must come from lambs he advocated bigger sheep and earlier lambing, the latter as a means of parasite control.

B. F. Grech of the West Virginia University explained the lamb improvement work in that state, a movement which has already enhanced the reputation of West Virginia lamb on its principal markets. This campaign includes the introduction of pure bred sires, docking, castrating, parasite control, attention to winter feed and care and cooperative marketing.

Since Pennsylvania's sheep population is about half fine and half medium wool W. B. Connell of the Pennsylvania State College pointed out that it has a two-fold problem, that of promoting better lamb production and that of managing Merino flocks so as to bring in greatest returns. He does not advocate any change from fine wool to mutton sheep in the territory where the fine wool has reigned supreme for generations, but maintains that the fine wool man as well as the mutton breeder can afford to keep his ewes in better condition during the winter than is the custom with some farmers.

Dr. H. W. Turner of the Pennsylvania Bureau of Animal Industry urged the control of parasites by prevention, holding this more important than medicinal control, although of course the latter is essential in many cases. Early lambing, pasture rotation and all efforts to prevent the introduction of worm eggs into the lambs were advised.

A judging contest for boys of 10 to 19 years of age brought out 68 contestants. The boys judged fine and medium fleeces. The first ten finished in the following order: John Warney, Lloyd Morgan, Glenn Mattah, Herbert Hazlett, H. A. Leacock, Robert Richards, Loyal Marquis, Kenneth Macaffee, Robert Moore and James Mahloy.

The awards in the wool show follow:

Pure-bred Merino Ram.—R. D. Hamilton & Son, Houston first; W. H. Davis, Washington, second; Rufus Patterson & Son, Ruby, third; Charles Orndoff, Waynesburg, fourth; J. H. Orndoff, Waynesburg, fifth.

Pure-bred Merino Ewes. W. H. Calland, Summerfield, O., first; Rufus Patterson & Son, second and fourth; J. C. Paxton, Washington, third and fifth.

Pure-bred Ram Lamb. S. R. Garber, Washington, first; R. D. Hamilton & Son, second; W. H. Calland, third; J. C. Paxton, fourth.

Pure-bred Ewe Lamb. R. D. Hamilton & Son, first and fourth; W. H. Calland, second; J. C. Paxton, third; P. C. Green, Washington fifth.

Commercial Merino Fleece.—R. D. Hamilton & Son, first and fifth; W. H. Calland, second and third; Joseph Reed, West Alexander, fourth.

Champion Merino Ram. R. D. Hamilton & Son.

Champion Merino Ewe.—W. H. Calland.

Grand Champion Merino Fleece. R. D. Hamilton & Son.

Medium Wools

Pure-bred ram fleece. J. M. Marquis, Hickory, first; S. A. Hanna, Cadiz O., second.

Pure-bred ewe. J. B. Henderson, Hickory, first and fifth; S. A. Hanna, second and third; J. M. Marquis, fourth.

Half-blood. William Horne, first.

Three-eighths-blood. J. F. and H. H. Walker, Gandier, O., first and third; Lawrence County Sheep and Wool Association, second, fourth and fifth.

Quarter-blood. J. F. and H. H. Walker, Gandier, O., first; George Neubardt, Elm Grove, second and third.

Champion Medium Fleece. J. F. and H. H. Walker.

Three-Fleece Commercial Exhibit. W. H. Calland, first; R. D. Hamilton, second; J. C. Paxton, third; Joseph Reed, fourth.

Junior Exhibit

Pure-bred Ewe. Robert Barkhurst, McConnellsville, O., first; James Martin, Washington, second and third.

Ewe lamb. Louis R. Strong, McConnellsville, first.

Champion Fleece.—Robert Barkhurst.



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Direct to You Factory to Farmer
L. W. Silo Co.

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SHIPPING CRATES LOADED FREE
SELL YOUR LIVE BROILERS and other
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young man, 25, single, desires
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you have a good, steady man with
Work or Wages. Can furnish
make no charge. The Jewish
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MARRIED WOMAN wants
farm. Address Box 111, Penn'a
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ARE YOUR BEES PAYING? Are
good shape so you would like to
If not, perhaps we can help you.
free booklet, "Bees for Pleasure
Tells how to start right. Our
transferring bees tells exactly
into better hives. Address A. I.
Liberty St., Medina, Ohio

WANT—MISCELLANEOUS

WANTED—Raw Furs, Rabbits,
Muskrats, $1.75. Also want live
Mink, Raccoons, Foxes. Write
New Brunswick, New Jersey.
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HONEY

HONEY—NATURE'S OWN SWEET,
ver and autumn flowers 12 5-lb. pails
Fred R. Lanes, Portland Mills, Pa.

BULK COMB AND EXTRACTED
pail $1.25; amber, $1.10, postpaid.
Castalia, Ohio

SEEDS AND NURSERIES

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APPLE TREES, 2c. PEACH, 1
and Nectrines 12c. Quince, Cankerworm
$1.00. Catalog free. Wells Nursery,

FREE SAMPLES of
Corn. High yielding strain. Write
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100 MASTODON EVERBEARING
grafted plant, seed catalog free.
Buffalo, Mich.

CERTIFIED SEED POTATOES
grafted plant, seed catalog free.
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SEED CORN. Certified, also
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Ohio

40,000 DISEASE FREE CUMBERLAND
Strawberry plants. 1 year
Sells, Wernersville, Pa.

PENNSYLVANIA CERTIFIED
Potatoes. Write for prices. S. L.
Clymer, Pa.

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RAINBOW CHICKS. BUCKLINES
this production disabilities. Let Rainbow
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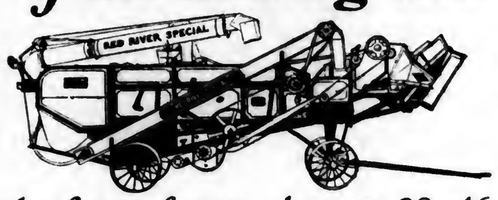


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Farm Facts and Fancies

By MAY A. AGEE

A READER mentions casually that he is thinking of buying a farm. It may be that his considerate [illegible] the change in occupation has been as careful as it should and he wants to have the right farm in view, for this instinctive in such a case to wait to warm even when not fully



[illegible] to do so. The warning is that it is so much easier to buy than to sell that the man whose capital is in question should know what he has found a bargain before he buys the money.

There are real farm bargains today. This is necessarily so because farms continue to be forced on the market by those who have no choice or by those who, [illegible] who are tired of waiting. We meet this condition deeply in the city as it has a right to treat his wife to the best choice in buying them. Let the investment be as his capital for his [illegible] dollar can.

[illegible] double values have been games [illegible] as [illegible] sometimes later on they are [illegible]. Banks have wanted to [illegible] their [illegible] knows [illegible] about [illegible] but there certainly [illegible] to [illegible] tying up [illegible] capital [illegible] and a buyer should take to [illegible] is making the right [illegible] am thinking of the [illegible] are often

Novelty Products

[illegible] twenty years ago I chanced to be a state there was a strenuous effort to interest leaders and other men agricultural folk in the growing of pecans in the South. The man who knows little of farming is pretty sure to see [illegible] opportunities that the practical farmer seems to overlook. Novelties come along in a procession, get publicity and in most cases drop out of sight. Some have promoters behind them, and others are merely a chance to vent enthusiasm. A few have absolute merit, and now and then one adds millions of dollars to our agriculture.

The soy bean is one of the latter. It made slow headway in displacing oats in all that belt that is too warm for oats, and in getting into rotations where more protein is needed. The chances are that practical farmers do not finally miss many new things that can add substantially to farm income. The people who put money into new lines of production, of which they know nothing in a practical way, are pretty sure to lose. There are men who have made successes of novelties from ginseng up, and that made booming possible, but most others are pretty sure to fail. If anything has merit, the experienced farmer will find it in his own conservative way.

Opposing Interests

There is no reason that American farmers should be in agreement on what they need in the form of farm relief. Their interests do not run parallel. Some clashing when the tariff bill is in the making is only what is seen when manufacturers' schedules are discussed. Some manufacturers want a freer market for the buying of materials and more protection for their goods as they go on the market. Such difference in interest always exist. The dairy and poultry interests of the northeastern states, the Corn Belt interests and those of the southern cotton country never have been one.

We are getting closer in our thinking because we see that what hurt one section seriously hurts another indirectly, and finally directly through increased competition. That is our best reason for hoping for concerted action along the line.

Making Friends for Trees

We call frequently at a home where [illegible] great pepper trees stand on the [illegible]. A year ago they looked badly and [illegible] wanted to cut them down. They were a continuous harbor for the black scale and the ants that foster the scale. They were his property, and certainly not mine, but I tried mental suggestion, and now and then spoke of the value great trees give to property.

Trees are the marvel of plant life. A great pepper tree is a thing of beauty. Finally it was tacitly accepted that such a tree on a lawn near one's [illegible] evidence that it was worth five hundred dollars, and that is a reasonable estimate. This brought the valuation of the trees up to a tidy sum. Six months later I found a stiff fight against the scale and the ants was being made. I was asked to note the new color of the trees and it was fine to see the fresh sheen in them.

I think that [illegible] cash valuation as well as a matter of course for them [illegible] saved the day rather than ability appreciation [illegible] to the full, but [illegible] would [illegible] so many people [illegible] hundred dollars more than [illegible] asked house. A tree is friendly in a [illegible] and [illegible] today my mind goes [illegible] more often to a great hard maple [illegible] my father's home than to the house [illegible].

Lime Aside from Legumes

We have [illegible] the words lime and [illegible] so surely that one could [illegible] as a reason for [illegible] field is to get clover and some other [illegible] Experiment station [illegible] and farm experience show that [illegible] soils need liming for many crops. Even in the case of the peanut, which will mature some soil acidity, [illegible] keep scab in check, liming has been [illegible] twenty-five bushels more peanuts [illegible] acre than the sour soil could produce without the lime. Most crops cannot get full value out of fertilizers if the soil is very acid. We should measure the full value of liming [illegible] in the effect on legumes, good as [illegible] may be.

Acid-resistant legumes have [illegible] value where liming is not practicable, and probably we never shall reach the point where they should not be [illegible] important than plants that are [illegible] dependent on lime as sweet clover is. Most land will continue to be overacid [illegible] the alkaline class for a long time, forever. While that is true, there will not be as great return from acid soils as from alkaline soils, regardless of a good supply of nitrogen, in the case of our chief grasses and grains.

Unsightly Fence Rows

OUR fame and the public road [illegible] made our farm a ten-field plan. Five or six fields would suit our method of cropping. As it is miles of fence lines take very much time which ought to be spent elsewhere to keep it free from brush and weeds.

I am handling the roadside fences this way. The rich black soil of the gutters close to the fence is loaded into small field quarry holes and dumped on shallow rocky [illegible] spots. The stony material and [illegible] make the large abandoned quarry holes sink holes. Now these materials are in their proper place and the gutters are made safe for the two-horse team which is run down one side of the [illegible] and up on the other as often as is necessary.

The gutter soil can be simply shoveled into the fields without being hauled away. When a field is in corn, or hay stubble, the fields are safe by this method. Robert I. Weigle

News and Notes

Anything to make folks feel at home. A Chicago hotel has installed a combined radio system with loudspeakers in each of 887 rooms. The guest may choose from three different programs and by turning a knob can adjust the volume of the sound to suit himself.

• • •

The steamship Farmington, Newport News to Liverpool, left the port of Baltimore, Md., Wednesday recently with one of the largest cargoes of wheat on record, 1,650,000 bushels.

• • •

Millions of pounds of [illegible] eggs are now stored [illegible] this [illegible] being preferred to the fresh [illegible] in most of them. The eastern [illegible] are followed by the Pennsylvania [illegible] figures. "In the spring when eggs are [illegible] surplus eggs are purchased by [illegible] cooking establishments which break [illegible] use the egg in containers to be [illegible] to their eggs, egg yolks or egg albumen [illegible] of the baking industry. After being [illegible] solid, the eggs are kept at [illegible] temperature ranging from zero to [illegible] degrees. These are then made available [illegible] orders any time during the year.

• • •

Lehigh produced more [illegible] tobacco than any other county in Pennsylvania in all but Lancaster, which [illegible] second. Estimates are Lehigh [illegible] Lancaster [illegible]. York county [illegible] the two million mark [illegible] is growing more than one million [illegible] of the year were Berks, Chester, North[illegible], Schuylkill, Somerset.

• • •

All grade and scrub bulls have been eradicated from four counties of the United States. Taylor county, Kentucky, is the latest to join the 100 per cent pure-bred bull list. Two of the other counties are also in Kentucky and one is in Virginia.

• • •

The birth rate in American cities averages 23 births per 1,000 persons and the death rate is eight deaths per 1,000. This comparatively high birth rate and low death rate has helped offset the [illegible] movement, but even so the urban population of the United States is the smallest in 20 years, according to the U. S. Department of Agriculture. The urban population of the country on January 1, 1929, was estimated at [illegible] persons. In the peak year 1920 it was [illegible] persons.

• • •

When the records kept by members of the Indiana county poultry testing club were summarized for the month of February it was found that they had been producing eggs at a profit, cost being from 14 cents to 09 cents per dozen. The prices they received for eggs ranged during the same period from 35 cents to 0 cents per dozen.

• • •

Vital statistics from government reports, 27 tons of macadamia nuts were exported from New York to New Zealand and Australia in January. The American consul at Tsingtao states that 7,742 tons of unshelled Chinese peanuts and 2,000 tons of shelled peanuts were shipped from China to the American market in the last three months of 1928. Over 4,000 tons of tomatoes were shipped from Cuba to the United States in January. Eggplant [illegible] okra, lima beans, cucumbers, squash and potatoes also were shipped into the United States from Cuba during the [illegible] months.

• • •

Farmers in a few areas in Pennsylvania, New York and Ohio can correct the acidity of their soil without purchasing lime, according to the Bureau of Chemistry and Soils, U. S. Department of Agriculture. The experience of a New York farmer has proved that soil acidity can be corrected by irrigation with naturally lime-carbonated water. All the ordinary farmer needs to profit by this discovery is the irrigation system and the carbonated water.

• • •

Where do all the green vegetables come from at this time of year? Here is the answer for Philadelphia. This list gives the point of origin of some of the commodities offered for sale on the wholesale market there on March 9: Snap beans, Florida; beets, Texas; cabbage, Texas, California and New York; new cabbage, Florida; celery, Florida; cherry, California; cauliflower, California; field peas, Del-Mar-Va Peninsula; lettuce, California and Texas; peas, Mexico; peppers, Louisiana; peppers, Florida; rhubarb, Michigan; spinach, Texas; tomatoes, Mexico and Florida; turnips, Canada; turnip greens, Del-Mar-Va Peninsula; broccoli sprouts, North Carolina.

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Champion (Ever)	.50	1.30	2.35	8.00	35.00
Dunlap	.30	.90	1.60	5.00	21.25
Gibson	.40	1.00	1.90	6.00	25.00
Gandy	.40	1.00	1.90	6.00	25.00
Haverland (Imp.)	.40	1.00	1.90	6.00	25.00
Klondyke	.25	.70	1.25	4.00	17.50
Lupton	.40	1.00	1.90	6.00	25.00
Marsden (Ever.)	1.00	2.40	4.75	15.00	65.00
Missionary	.25	.70	1.25	3.90	15.50
Premier	.40	1.00	1.90	6.00	25.00
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Don't waste time on old-fashioned, often harmful soak treatments when the Semesan Bel *instantaneous* dip method gives yields like this.

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F. F. Ebert, of Indiana, used Semesan Bel on certified seed and dug 7½ bushels more per acre. W. H. Gordon, of Texas, had an increase of 19 bushels per acre, and C. E. Randolph, of Maine, of 21 barrels per acre.

Diseases of many other crops can be controlled with Du Bay Seed Disinfectants. Mail the coupon below for information, or ask your seedsman, druggist, hardware dealer or general merchant for pamphlets on Ceresan, for seed grains; Semesan Jr., for seed corn; and Semesan, for vegetable and flower seeds and bulbs.

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NESHAMINY GARDENS

By R. P. KESTER

THERE seems to be considerable interest among gardeners and market growers in the subject of mulch paper. The chief claims made for its use are that it preserves moisture and keeps down weeds. From a practical standpoint the grower asks, "How much does it cost?" and "How can it be used to advantage." A number of inquiries have come to hand since I mentioned the subject here a few weeks ago. Some of these letters question the statement quoted here from a communication signed "Wm. K." In it he said that he figured the cost as $58 for eight acres. That seems to have been a mistake or a miscalculation. Professor Paul Work of Cornell writes:



"I was interested in the paragraph in your notes in the issue of February 23 regarding mulch paper. It would be interesting to know how your correspondent is able to cover four acres of tomatoes with mulch paper at a cost of $58. While the paragraph does not say so, possibly 'Wm. K.' is figuring on $58 per acre. This would probably cover the cost if part of the middle is left uncovered. Professor Thompson of Cornell figures that it costs about $100 (per acre) to cover the ground entirely."

• • •

Professor Work enclosed a mimeographed copy of the report of Professor Thompson's finding in one year's work with mulch paper. Since there seems to be considerable interest in the subject, I shall quote a part of the report herewith:

"In 1928 the Department of Vegetable Gardening, Cornell University Agricultural Experiment Station, began experiments to compare mulch paper with good cultivation in growing cabbage, tomatoes, beans, potatoes and beets. These were grown on a sandy loam soil of average fertility and the treatments were in triplicate.

"While the results may be of interest to persons contemplating the use of mulch paper, no definite conclusions should be drawn from them, as the experiment was carried on for only one year.

"Tomato (Bonny Best)—The yield was 29 per cent greater on the paper-mulch plats than on the cultivated plats. The percentage of grade 1 fruit was considerably higher on the mulched plats and there was an advantage in earliness. Thirty per cent more fruit was picked during the first 20 days from the papered plats than from the cultivated plats. The increase in gross returns from the paper mulch over the cultivated plats considerably more than paid for the paper. The paper cost a little less than $100 per acre. It should be noted, however, that the yield was about twice as large as normal.

"Cabbage (Copenhagen Market)—The yield on the paper-mulch plats was 12 per cent greater than on the cultivated plats. There was an advantage in earliness, thirty per cent more cabbage being harvested at the first cutting from the paper plats than from those given cultivation. At the price received for the cabbage the increase just about paid for the paper."

The report does not show that the paper paid in the case of beans, potatoes and beets. However, it is stated that the beans were planted too late (June 13). Those who are contemplating the use of mulching paper should write the U. S. Department of Agriculture, Washington, D. C., and also to the Ohio Experiment Station, Wooster, Ohio, and ask for their reports of experiments with mulching paper. No doubt the editor of this paper would be willing to give inquirers the name and address of manufacturers of such paper.

• • •

Either my typewriter or the linotype machine made me say in these notes that our carload of cinders for road improvement cost us $25. The statement should have read $65, which was added to the cost of unloading and placing. $25, made the entire cost per. Because of the frequent rains it has been difficult to get the cinders packed so as to make a hard road. Our plan is to apply a top-dressing of crushed limestone later.

• • •

The seed and nursery catalogs continue to come in, and they, each year, become more attractive. The art of printing and color printing make it possible to get up real works of art in catalogues. They make an alluring appeal at this time of year when farm surroundings are at their worst. I have wondered when passing some farm homes at the evident lack of desire to improve the appearance of home surroundings. The expenditure of a little time and money would convert many such homes from a condition of repulsiveness into attractive homes.



Amandus Larson of Elk county, Pennsylvania, started farming for himself with some borrowed money, 26 run-down acres and some ramshackle buildings. He built up the fertility of his 26 acres until they now support nearly that many high-producing dairy cows. With the aid of every type of labor-saving equipment, including a milking machine, litter carrier, electric appliances, etc., he has been able to make his business prosper. The old indebtedness has been paid off, the home has been modernized, the children have been educated and just recently additional land has been purchased to make room for the son who graduated from the Penn State School of Agriculture and returned to go into partnership with his father. Mr. Larson received one of the Master Farmer Awards for 1928.

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Pittsburgh, Pa., March 23, 1929 — No. 12



Sprucing up the compost pile in front of Mr. Preston's mushroom houses. This is one of several hot jobs in this business.

Regarding Mushrooms

By C. F. PRESTON

BY WAY of supplementing an article written by N. S. Grubbs, which appeared in the Pennsylvania Farmer of February 16 and dealt with the subject of mushrooms, I wish to present a few statements. If the editor will permit I should like first to supply one or two points brought up in regard to cultural practices.

When manure is received from the stable it is dumped in an orderly pile at the end of the houses, sufficient manure for each house being deposited separately, following which the grower spreads the surface with a quantity of soil to a depth of from one to three inches. At ten-day intervals and for three times the manure is "turned" and if necessary watered, the process of turning being essential to proper curing of the manure and composting with the layer of dirt. Hereabouts it is customary to work in a quantity of dirt with each the first and second turnings but not with the third, although this, like most others in the mushroom business is subject to variation.

There is considerable shrinkage in bulk and shortening of the manure and the product which enters the house looks and is quite different from that originally taken from the cars. When the last bed of a house is filled all doors and ventilators are closed tight and the final process of curing ensues. Horse stable manure when confined in a tight house generates terrific heat. A thermometer is suspended inside a door where quick observations can be made from time to time. When the mercury registers 138 degrees Fahrenheit or thereabouts the doors are thrown ajar, ventilators opened and several days allowed for the manure to rid itself of heat. Depending on outside temperatures this may be from two to four or five days.

We are now ready for the spawn and once ready the grower loses no time getting it in place, for between the spawn and its enemies there immediately sets in a race for supremacy. Be it understood the spawn finds its home in the processed manure and not in the casing dirt, a lump the size of a walnut being placed in the center of each square foot of bed space as indicated by a marker. If the manure has been rightly handled spawn starts to run within a few days time and its ramifications cause it to occupy the entire mass of bedded material. Should moulds develop they will take for their very own certain areas through which the mycelium cannot go and no mycelium, no mushroom, as in the higher orders of plant life we might say no root, no branch.

The tiny manure fly which can be seen in any horse stable in warm weather is perhaps the greatest pest of all pests. The larva of this insect gains its sustenance from the manure and at times occurs in such quantities as to take almost complete possession of a house, resulting in crop failure of greater or less degree, for here again mycelia cannot penetrate a mass of compost that is seething with voracious worms small though they be.

The casing dirt which consists of a layer of good screened sod is placed over the beds usually at three or four weeks after a house has been spawned. As to the function of this dirt let us be clear. It is the key to the whole proposition, for if no dirt were placed on the beds no crop would ever be secured.

Most growers withhold water until mushrooms show on the beds, at which time they are watered lightly and subsequent sprinklings are made when necessary to keep the surface in a moist but not pasty condition. After the first crop is removed all dead stuff is cleaned on the beds, pock marks filled up and the beds watered in anticipation of the second crop or "run." This process is repeated through the season or until hot weather, for the mushroom is sensitive to heat and when the thermometer registers 72 degrees F. inside the house the grower knows the dead line has been reached and unless he can lower the temperature and hold it the history of that crop is about written.

So much for culture; let us consider a few of the economic aspects of the mushroom business. It has been a stock expression for many years that the production of mushrooms will soon be overdone and yet each year witnesses the erection of still more houses and the building operations of the past season can be described only as frenzied. According to one's point of view the mushroom business will soon be overdone or has long since been overdone or, taking the other extreme, can never be overdone, for in support of the latter theory it may be proved that millions of our population have never tasted this delicacy and may in future times become enthusiastic consumers.

Necessity is the mother of invention, also of organizations. It brought the Mushroom Growers' Cooperative Association of Pennsylvania into existence four years ago and a business that was struggling for existence gained new life, new markets were established, old markets strengthened and an intensive advertising campaign through the medium of city newspapers, radio programs, etc., resulted in a surprising increase in consumption. Better prices followed and on the strength of better prices uncounted mushroom houses have since gone up.

Following this development serious price declines have been in order and in comparing net returns per three pound basket for January, 1929, with January, 1928, the writer finds he averaged just 20 cents less this year than last for the same quality of mushrooms. This may not mean a great deal to those unfamiliar with the subject, but to put the matter in understandable language it may be said that when a grower receives an average price of seventy cents per basket net he feels that he is making money just as fast as when selling potatoes at fifty cents a bushel. We have done a lot of both recently and in each case our emotions have been the same.

When the United States occupied the Philippines in 1898 a philosophical question frequently asked ran to this end, "Does the flag follow the Constitution or the Constitution follow the flag?" And today in the mushroom business we wonder if expansion follows prices or prices follow expansion.

Mushroom growing is a highly specialized business which is one of the reasons why considerable money has been made in it by some fortunate individuals, but as the recent past has shown it is easily capable of expansion sufficient to keep up with or even distance consumption.



A mushroom bed at picking time. The beds are arranged in tiers and all the picking and other work is done from a narrow alleyway which extends through the middle of the building from end to end.

TIGHT BINDING TEXT CUT OFF

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Volume 100, Issue No. 12 — Established 1877

WAIT FOR THE BILL

MANY interests have submitted for publication their reason for changes in the present tariff law. If we published all of them this paper would contain little else than tariff discussion. All of this matter has been placed before the committee of Congress responsible for the new tariff measure, or the amendments to the present law. That committee's report will be ready in a few weeks. Let us wait for it—wait until there is something definite to discuss.

A BEAN INDUSTRY

LAST week the American Milling Company decided to contract for 1,500,000 bushels of soy beans at its Peoria, Ill., plant this year. The Toledo Seed and Oil Company is trying to get 300,000 bushels in Ohio this season. After the oil is extracted from the beans the residue goes into stock feed, for which use it is valuable just as linseed and cottonseed meals are. This soy bean industry is a comparatively new one but is growing. The price for beans at Toledo is $1.35 per bushel, which is not high but sufficient to allow the bean crop to compete with the oats crop.

OIL AND AGRICULTURE

PRESIDENT HOOVER'S order that no more public land shall be leased for oil production is much applauded—and properly. One of the reasons it is approved is that it will help to stabilize the oil industry by assurance that public lands will not contribute to present or future over-production. If this reasoning is sound as applied to the oil industry why not apply it to the industry of agriculture? Why continue to spend public money on reclamation to bring about greater and unnecessary production of agricultural staples? Must we have a malodorous scandal to induce the country to follow the right policy?

DIFFICULT

THE House Committee on Agriculture begins its hearings on farm relief legislation next Wednesday, March 27. We respectfully suggest to the numerous gentlemen who have sent us sure-thing plans in recent years that they put said plans before the Committee. Thus far there is little in evidence at Washington beyond a disposition to agree with the Administration's plan. But what is that plan? Nobody knows, but probably when it is published the agreement will not be so nearly unanimous as was expected. The subject is a difficult one, and those who expect speedy agreement on an effective measure are quite likely to be disappointed.

BROTEX

WORD comes from England that a big corporation has been formed to grow and manufacture a new fiber plant called Brotex. The plant is said to be a hybrid, but its parents are not named. Its discoverers must have a patent on it, for they propose to license farmers to grow it. The fibers are said to be good for coolage, sacking and other coarse materials but not for clothing. Has the plant breeder given the world a new industry?

RAISE COLTS, IF—

NOTING a slight advance in the farm price of horses last year, compared with 1926 and 1927, and the continued reduction in horse population, the United States Department of Agriculture suggests that "the corner has been turned and that the recent slight upward trend indicates an increasing demand." This is borne out, in part at least, by reports from some places of a more active demand for horses this spring. No one expects any wild boom in the horse business, neither do we look for the elimination of the horse from our farms. To supply the demand some one must raise horses, and this spring may be a good time to breed a mare or two, if good and if a proper stallion can be found.

AN ANTI-BELLUM SURVEY

WAR on weeds has been declared by the United States Chamber of Commerce, representatives of the seed trade, the National Grange and the United States Department of Agriculture. The offensive will start, according to the agreement reached by a conference of the above bodies on March 5th, with the mildly hostile method of a survey. This survey is to estimate losses by weeds, control methods, seed laws and weed control legislation and the extent of seed cleaning on the farm. If this survey reveals no new facts it will still be useful in drawing attention to the most dangerous sources of weed seeds and the practical ways of control.

A PUBLIC PROBLEM

A MICHIGAN farmer, in corn borer territory, made a thorough clean up of his fields last year, yet his crop was so badly infested that he estimates his loss at 15 to 20 bushels per acre. He thinks his trouble was due to the fact that some of his neighbors failed to clean up as they were compelled to in 1927. He asks whether it is fair that he should suffer such loss because of their negligence. Of course it isn't, and therein is one reason for the enforcement of proper measures to control this or any other pest. It was a grave mistake to abandon prematurely the methods which proved successful in 1927.

TWO COWS

WHY some cows change feed into milk while others convert it into beef has engaged the attention of scientists at Washington. Two notable cows, Sophie 19th of Hood Farm, Jersey champion for many years, and Blackbird of Dallas, a pure-bred Angus of show-ring prowess, were measured, dissected and compared for the purpose of finding why one was famous for milk production and the other for beef. After taking these highly-organized and extremely efficient producers apart the investigators knew about as much concerning the cause of their conduct as the small boy knows about what makes a watch go after he has scrutinized its contents. Strange to say the bone structure of the two cows was very similar, that of the Jersey being the larger, although the Angus weighed over 600 pounds more alive. The internal organs did not differ enough to indicate "significant differences in function." However, the udder of the dairy cow was nearly filled with milk-secreting tissue, while that of the beef individual contained practically none. The results of breeding and selection are common knowledge, but that which determines these results remains a mystery.

NO SCRUBS

WHENEVER a county banishes scrub sires we give "honorable mention," and we are glad to record that Taylor county, Iowa, which county agent C. V. Bryan has put successfully on a campaign for all pure-bred bulls, is the fourth county in the United States to reach that high. The others are pure-bred counties are Lucas and Russell counties in Kentucky and Gordon county in Virginia. The South has been considered rather backward in animal industry, but it has all the hundred per cent bull counties.

HIGHWAY SUGGESTIONS

OUR Pennsylvania State Highway Department is doing a great deal of work on roads which have been paved, widening them in some places, modifying or eliminating curves, removing humps and even attempting to grade and adorn roadsides. No doubt some of this work on already paved highways is absolutely essential to public safety, and to that there can be no objection. All of it would meet with unanimous approval if all the roads in the State Highway system were improved. But since not all of these roads are improved the public feels that the Highway Department's first duty is to improve them and get as many people as possible out of the mud. When this has been done the further improvement of paved highways will meet with no objection. The same principle applies to roads through towns and cities. Before the State spends more money on these sections of roads it should pave its own county roads. The decisive defeat of the recent highway bond issue and the manifest reluctance to vote increased revenues to be used by our Highway Department means something which those in authority should not overlook.

PURE MAPLE PRODUCTS

THE Bureau of Foods and Chemistry at Harrisburg rains hotels, restaurants and dining rooms that when they advertise "maple syrup" they must serve the genuine article and not a synthetic product. While the maple sugar industry is not so large as it was a generation or two ago Pennsylvania is still an important producer of maple products, and these products merit the protection of the pure food laws as well as does any other commodity. Farmers and their organizations might be of assistance to the Bureau and to themselves if they would report the sale of a substitute under the name of maple sugar or maple syrup, for many farms in this state could have a little more in the spring if more attention were paid to these things. The fact that the prices of maple products have not risen in proportion to their scarcity, and to prices of some other things, is largely responsible for the decline of a picturesque and sometimes profitable spring activity.

NOT SO FRIVOLOUS

THOSE who bemoan the alleged frivolity of the rising generation might glance at what our young people say they would do if they had $500. Getting an education, buying improved live-stock, helping their parents—these are the three things most boys and girls name as their use of the money. Probably all this worry about the frivolity of young folks merely indicates that the worriers are getting old. For centuries age has fretted over the shortcomings of youth, and it is likely to be the same in all generations.

New Jersey Farm Comment

By G. W. HARRIS

THE Hunterdon County Holstein Association and the Dairymen's League will combine to hold a dairy banquet in the Union Hotel, Flemington, on March 5. Efforts are being made to secure Dr. Franklin C. Strickland of Providence, Rhode Island, as the principal speaker. Dr. Strickland has been a Holstein breeder for the past twenty-five years. T. J. Perry, dairy specialist at New Brunswick, is on the program and will speak on the topic "Bull Brains".

• • •

FRANK WELSH of Lebanon, Hunterdon county, has grown several heifer calves on the New Jersey dry mix calf formula and is well pleased with the results obtained. Mr. Welsh feels that he saves at least $50 on each calf by using this formula, besides saving considerable labor. An increasing number of dairymen in the state are using this ration which is composed of 100 lbs. yellow corn meal, 50 lbs. ground oats, 50 lbs. wheat bran, 50 lbs. linseed oilmeal, 50 lbs. middlings, 4 lbs. dried skim milk, 4 lbs. pulverized limestone and 4 lbs. salt.

• • •

ASPARAGUS growers of the Cumberland County Vegetable Growers' Association met at Bridgeton on March 11 to learn the results of experiment on the growing of asparagus conducted by Professor Stuart Fairchild of the State College.

"Plant only ... spoke ... told the growers ... of each ... that it cannot ... stock of ... transplanting ... and then ... produce a ... crop.

"A few ... varieties are fairly satisfactory, but ... a strain of the experiment station has developed ... that will produce ... the bounder ... rather than ... where- ... every root will ... a maximum ... of colossal spears.

The growers voted to make a summer inspection trip to the New York market. The date has not definitely been set.

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SALEM-Cumberland County Holstein-Friesian Association held their annual banquet in the Johnson Hotel at Salem, Thursday evening, March 7th. The high winds and ... kept an enthusiastic gathering ... but in spite of ... tending this banquet and enjoying the ... instructive and amusing talks which took place.

G. I. Ball, Salem county farm demonstrator, was master of ceremonies and conducted the program in a very pleasing way.

The community singing was led by Elmer Wentz of Vineland, who is known far and wide for his ability to coax music out of any audience.

The gathering was welcomed by S. W. Ridgway, president of the Association. Mr. Ridgway gave a very interesting review of the origin, development and accomplishments of this organization of breeders of the Black and White cow.

Professor A. M. Hulbert of the State Agricultural College at New Brunswick gave a talk on calf club work in New Jersey. Professor Hulbert opened with a few remarks about his recent trip to Mexico and stated that if any ... were interested in beautiful scenery, it would be ... only their while to visit this section of the country. He ... until the rebellion had been subdued.

According to Mr. Hulbert, calf club work began in New Jersey in the Pequest Valley section of Mercer county about eight or nine years ago. The object of the club was ... to call boys and girls the fundamental principles ... raising dairy cattle and also to ... them ... care business of dairying. There were 12 or more members in this first calf club who, through their ... brought ... now have some very fine animals. ... this modest beginning calf club membership has ... to 400 throughout the state. The cows owned by these boys average 9,300 pounds of milk produced during the past year at three and one half years of age. This is a very high production when the state and federal averages are taken into consideration and shows that the principles laid down in the calf club manual have produced amazing results.

One of the interesting features of the evening was the presence of 15 calf club members of the three counties who were the guests of the Association.

E. J. Perry, dairy specialist at the New Jersey Agricultural Experiment Station, gave a talk on "Bull Brains". He impressed his audience with the urgent necessity of keeping only pure bred sires of known lineage. The sires, he said, should be kept in safe pens throughout the year with sufficient room to provide for necessary exercise. Too many bulls are allowed to roam at large. Also too many bulls are sold before their transmitting qualities have been discovered.

The amusement was furnished by Tom Hunt of Lambertville, N. J., who presented some of his latest anecdotes which kept the dairymen, dairymaids and dairymatrons, in a continuous uproar. Mr. Hunt is always at home before an audience of this kind and his fund of stories is always given full sway.

S. W. Ridgway was the recipient of a fine pen and pencil set which was presented to him by the directors of the Association in appreciation for the large amount of work and interest he has shown in fostering the Association to its high standard.

Henry Schmidt, prominent Holstein breeder of Mercer county, gave great encouragement to the boys and girls. Mr. Schmidt himself began his dairy career as a member of a calf club in Mercer county and gave some valuable advice as to the amount of knowledge which can be secured by adhering to the principles which are laid down in this type of work.

G. I. B.



Franklin Smick Who Describes His Poultry Project on This Page

THERE were 5864 acres of white potatoes grown by seventy-four farmers entered for seed certification in 1928, Edgar G. Rex, Assistant State Plant Pathologist, Bureau of Statistics and Inspection, stated in a report of the inspection and certification work of New Jersey Second Crop Cobblers in 1928, recently received by William B. Duryee, Secretary of the State Department of Agriculture.

Although the 1928 crop was not as large as that of 1927, when 1,217 acres were entered for certification, the percentage of seed certified was far greater. In 1927, 99.73 per cent of the seed was rejected while only 11.5 per cent of the acreage inspected last fall failed certification. The past year's work was by far the most successful since the seed inspection began ten years ago.

The acreage entered for certification in 1928 included 567.5 acres of Cobbler, 87.5 of Green Mountain and 10 of Iced Skin. This was grown in five counties—Cumberland, 333.75 acres or 56.94 per cent, Salem, 225.50 acres, or 38.46 per cent, Monmouth, 20 acres, or 3.41 per cent, Camden, 5 acres, or 0.85 per cent, and Burlington, 2 acres, or 0.34 per cent.

Nearly 61 per cent of the seed used or 2,003 bags came from Maine, 37.70 per cent or 1,620 bags from Prince Edward Island, 1.44 per cent, or 61 bags, from South Jersey, and 0.27 per cent or 12 bags, from New York.

Nearly 70 per cent of the acreage followed a green manure crop, 23 per cent was planted after tomatoes sod, and the rest after grain stubble. The average application of fertilizer per acre was 1,966 pounds and cost $47.55, while 7.32 bags of seed in 17,968 cells were planted per acre at a cost of $42.00, which made the seed preliminary expense $79.44 per acre. Approximately 92 per cent of the seed planted for the 1928 late crop was disinfected with organic mercury seed disinfectants. The fertilization rate per acre was approximately one ton or 4,585.5.

"Spraying in most cases was much delayed but weather conditions kept blight from becoming a serious problem," according to Mr. Rex. "Aphid and leaf hoppers were present in small numbers while the green tomato worm probably made its first appearance as an insect pest on the last crop and devastated a few fields. The need of a vine-lifting attachment on every sprayer was emphasized last fall."

The behavior of Maine and Prince Edward Island seed during the past season, as compared with local seed grown the few years previous, has led many growers to the conclusion that seed grown in South Jersey one year or more has little future promise as parent seed. One need merely recall the ability of the Kandle strain to satisfactorily withstand fourteen growing seasons under South Jersey conditions with increasing popularity. Seed grown in South Jersey, in a field from which not more than three per cent of the plants have been removed because of leaf roll, mosaic or spindle tuber, and in which field aphid were not noticeably troublesome, could be grown in the succeeding year with considerable security. The annual introduction of northern seed involves two major disadvantages, increased cost and Black Leg. The plan adopted by several of the growers to plant two-thirds of next year's acreage with their own seed and the balance with northern seed, appears to carry with it good judgement. A desirable objective for each grower could be centered in his attempt to procure a high yielding disease-free strain, and then retain it for parent stock until such time that the roguing becomes excessive."

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Story of My Project

By FRANKLIN SMICK

BY carefully selecting, feeding and managing my flock of 25 White Wyandotte pullets, I have been able to make a profit of 52c per pullet in January and 48c per pullet in February. This flock of 25 White Wyandotte pullets represents my project, or supervised home practice work, which each boy carries on as a part of his course of study in the Vocational Agriculture Department of the Salem High School.

In my Freshman year I decided to grow one acre of tomatoes as my project as we were studying crop production and soil management that year. I kept careful records of all receipts and expenditures, and although the season was not very good, I sold 10 tons from the acre. After deducting all expenses I had approximately $100 profit from my first venture in project work.

The profit I made on my tomato project made it possible for me to get started in poultry this past fall. I always was somewhat interested in poultry, but never got to the point of having any of my own on account of not having the necessary buildings. With the help of my father I remodeled and built an addition to an old hog pen so that at the present time my pullets are in a 10-by-20-foot house. After putting in a dropping board, water stand, etc., I have a rather satisfactory open front type house with only a small outlay of capital.

In November, accompanied by my father and the agricultural instructor we made a trip to a nearby farm where we had the privilege of selecting the pullets we wanted at $2 apiece.

I put these pullets in my newly remodeled house and fed them according to approved methods. As the weather got colder, I turned up a water heater so that the drinking water would not freeze. I am also feeding cod-liver oil as I believe that it will help me to hold up my production and give me better shelled eggs and healthier birds.

I have found my poultry project so interesting and profitable that I am building a new 12-by-12-foot brooder house on which I expect to start 500 chicks which I have ordered for delivery March 20th. I am getting these from Wenner Brothers' Hatchery as they are supplying chicks to the "Ag. boys" for their project work at reduced rates. From these chicks I expect to increase the size of my flock for my project next year.

Almost all of the boys in my class are conducting projects ... I ... from the financial returns and the practical knowledge gained through experience. Each boy is anxious to have a good project as it enables him to become a member of the Local Chapter of the Future Farmers of America. This is an organization in which membership is limited to boys enrolled in vocational agriculture in the public schools who come up to certain standards in their work. As I have already completed one year of satisfactory work in the Agricultural Department I hold the degree of Future Farmer and also am the reporter for the local Chapter.

TIGHT BINDING TEXT CUT OFF

Westmoreland Farmers Electrify

These Dairymen Use Electricity in Many Ways

By C. L. WHITE



The compact electric milk cooling and storage outfit owned by Harry E. [illegible]. The cooling unit and motor appear at the left. Another small motor on the [illegible] at the right pumps brine from the cooling room through the aerator.

THE practice of cooling milk by electricity, almost a novelty two years ago, is now accepted by large numbers of Pennsylvania dairymen as the solution of an age-old problem. The increasing demand for high quality milk, the desire for low production costs, and the rapid extension of rural electric lines in Pennsylvania are largely responsible for the growing interest in this subject.

Of course, milk cooling is only one of the purposes for which dairymen are using electric power. Last week we visited three dairymen in Westmoreland county, Pennsylvania. One of them was using eight small electric motors, besides those attached to various household appliances used by his wife. Another had seven motors, another three. All three of these men were using electricity for milk cooling, two relied on electric power for their entire water supply, two were using electric milking machines, and all were using small motors on various appliances in their milk bottling rooms—for all three retail their milk in nearby towns.



The roomy interior of Mr. Steele's cooling room, with a glimpse of the trays in which ice is frozen for family use.

A few months ago we described in these columns the milk cooling equipment used by Charles E. Patton and Son of Chester county. The Pattons were selling their milk at wholesale and they used the tank type cooler. The cans were put in an insulated tank of water in which were cooling coils connected with the electrically driven refrigerating unit. This seems to be the type preferred by dairymen who sell their milk in cans.

Handles Product of 60 Cows

The three Westmoreland county dairymen had the room-type or dry air cooler, which is the favorite with men who retail their milk. This type affords a supply of brine which can be circulated through the aerator to cool the milk quickly. The tank type can be similarly equipped but many wholesale producers cool the milk in shipping cans standing in the tank cooler, which eliminates the aerator. As a rule convenience favors the use of the dry air or room-type cooler but the tank type is cheaper in original cost.

But this isn't intended as a treatise on milk cooling. Rather we want to tell of what we saw and heard on these Westmoreland dairy farms about the possibilities of electric power as a money, time and labor saver for farmers.

We found eight electric motors on the farm of Michael Rathgeb, north of Greensburg. There was a one horsepower motor for the milk cooler; another ran the milking machine; a third operated the water pump. A one-half horsepower motor was belted to a line shaft which carried power to several machines in the milk house. Four one-quarter horsepower motors were operating the following appliances: milk bottle filler and capper; water pump for milk aerator, milk pump; brine pump.

Mr. Rathgeb's dry air type of milk cooler handles the product of his 60 cows. This cooler is simply a small insulated room with a brine tank along one wall. The brine is held at the required temperature by the electric refrigerating unit and compressor which stands in an adjoining room.

As Mr. Rathgeb bottles and retails the milk considerable equipment is required besides that used on the ordinary dairy farm. When the milk is brought in from the milking machines it is emptied into the receiving tank. A pump with a quarter horsepower motor lifts it to the aerator or cooler directly above the tank. The milk flows over the aerator then into the tank of the bottling machine.

The upper half of the aerator is cooled by ordinary well water pumped through it by a quarter horsepower pump. The lower half brings the milk down to bottling temperature just above freezing by means of brine from the cooling system. The brine is pumped through the lower aerator pipes by another one-fourth horsepower motor.

Adjoining the bottling room Mr. Rathgeb has the bottle washing equipment, cream separator, and in still another small room is an old time dash churn. The bottle washing brushes, and the cream separator are belted to the line shaft operated by the one-half horsepower motor. A home-made crank on the end of the shaft is attached by a wooden "connecting rod" to the dash or plunger of the churn. It is an interesting combination—the latest in farm power and one of the oldest of farm implements. The home butter-maker is relieved of her tiresome task; a [illegible] takes her place chugging the [illegible]

[illegible] Mr. Rathgeb's [illegible] more power [illegible] all the [illegible] electrical current to each appliance. [illegible] except the [illegible] when the motor is [illegible] the running time short as in this case. [illegible] Perhaps [illegible] the result of this ingenious [illegible] backup.

Many [illegible] they can get cash [illegible] their product in an electric installation [illegible] inches [illegible] hens' working [illegible] and speed up egg production during the [illegible] months. Mr. Rathgeb [illegible] this class. His [illegible] house has electric [illegible] an automatic [illegible] watering system in each pen, and [illegible] during the [illegible] weather.

Mrs. Rathgeb has an electric washing machine, iron and sweeper. Needless to say, the house, barn and outbuildings all are lighted by electricity. The total electric power consumption on this farm for the year 1928 was 6,500 kilowat hours.

There were seven electric motors in use on the farm of Joseph J. Bauer of Jeannette. Mr. Bauer retails the milk from his herd of 25 cows. He has had his satisfactory electric cooler simply by putting the brine tank and small electric fan in his old ice cooler and installing the electric compressor unit in an adjoining room.

(Continued on page 2)

Europe's Tile Stoves

By ELLEN S. BRINTON

THE tile stoves used for heating and cooking in Germany, Czechoslovakia and Austria were one of the big surprises of my European trip. I had a dim recollection of reading in school books about tile stoves in Russia, but never thought of finding them in this age and in cities that in some ways are more progressive than American cities. I saw these stoves in private houses, in small peasants homes, in castles used by royalty up to recent years, in stores and offices—huge affairs of white, brown, green or ornamental glazed tile usually with doors of brass, and looking very much to my mind like elaborate tombstones. There was one in every room, almost tall enough to touch the high ceilings. Even then I thought of them as old-fashioned until I saw new ones displayed prominently in center city stores along with modern bathroom and electric fixtures; and heard local residents praise them for "keeping hot all day."



This stove was in the dining room of the pension where I stayed in Prague. It is built of white tile with shining bright brass doors. The one in my bed room was of brown tile. I saw them of all colors, and in all kinds of private homes and public offices—one in each room — in Dresden, Prague, Vienna and Munich.

Finally I realized that customs are not merely queer habits of strange people, but that there is usually some climatic and economic reason in the background. Possibly we in America would be following the same practices if conditions were similar.

Besides taking care of the little fuel available the mid-European claims he gets the best use from it. The fire box of these tile stoves is very small and apparently a little fuel goes a long way. [illegible] wood or coal may be burned. The tile, like [illegible] or soapstone, absorbs much of the heat instead of escaping up the chimney as with many of our American stoves. The fire may go out entirely but the stove will radiate heat [illegible] hours. In some sections it is customary to build [illegible] benches around the stove so that the family may sit [illegible] their backs to the warm tile.

To further conserve the [illegible] all the houses have double sashes and double doors. [illegible] is universal, whether the [illegible] is old or new, a cottage or palace, apartment house or office. When the sashes are closed the window is almost air tight, and then on top is the general custom of having heavy curtain drapery over every window. Fortunately European summer nights are cool or would have smothered for lack of ventilation.

It is likely that some European cans would feel smothered [illegible] for they wear more clothes [illegible] keep their houses cooler [illegible] we do. Where fireplaces are depended on for heat the result is more picturesque [illegible] comfortable, measured by [illegible] standards. The chilliness of such quarters is also heightened by the extreme economy of fuel, a fire barely large enough to keep alive being the rule.

A Shrub for Every Purpose

Some Timely Suggestions on Plantings for the Home Grounds



An Artistic Landscape Design with All Dependence Placed on Trees and Permanent Shrubbery

By L. L. Rummell

SHRUBS for rural plantings vary in size, form, habit of growth and dependability. They are not standardized like machinery or clothing. A shrub must be selected for a given location and purpose. Now with spring planting at hand, we should prepare to set out needed plantings as soon as the ground permits, considering each type of shrub for the use it could serve.

What is the value of a shrub anyway? How is one worth more than another? On what basis would one judge the value of a shrub?

We have score cards for grain, livestock, even Master Farmers, but why not a score card to judge shrubs. I never saw one before, but I am going to venture one myself and here it is:

1 Ease of growth, 15 points. Hardy, stands adversity, not readily susceptible to disease and insects, all one grower.

2 Form, 25 points. Symmetrical compact, neat.

3 Foliage, 25 points. Dense, [illegible] long season, not [illegible] dense of insects.

4 Flowers, 10 [illegible] Insurance.

5 Twig Display [illegible] Winter effect of bark or berries.

6 Longevity, 20 [illegible] hardihood in old age.

Maybe I can [illegible] tons, good and bad, [illegible] of all, we need shrubs [illegible] growth and will do well under average [illegible] A rhododendron is a beautiful thing in bloom in its native habitat, but it has decided soil restrictions. We may expect scale insects in profusion with lilacs, California privet is a trouble with our growers in northern counties.

By form we mean a shrub should assume a symmetrical shape, with branches compact, presenting a neat appearance. Barberry, a Japanese barberry, a spirea V. H. or [illegible] a weigela as a specimen plant all by itself in the yard and you have about an ideal. On the other hand what picture would a forsythia, a red twig dogwood, a rose of Sharon, a nine bark or elder present by itself?

Foliage on a shrub should be pleasing through a long season. Bush honeysuckle in my yard takes first rank there because it is the first out in spring, is dense, hardy and stays on late fall. Ibota privet lasts longer, even in the [illegible] but is slower to leaf out in the spring. We have a dense hedge row of althea, three of Sharon as a screen on one side of the yard, but it has a disadvantage in being slow to leaf out, very late. The old fashioned snowball viburnum sterilis has no place on my yard because it is seriously attacked by [illegible]

Flowers are the attraction about [illegible] and sometimes they are [illegible] Yet for six months we may have [illegible] and the graceful form of a [illegible] with as often only a week or two [illegible] Spirea Van Houtti makes [illegible] for a week, and then unsightly blasted blooms for that many days. The forsythia is highly appreciated because it is the first early bloom, bright yellow, welcome flowers, a charm in the garden for a short time; useful because they dare come out first [illegible] Hydrangeas present [illegible] Weigelias [illegible] but should be used sparingly. [illegible] Lilacs [illegible] Virginal are especially recommended. Their bloom is so profuse it covers the leaves. If you do not like, forget the old fashioned sort with its small muddy flowers, and get a few French hybrids, named sorts, and enjoy magnificent trusses with extreme fragrance.

With [illegible] flowers a rating [illegible] per cent. I don't consider them half as important as [illegible] large. Some shrubs are more valuable for winter [illegible] than for flowers. Barberry, red twig dogwood, Tatarian dogwood, bush honeysuckle or privet as superior [illegible] cotoneaster, euonymus, hydrangea or spirea in winter. The snow-berry [illegible] twig dogwood [illegible] Indian currant with red berries [illegible] birds and they [illegible] along with the [illegible] of all the [illegible] the [illegible] can be [illegible] their small destruction by aphid attack when they [illegible] bright winter fruit.

[illegible] we want shrubbery plantings, especially [illegible] rural homes where time is often at a premium, to take care of themselves for most part and remain [illegible] for many years. Snowberry, moss rose, [illegible] cannot hold their own and lack stamina to retain their form and vigor. Deutzia Pride of Rochester is that way too. We have discarded poplar and catalpa for street plantings. They grow quickly but have no other [illegible] We must [illegible]

[illegible] we will suggest the [illegible] in the accompanying table for [illegible] those [illegible] most dependable and common in plantings. There are others too, but they are more or less the unusual.

With this list of old-time standard sorts for a guide (and it should fill the bill for any ordinary farm planting), let us pick the right type of shrub for each special purpose and each location. There are some shrubs that have a special use, enumerated below. For instance, for flowers our choice would be for philadelphus varieties, weigela, hydrangea, forsythia, deutzia and lilacs. For shady locations ibota privet, bush honeysuckle and viburnums will succeed, along with snowberry and coral berry (Indian currant) not listed above. Spirea and barberry will do well on the north side of buildings also.

Now that we have looked over the great array of shrubs and selected those of permanence and desirable form and beauty, let us think of their location. Shrubs have three main positions about a home landscape design; namely, foundation planting (about the wall of the house), at the entrance of driveway or walk, and along the border of the yard.

The foundation planting needs first attention. It breaks the sharp lines where the basement wall meets the ground, softens the lines at the corners of the house, and "ties down" the house as a part of the landscape. Pick shrubs for foliage, some flower and of a height to suit the purpose. Mass planting of many shrubs is superior to a conglomerate mass of numerous varieties. Pick tall shrubs, like bush honeysuckle, weigela, mock orange or viburnum, for the corners where they do not shut off views from the windows. Use shrubs of a height about porches to cover basement walls and come up to the porch rail, but not so high as to shut off a view to the street or road.

Tall	**Special Use**
Bush Honeysuckle	Dense foliage, berries, shade
Philadelphus (mock orange)	Fragrant white flower
Lilacs, French Hybrids, Chinese	Fragrant bloom
Weigela	Flowers
Viburnum Americanum (High Bush Cranberry)	Red berries
Nannyberry	Black fruit
Medium	
Philadelphus, Bouquet Blanc and Virginal	Flowers
Forsythia	Early yellow flower
Deutzia Lemoine	White flower
Privet Ibota Regel	Dense foliage, shady places
Spirea, Van Houtti	Pink flowers
Flowering Almond	White flowers
Hydrangea	
Low	
Barberry, Japanese and red leaved	Border, color
Spirea, Froebeli and Anthony Waterer	Pink flower
Deutzia gracilis	White flower
Kerria japonica	Yellow flower

Spirea V. H., ibota privet, forsythia and hydrangea are common foundation shrubs, with any of the low types in front. The most common mistake of all foundation plantings is an alternate planting of spirea V. H. and barberry. It would be good if grandmothers and others of no individuality and imagination did not have the same thing. I never recommend it because it is so commonplace.

The ideal landscape design leaves a large open lawn before the house, unbroken by flower beds, unmarred by some un- (Continued on page 22)

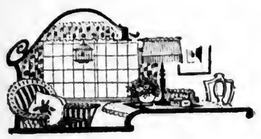


Shrubbery Around the Barn May Be Larger and Placed in Informal Groups



Shrubs Should Have a Form That Gives Good Winter Effect—Bush Honeysuckle Loaded with Snow

TIGHT BINDING TEXT CUT OFF



The Farm Home



Finds American Diet Lacks Minerals

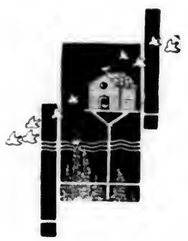
By GERTRUDE S. STEWART

MOST American diets are deficient in the animal proteins and minerals found so abundantly in milk.

This is among the findings of Dr. George Walker, Baltimore scientist who has been making a study of the eating habits of the American people. Dr. Walker laid the initial results of his study before the American Dietetic Association meeting in Baltimore the other day.

Dr. Walker's study embraced 750 families ranging in circumstances from very poor to comfortable. The average outlay for food varied from six cents a day per individual to $1.95. Dr. Walker found that more than a third of the average income of these families went for food. He calculated that, at retail prices, it takes 57.31 cents to feed a child daily, while the proper nourishment of a grownup can be accomplished for 44.58 cents.

Rich or poor, however, Dr. Walker found that the diets of all these families were deficient in one or more important respects. Virtually all of them consumed too little of the essential minerals, too much of the vegetable and not enough of the animal proteins. They also consumed less than half the required non-digestible fibrous or cellulose material and only about one-fifth of the raw foods containing the very important but little understood vitamin C that they should have.



Perhaps the most startling fact brought out by Dr. Walker's study is the pronounced shortage in a large proportion of these diets of iron, lime and phosphorus, three of the minerals most necessary for body health. Lack of phosphorus leads to rickets. He found that 64 per cent of all the diets were below normal in the proportion of calcium and 62 per cent were lacking in the phosphorus element essential to the growth of nerves and bones. These elements are obtained chiefly in milk and in certain of the vegetables. This would indicate that although Americans think of themselves as a nation of great milk drinkers, they really do not drink as much as is good for them. Every child should drink not less than a quart of milk daily and every adult not less than a pint, according to Dr. Walker.

Dr. Walker's findings follow on the heels of other recent findings by nutrition experts of the great value of milk proteins, milk sugar and milk minerals in the human diet. These investigators have proved that it is not the butterfat above the cream line in the milk bottle but the solids in the skimmilk below that are really the body builders. Homemakers who would conserve the health of the members of their families will, therefore, encourage not only the free drinking of milk but also the eating of bakery goods, ice cream, candies, meat specialties and many other of the food articles that are now made with skimmilk solids.

Then we should double the amount of fibrous or cellulose foods planned in the daily diet. All right, here they are. All fruits and vegetables contain much of cellulose. The fruits having greatest abundance of this food material are apples, peaches, grapes and blackberries. For highest cellulose value, they should be eaten without too much of refining—peeling, seeding, etc.

The vegetables richest in cellulose are potatoes, sweet potatoes, spinach, carrots, lettuce, cabbage and lima beans.

Profession of Homemaking

By HEPSY NEFF

THERE are still some lands in which only a few people can hope to learn to read or acquire skill in any occupation. In no land are these things within reach of all who are willing to work, for them as in our own land. Our prosperity, which other nations find so hard to understand, rests on the fact that so large a portion of our people are trained to think and so to become skilled workers. This fact has also tended to divide our workers into classes beginning with common labor (unskilled), skilled labor, job workers, tradesmen, business men and professional men, the highest trained of all "the learned professions," they were once called. In this class are lawyers, doctors, ministers, journalists, architects, artists, engineers and still others. Once it was not possible for women to gain an education but today women have found their way into every business or occupation open to men and with at least some measure of success.

More than a score of years ago, the Dean of the great school of Home Economics urged upon women's organizations the high distinction of "the profession of Homemaking." With all the experience of a generation of schools he urged every young woman for full training in this great profession. Such training, he assured them, must include biology, chemistry, bacteriology, sanitation and business management, the broadest training in any of any profession because as he said "Motherhood is a whole profession in itself." It is he adds, what I told at that time, "the homemaker of today is less prepared for the place she attempts to fill than was her mother a generation ago." what could be said of our women of today who seem to seek any kind of occupation rather than the one for which there is the greatest demand and which nature has made them best able to fill?

The activities of the farm home have always demanded close study, careful thinking and obedience to a wide range of rules. On the other hand, the city home has little or nothing of the inspiration of ownership and much of the go-as-you-please appeal, especially through all the years of childhood and youth. Little wonder that crime multiplies. The mature wild horses of the plains are sometimes subdued and made dependable, but horsepower by that method never has been considered possible, much less profitable. All that man has gained in his long upward climb has been learned through obedience to the laws of nature, a fact which time can never change. Some good day, perhaps, women too will learn that lesson.

The Reward of Helping Others

By HELEN GREGG GREEN

There are no fairy tells, who ends about the world at night
To give you wishes and rich things to pay for doing right
But you'll do for others what you'd have them do for you
And that is all that's left of fairy tales we true.
—Alice Cary.

WHEN small Bobby returned after going on an errand for me, I offered him a dime.

"I don't want your money," he scolded, "but Mother does."

"Do you?" I asked, "and why?"

"Well, you know about selling us the pay Bobby for errands."

"Bobby, you're a dear," I answered, "though it's rather a big one."

"Dear? Why, I'm not dear," he protested. "I don't imagine what some creature would be."

Well, you know Bobby has been the neighborhood errand boy for several years. Indeed, the first two years he made quite a lot of money. Both of us were pleased. For one day our little Mrs. Fields, who you know is quite old and has so little of this world's goods, asked Bobby to go to the grocery store for her. His legs just flew. He was thinking of the nickel or dime he would receive when he got back. But when he returned from the grocery Auntie Fields just smiled one of her angelic, sweet smiles and said, "Thank you Bobby." In two minutes he was home, angry and crying.

"I won't go any more errands for her! She never gave me a cent!" he declared, stamping his foot.

"I was amazed and shocked. I really felt like crying myself. I had never dreamed Bobby had lost his perspective like that.

"'Why Bobby,' I said, 'don't you get any satisfaction in knowing you helped Mrs. Fields, who has always been so kind to you?'"

"'No. I want my nickel,' he pouted.

"Well, I began then and there to root from Bobby's mind the idea that it is useless to perform a good deed unless one receives remuneration. From that day to this Bobby's friendly services have been free of charge, while his father and I make it a point to teach him that happiness comes from helping others."

"Well, I had never thought of things in your light before," I told her.

Yes, Bobby has become more thoughtful in every way. He's always trying to help folks. We never think of rewarding him except with a few words of praise. Whenever I buy him a gift and am tempted to say, "Here's something for being such a good boy," or something tells me "Yes, and tomorrow he'll be good and if he doesn't receive a reward he'll wonder what's the use of good conduct if he doesn't get anything for it." So Daddy and I keep on trying to mold in him the fact that the true reward of right conduct is the esteem of others together with an added self respect, and we avoid giving the impression that our presents to him have any connection with his conduct. This, however, does not prevent his having certain duties for which he receives regular payment—that is as important a part of his training as the other."

—National Kindergarten Association.

THE other day while making an apron, I wanted a flower to trim it. Having no pattern I thought of a pretty piece of cretonne I had saved from it I cut a flower to sew on the pocket and on the bib. The effect was very pretty.

Another plan is having a loose-leaf note book of generous dimensions in which to write or type my favorite recipes. My book is just in its infancy but I value it very much. You can index it, group your recipes, and not have to hunt through half a dozen cook books to find recipes wanted. M. V.

Over the Counter



Cottons for Spring sewing include many white goods

TODAY women are studying the materials they buy. Because we desire frequent changes and many launderings for our summer frocks, we are anxious for cotton fabrics that "put up" with the tub.

Most cotton fabrics are so inexpensive that we are enabled to have pleasing variety in our wardrobe with little cost. This is especially true if we do our sewing at home. Here we can establish perfect fit, and be individual in design and trimming.

In buying cotton material of any sort, it is wise to look into the make-up very thoughtfully. Study the weave, the finish and the dye of whatever you buy and avoid later disappointment.

The closer the weave, the more durable the fabric, if other qualities measure up to the same standard. Yarns in the weave that are easily displaced will easily fray out and a garment made of such material will always be pulled out at the seams. Often greatest shrinkage occurs in material loosely woven.

Watch the Finish of Fabrics You Buy

When materials heavily sized or stiffened are bought, test assured the laundry will change their appearance. This filling washes out and then a coarse, loosely woven textile is all you have.

Mercerized goods are different, for the process used adds both strength and beauty to the material, and the finish is lasting. Unbleached fabrics are preferred by many because of their wearing qualities.

The Bureau of Home Economics has a bulletin for more extensive study of this subject. Send to U. S. Department of Agriculture, Washington, D. C., asking for Farmers' Bulletin No. 1449, Selection of Cotton Fabrics.

The Light Meal of the Day

MANY times we feel that it is easier to plan and prepare a dinner than it is to think up something to serve for the lighter meal of the day, whether it be at noon or in the evening. With a little forethought, we may often prepare one or more luncheon dishes when serving the main meal of the day, thus saving time, energy and worry at the last minute.

It is a help to remember that there must be something containing starch, such as starchy vegetable, cereal or dessert, meat or light custards or puddings are very suitable. For a beverage nothing equals good cold water and milk.

Baked beans, lettuce salad and cake and or fresh peaches make a good lunch. Spaghetti with cheese and tomatoes, brown bread and strawberry preserves, or bacon and egg sandwiches with creamed cabbage, and stewed prunes. Waffles with chicken gravy make a delicious supper, as do pancakes served with maple syrup. It is well to eat cereal and fruit with such a lunch, however, as one does not care for fruit after eating as a rule.

In thinking of luncheon never forget the delicious vegetable soups made with barley or rice. Vegetable soup served with mashed potatoes sounds more like a dinner menu but is good for lunch too, with a little apple tapioca and whole wheat bread.

Rice is an excellent starch, and the most wholesome form is the natural brown rice, which contains all the precious mineral elements plus the outer grain, necessary roughage. Salad and sandwiches always make an attractive and delicious lunch.

Marion [illegible] Beck

Before Easter Dishes

EGGS baked in cream. Butter a shallow baking dish, and place several spoonfuls of nice sweet cream over the bottom. Break into this pan the required number of eggs not letting them touch each other. It is wise to have them of uniform size.

Dot each egg with one-half teaspoonful butter and salt and pepper as desired. Pour over all enough thin sweet cream to cover the eggs and bake in a slow oven until the eggs are set. Serve at once in the baking dish. A bit of "celery salt" is relished by many in this attractive dish.

• • •

Baked Spaghetti with eggs. Cook spaghetti in salted water. When tender, drain and season richly with butter, salt and pepper. A dash of cayenne gives added "tang." Place in your baking dish and level over that.

Then make slight depressions with a rounded cup. Into each pocket carefully break an egg. Over each egg add pepper and salt to suit taste a dot of butter and a tablespoonful of rich heavy cream. Bake until eggs are done to suit. Serve at once with mashed potato or milk toast. Clarice Raymond

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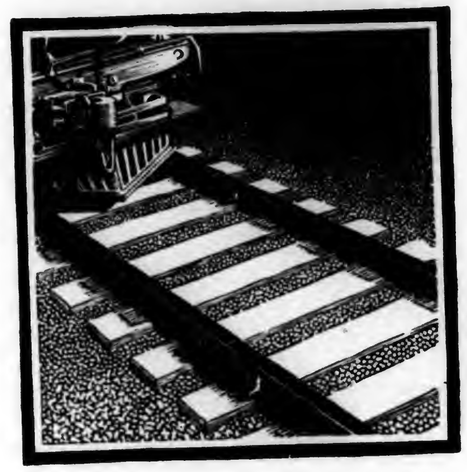
Baked Fish

Use an oven-glass or enamel ware dish, in which cutlet, fillets, or panfish can be served at table, direct. Have the oven piping-hot. Cut thin slices of sweet, pinky, fat salt pork. Cover the bottom of the baking dish with these then lay on them the slices of cod fillets of fish, or the small pan fish well floured and peppered. Cover well with more slices of the fat pork, and set in the oven. Bake there for from ten to fifteen minutes, according to the thickness of the fish. Serve at once.

This method gives all the flavor of fried fish, without the work or trying in the kitchen, and is especially desirable when only frozen fish can be had, as there is no need of turning the pieces in the pan, which so often breaks them and makes them unsightly. This method can also be used where the fish is first dipped in egg and crumbled; but remember that the pork is apt to salt it quite sufficiently. Serve with Tartare or Hollandaise sauce, or plain.

Aldis Dunbar

Resiliency . . .



BODY BY FISHER

GENERAL MOTORS

The Chief Reason why Both Railroads and Fisher Body Can Find No Substitutes for Wood . . .

RAILROADS use wood ties instead of steel ties, to obtain *resiliency*. This is the same reason why Fisher uses wood in building Fisher Bodies. Note, too, that a railroad track is of steel and wood construction—the same kind of construction used in Fisher Bodies . . . Both wood and steel have their own particular merits—but Fisher, by using *both* wood and steel, obtains the full advantages of both materials . . . It costs Fisher more to use wood and steel construction—but the body which results is worth more to the automobile owner. It is worth more largely because the wood deadens rumble and vibration and because, through the use of wood, greater durability is obtained . . . That is why all Fisher Bodies, whether made for Chevrolet or Cadillac, employ wood and steel—the only structural principle compatible with sound body quality.

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Read the advertisements in this paper. When booklets are offered on subjects in which you are interested, write for them, mentioning this publication. Advertised goods of known quality are safer to buy than unadvertised goods of unknown or doubtful quality. Read the advertisements.

Please Mention Pennsylvania Farmer When Writing to Advertisers.

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ALL-SILK PONGEE DRESS

JUST send your name and address, state size and color of the dress you want, and we will send you this all-silk bargain dress. If you do not think it worth double our price, return it at our expense.

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Guaranteed ALL-SILK

You'd never believe you could buy an all-silk dress for $1.98 until you see this one. It's a beauty! Nicely made of all-silk imported pongee in tailored style with smart pleated skirt. Very attractively trimmed with colored all-silk pongee tie, bindings, and bands on collar and pockets. Guaranteed to wash perfectly. The low price doesn't mean it is a cheap dress, for it is guaranteed pure silk.

Colors: Natural tan, with choice of rose or Copenhagen blue trimming.

Misses' sizes: 14, 16, and 18 years; women, 32 to 44 bust.

ORDER TODAY!
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Don't send one penny with your order—we will ship the dress C.O.D. Pay the postman $1.98 when he delivers the dress to you. We have paid the postage and all costs of sending the package to you. Order today!

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PLEASE mention Pennsylvania Farmer when writing to our advertisers. They want to know and we want them to know that you read it all.

Threaded Needle Prize Letter

I HAVE recently found a brand new sewing-machine attachment called a cording foot, and it is most useful. It has but one prong, and its use enables one to sew cord, bias binding, bindings, hemming tape and so on.

When making coats for my girls and myself, I save much time by cutting out the lining, interlining, and coat cloth all at the same period. Then I baste the coat material and do the fitting.

The necessary allowances are then made on the lining and interlining and they are sewed up together. If the sleeve is raglan style, the sleeve lining can be sewed in also.

To make an extra neat job, I baste the interlining pieces on the ironing board, place the lining pieces over, press and then baste together. I am enjoying the sewing hints very much. Edith R. Dilts

Many readers have sent in the following hints which may be new to some of you.

1. Worn out electric light bulbs make ideal stocking darners. Flash lights help mend slightly worn places—especially at night.

2. Cretonne bags made up similar to shoe bags with several pockets, are excellent for careful storing of sewing patterns.

3. Small ironing boards are of great help with family sewing.

4. A bureau in the sewing room, or near the machine provides a convenient place for sewing materials and trimmings—each in its own drawer.

5. Use shallow boxes for your threads—laying them on the side. You can find the very shade or color you want—immediately.

6. Small dry pieces of toilet soap make the best of markers for the woman who sews.

7. Pennsylvania Farmer patterns are reliable, true, stylish and very economical.

8. As you make the children's dresses and shirts, make them a "souvenir" quilt of left-over pieces of cloth. It may take years, but the sentiment involved is worth it.

9. When you sew, let the children sew, too, if they wish—boys or girls.

10. Thread your needle using the end of thread first leaving the spool, then you need not struggle with knots and snarls.

Next week this contest closes, and I know from your many letters that you have liked it. Would you like any special feature for similar interest during April and May? Your desires are our pleasures to grant, so write your preferences.

Among the things that suggest themselves to me at this season are:—Exchange of house-cleaning ideas, pretty new things for the house, our better gardens, painting pictures with flowers in the country yards, planning wholesome recreation for vacation and dozens of others. Which do you need the most and hope to have us develop? Send letters to Home Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa. G. S. S.

The Farmer's Vacation

THE farmer should have a vacation, if only for a few days, through the hot season.

All winter he has been busy on the farm caring for the stock, looking after the repair work or building fences and ditches when he is not so pressed with work of the growing season. From spring on, Mr. Farmer is literally on the jump.

How much a vacation is needed to rest tired, taut nerves and it would be appreciated if possible. This could easily be arranged if two farmers in each vicinity would get together and form a compact:—"You look after my farm (of course your own too) while I go vacationing (a set number of days) and I will do the same for you."

Naturally it is added work for each individual but who wouldn't undergo a few days of doubled labor in exchange for an equal number of days of complete rest and relaxation.

Note: I'm sorry our writer did not say what these interesting words for the "Male Wave?" It is understood that whatever is best for the curler is also good for the waver.

Mary Hoff, Editor.

Ten Wash-Day Helps

NO matter what type of wash-day conveniences you have in your home, there are many duties that require space in your accessories cabinet.

1 A bottle of bluing, three of which there are many excellent varieties.

2 A tube or bottle of rust remover.

3 A fine white bristled brush for stubborn shirt collars and cuffs.

4 A coarser bristled brush for rough jobs, overalls, rack or stockings, etc.

5 Bottles of tints in various colors for a quick and easy way to tint faded clothes. These are easily made from dyes and it cooks hard to obtain the tints, will keep indefinitely.

6 A box of laundry starch, a bottle or paddle of bluing.

7 A can of concentrated lye to use in boiling stains, or rather, in garments, and for soap making of scraps and ends of grease and fats that accumulate. Homemade soaps are always appreciated in laundry time.

8 A small suction hand washer is a help and should be in every laundry.

9 A rod clothes line. For the years I have been using one that cost thirty cents.

10 The usual tubs, boiler and wash board, also washing soda or whatever there are many varieties on the market.

R. D.

Take Care of Your Broom

THE life of your broom is lengthened if you turn the fabric of turning the broom completely around every few strokes. This plan keeps a broom level, as the straws on both sides of the handle are uniformly used.

The little trick of turning will be done automatically after you have done it a few times and realize the importance it bears to your work. An even straight across broom sweeps more easily than one of those old turned up affairs. It is more effective and has a much greater area of sweep to it.

Always hang up brooms or mops when not in use. This is easily done by screwing an "eye" into the end. Some folks bore holes and tie on a string or wire through by which to hang them over a nail or hook.

Clarice Raymond.

Casserole Recipes

Please give us some good casserole recipes in the Home Department.

C. L. G.

WITH boiled or fried hominy grits, rice, baked or mashed potatoes this recipe, from the Bureau of Home Economics, will make the main course of a meal.

1 pound sausage meat
1 quart shredded cabbage
4 tart apples, sliced
1 tablespoonful tarragon vinegar
½ teaspoonful salt

Make the sausage into flat cakes and fry until crisp on both sides. Put a layer of the shredded raw cabbage into a lightly greased baking dish, and add a layer of sliced apples, another of cabbage, and so on. Continue until all the cabbage and apples are used. Salt each layer as it is put in and leave apples as the top layer. Lay the cakes of fried sausage over the top. Wash out the sausage pan with the vinegar and pour over the contents of the baking dish. Cover and cook until the cabbage and apples are tender.

Readers are invited to send in unusual casserole recipes that are adapted to the farm in this season. Please address Home Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.



Which Will You Have?

No. 3412 Dainty beads interest. Designed in sizes 16, 18 years, 36, 38, 40, 42, 44 inch bust measure. Size 36 requires 3¾ yards of 40-inch material.

No. 2581 Designed in sizes 14, 16 years, 36, 38, 40, 42, 44 and 46-inch bust measure. Size 36 requires 3 yards of 40-inch material.

No. 405 Unusual and smart. Designed in sizes 6, 8, 10 and 12 years. Size 8 requires 1¾ yards of 40-inch material for trousers, and for skirt and waist 2¾ yard of 32 inch material.



No. 412 Charming afternoon frock of red georgette crepe, self-trimmed, with neckline softened by soft collar with long loose ends falling over shoulders and reaching almost to hem at back, which contributes new smartness. Designed in sizes 16, 18, 20 years, 36, 38, 40 and 42-inch bust measure.

No. 424. Designed in sizes 16, 18, 20 years, 36, 38, 40 and 42 inch bust measure. Size 36 requires 2¾ yards of 40-inch material.

No. 458 Smart holiday dress. Designed in sizes 6, 8, 10 and 12 years. Size 8 requires 1¾ yards of 40-inch material with ⅝ yard of 36-inch contrasting.

How to Order

Write your name and address clearly. State number and size of each pattern. Price 15c each, two for 25c. Address Pattern Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

The Market Place

By W. R. WHITACRE

TWELVE years ago the motor truck began to play a part in the hauling of farm produce. As better roads came, it replaced to a large extent the old horse-drawn wagon for loads of ten to twelve miles. The development has continued until it is now being used for hauls of 100 to 200 miles and occasionally for even as great distances as 500 miles. In this way it has become a serious competitor to the railroads.

This has been a mixed blessing for shippers. There have been advantages due to its greater flexibility of speed and time of arrival on the market, less handling, better condition of the product at time of arrival and in some cases higher returns have helped in its development.

Some Disadvantages

On the other hand railroads hit by competition have closed stations and curtailed service. In some instances this has worked a hardship on the shipper. Road taxes have advanced and the motor truck has at least a share in this expense. Lack of organization, loss from over-turned or wrecked trucks and lack of uniform hauling charges are some of the disadvantages. Truck owners and operators have realized that these conditions exist and are making an effort to remedy them. One of the first movements to better motor truck transportation has been started in the Eastern Shore district where a huge motor truck transportation system is extending into all of the important markets of the northeastern states has just been organized at Salisbury, Maryland. This merger includes nearly 1,000 motor trucks that are used to carry produce from the Eastern Shore section to northern markets.

To Improve Service

This organization has been started to standardize hauling rates and to render a more efficient transportation service. It will be known as the Del-Mar-Va Truckman's Association. The organization has employed an experienced traffic expert, W. T. Gardner, to establish a set of rate charges. In this way there will be a definite rate for each commodity and the territory will be divided into zones with the rate per package varying with the distance traveled. The main schedule will include Wilmington, Philadelphia, Newark, New York, Providence, Springfield, Boston, as well as Albany, Pittsburgh, Baltimore and Washington. The Association is to be affiliated with a New York Truckman's Association to facilitate unloading and delivery to wholesalers and retailers.

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Early Potato Industry

The Interstate Early Potato Committee, composed of representatives of the Extension Services of Virginia, Maryland, North Carolina and the Extension Service and Bureau of Agricultural Economics, has appointed A. E. Mercker as its executive secretary.

Mr. Mercker was recently with a large fruit and vegetable marketing agency in New York, and previous to that served as Chief of the New Jersey Bureau of Markets. He has also worked with the North Carolina and United States Department of Agriculture in vegetable marketing.

The committee will direct its efforts toward the stabilization of the early potato industry by providing growers with economic information on the prospective demand and supply of potatoes. Also the desirability of producing other crops than potatoes, financial conditions affecting the industry and the coördination of marketing agencies handling the crop.

Friendly Talks

By Edgar L. Vincent

ARE you getting ready to set any grafts this spring?

One of nature's mysteries is how the choicest possible fruit may be grown on trees which heretofore have produced nothing but small, gnarly, imperfect apples or pears or whatever it may be. When I came on the farm I found a common fruit tree in the edge of the pasture. Nothing grew on it except inferior apples; but by grafting this tree we now gather almost every year some of the finest Northern Spy apples to be found anywhere.

How this comes about nobody knows. We take the scions, set them into the old branches and in a little while the miracle is performed. Same sap comes up from the root. The same dew, the same sunshine, the same conditions, but such a change in the fruit!

And I know a man who has been changed in somewhat the same way. He was one of the most surly, grouchy men to be found anywhere in our neck of the woods. Nobody liked to do business with him. Boys and girls avoided him, going away around when they saw him coming.

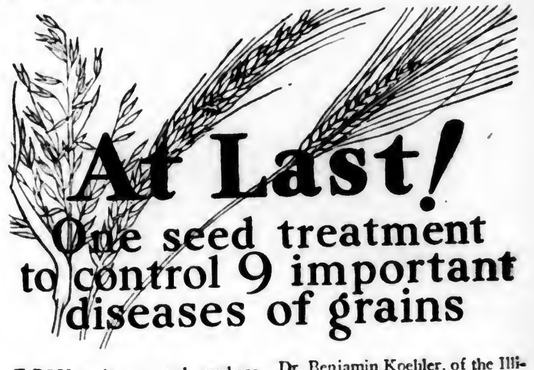
Today he is one of our finest citizens. How did this happen? He came in touch with a man who was always good and kind and true, and who had a good word for everybody. It was interesting to see the grouchy man watch this good neighbor. He seemed to be studying his life, perhaps expecting that the time would come when he would break down and do something mean; but he did not. That man's good life acted like a scion grafted into the surly man's nature, and the time came when he too took his place in society as a good, faithful member.

The grafts we set in the lives of others. It is fine to grow better fruit from a common fruit tree, a thousand times more so to help somebody turn away from life's low levels and climb up to the heights of good citizenship. And the best of it is that every one of us can set some of these grafts.

LIGHTHOUSE whitewash is made by using one bushel of fresh slaked lime to which is added twelve pounds of rock salt dissolved in six gallons of boiling water. After these two are mixed together then add six pounds of Portland cement. Add about twelve gallons of water.



J. H. Silvis and Sons of Westmoreland county operate this modern dairy establishment. The milk is retailed in Greensburg.



At Last!

One seed treatment to control 9 important diseases of grains

YOU no longer need purchase a different disinfectant to treat each one of your seed grains. Scientists have now developed a remarkable new dust disinfectant that can be used on *all* cereals.

This new disinfectant is Ceresan. With it you can treat wheat, oats, barley, rye and sorghums—easily, quickly and economically.

Ceresan effectively controls 9 important diseases that annually steal millions of dollars from grain growers. Note, too, that Ceresan is harmless to seed and does not corrode metal parts of the drill.

Ceresan is new—but you need not hesitate to use it. Impartial experts of the U. S. Department of Agriculture and numerous State Experiment stations have proved the value of Ceresan in controlling important cereal diseases.

Wheat—Bunt or stinking smut, and seed-borne flag smut.

On 1928 spring wheat, Ceresan reduced smut to almost nothing the check plots had up to 32% of smut.

Oats—Both loose and covered smut.

Dr. Benjamin Koehler, of the Illinois Experiment station, reports Ceresan gave perfect smut control on oats, and produced a yield increase about double that obtained by treatment with formaldehyde.

Barley—Stripe disease and covered smut in certain six-row winter varieties.

Ceresan is the first satisfactory dust disinfectant for the control of barley stripe. Dr. H. A. Rodenhiser of the University of Minnesota, reported it entirely checked this disease.

Sorghum—Kernel smuts.

Rye—Seed-borne stem smut.

Ceresan will not clog or corrode the drill. Treats seed for only 6 to 9 cents a bushel. Harmless to seed. Directions with package.

Diseases of many other crops can be controlled with Du Bay Seed Disinfectants. Mail the coupon below for information, or ask your seedsman, druggist, hardware dealer or general merchant for pamphlets on Semesan Jr., for seed corn; Semesan Bel, the *instantaneous* potato dip, and Semesan for vegetable and flower seed and bulbs.

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Seed Disinfectants

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See Page 17, February 16th

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you will have purchased seed unexcelled...Kelly's Murphies are grown from the best foundation stock we could find from all over North America...Each variety we plant on the soil and in the locality best suited to its individual requirements. ...Our Russet Rurals, for example, are grown on our own farm at Alba in Northern Michigan by Harry Arnold...Our Russet Rurals were first for the entire United States in the Iowa tests this summer.....We know that a blemished potato is not good seed so we pack "Kelly's Murphies" in our own warehouses so that they reach you as perfect as they grew. Our production is large enough to furnish growers a dependable source of seed every year.....IF YOU WISH WE WILL GROW YOUR SEED TO ORDER FOR YOUR 1930 CROP.

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This is the packing shed owned by L. Otis Corkran, of Dorchester co... Maryland's representative among the Master Farmers of 1928. Last year Corkran grew 75 acres of cantaloupes, 60 acres of asparagus, 10 of cauliflower, smaller acreages of other truck and canning crops. He is widely known for success in marketing his products at good prices. However, this success is due mostly to the high quality of his vegetables. Intensive spraying, dusting, careful cultivation and the application of as much as 135 tons of fertilizer some year give the products that go out under his label a quality that buyers remember.

Orchard Windfalls

By S. W. FLETCHER

AT THE annual meeting of the Pennsylvania Horticultural Society, Doctor Headlee of the New Jersey Experiment Station reported that two of the most promising methods of controlling Oriental fruit moth (to supplement the present controls of natural parasites and early spring oil treatment) are oil and talc container sprays. Three sprays of light oil, keeping the peaches covered, kill eggs and the young larvae. Talc dust, too, is said to be fatal to the larvae and eggs. But if both these methods are used together with hydrated lime spraying or dusting, as reported by the Ohio Experiment Station, are still experimental, but quite promising.

• • •

PENNSYLVANIA growers could seldom find it necessary to thin apple trees for codling moth control, to supplement a crop of spray, as is recommended in parts of Delaware and New Jersey, where the moth is more serious. According to Doctor Headlee, in New Jersey 90 per cent of the fruits in cultivated orchards come from cocoons found beneath the rough bark of the trees, the remainder come from cocoons on the ground and on the limbs.

The old orchard practice of scraping off the rough bark and burning it (this is justified, but possibly a cheaper and more effective way is to spray the trunks with a certain grade of oil covering the rough bark only. The oil penetrates through the loose bark and kills the pupae in the cocoons beneath it. A considerable proportion of infestation comes from cocoons found on old packages or storage containers. This is one argument against the permanent storage crate, as compared with storing in bushel tubs or baskets, which are sold every year.

• • •

SOME New Jersey fruit growers who are forced to apply late summer arsenical sprays for codling moth are finding it necessary to wash their apples to remove the spray residue, so that the fruit will come within the arsenic tolerance permitted by federal regulations. Lester Collins of Moorestown, N. J., has a $1,600 machine which washes the apples for approximately one cent a bushel. He claims that the cleaner, fresher appearance of the fruit more than justifies this slight expense, aside from the removal of spray residue. In the Pacific Northwest the expense of washing is three to five cents a bushel. There are home-made ma-



chines costing about $200, which ... satisfactory for use in the smaller ... orchards.

New Jersey growers are not ... this trouble about the spray residue problem but Pennsylvania growers are ... as well satisfied that washing ... is necessary in this state.

• • •

THE Cumberland peach, a ... fruit-bearing stone, which ... runs a week before Carman, has ... many friends in New Jersey and ... in Pennsylvania. The Golden Jubilee ... which was originated by ... New Jersey Experiment Station, ... is like Elberta ... and color, ... ripens five ... Thousand ... will fruit in ... the first time.

S. W. F.

• • •

A RECENT bulletin from the Michigan Experiment Station ... states that experimental evidence ... to indicate rather than ... bearing peach trees, ... pruning tends to an increase in the ... of the fruit, but "unless the set of ... is heavy it usually results in some ... reduction in total yield and often in ... no cash returns per tree." The bulletin recommends light annual pruning ... supplemented with severe ... pruning once in four to six years, ... secure new fruiting wood.

There seems to be a decided ... trend toward pruning in all ... sections of the country. In Massachusetts ... recently reported ... able results from using twice as ... heavy a cut as has been ... in Michigan.

• • •

THE Annual Proceedings of the Pennsylvania State Horticultural Association were distributed to ... members on March 9. This ... of nearly 500 pages is an authoritative ... record of the best current practice. ... Features of the recent meetings of the ... Association, reported in this volume, ... are the full discussion of the ... spray system, as used in the East, ... the application of refrigeration to ... farm fruit storage, cost accounting ... methods in the orchard; the outlook ... the apple business; problems in ... growing; and the papers and discussions on the culture of strawberries ... and raspberries. There are several ... hundred more Pennsylvania fruit growers who ought to be members of the ... Association and receive this book. ... addition to the 700 who are now members. It costs the price of a bushel of ... apples—$2. Send dues to the Secretary, S. W. Fletcher, State College.

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Barley—one of ... varieties, developed by the ... Experiment Station ... increases yields ... bushels per acre ... tall, ripens early, ... heavy and sound.

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Truck Crops

By GILBERT S. WATTS

THE very earliest sweet corn invariably commands remunerative prices and one is justified in taking some chance with the first plantings. A very important point in early spring is to plant shallow, not exceeding one inch deep, because the soil nearest the surface is warmer. Germination will be more prompt and better stands will be secured. Do not plant the small extremely early varieties on poor soil or the ears may be too tiny to sell. Neither should these sorts be planted at all late, because they will not sell in competition with the larger second early and mid-season sorts.



• • •

IF THE weather is inclined to be cold wet 150 or 200 pounds per acre of nitrate of soda or sulphate of ammonia will keep the early sweet corn growing along. After this crop is well established shallow cultivation should be practiced. Deep tillage is likely to break off or injure roots that materially assist in delayed ...

• • •

IN A test made on Long Island, New York, studies were made on more than 200 farms to determine the effect of fertilizers and manure on the yields and profits in growing market peas. On the farms using neither fertilizer nor manure the average yield was only 105 bushels per acre. On 74 farms which used an average of $5.74 worth of fertilizer per acre the average yield was 148 bushels. Forty-five farms used an average of $10.65 worth of fertilizer per acre. These yields averaged higher still, 156 bushels per acre. No manure was used in either of these groups, but a third group applied an average of $4.61 worth of fertilizer and $18.31 worth of manure per acre. These yields averaged only a little lower, 144 bushels per acre, but profits were much less than when five to ten dollars' worth of fertilizer per acre was used alone. Five hundred pounds per acre of the common potato and truck crop mixtures is none too much if the greatest return for one's land and labor is to be secured.

• • •

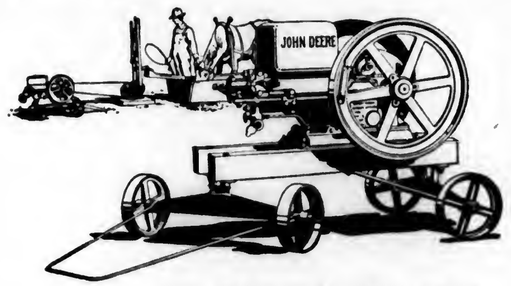
IF THE new raspberry plantation is to make a large yield the summer after planting a vigorous development of canes must be secured the first summer. An Ohio investigator reported excellent results from 200 pounds per acre of nitrate of soda or sulphate of ammoniat applied about a month or two weeks after planting. His method was to apply the fertilizer in rings around the plants, the circles being about 20 inches in diameter. Thus danger of burning was avoided. Incidentally, 200 pounds per acre figures out to exactly two ounces per plant with ordinary spacings. If this amount is weighed out and a small measure is found which may be used to dip up the desired quantity for each plant all guess work and danger will be eliminated.

• • •

EXACTITUDE counts for more and more on the farm, as the use of concentrated fertilizers, spraying materials and seed disinfectants widens.

• • •

THERE is considerable evidence, both practical and scientific, which indicates that non-leguminous green manurial crops such as rye, wheat or oats are practically as valuable as legumes in feeding the crops that follow, provided only that these non-legumes crops have been grown on a soil which is well supplied with nitrogen, and that they are plowed down in a young and succulent state of growth. In fact such crops decompose at an exceedingly rapid rate. There is no question that practically every instance of unfavorable results following rye or



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You can't appreciate how much time, muscle and money the John Deere engine will save you until you put it to work on your own farm.

A turn of the flywheel starts the pump supplying fresh wholesome water for the stock. When washday comes, the engine does the hard work for the women folks. If there's corn to shell, feed to grind, milk to separate, butter to churn, the John Deere is always ready to do the work—and just a few cents for fuel and oil keeps this time and labor saver working for hours.

JOHN DEERE ENGINE

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Mechanically, the John Deere is far in advance of ordinary engine construction. It has enclosed working parts, automatic oiling—freedom from grease cups and sight-feed oilers. It is simple—easy to operate, easy to understand, easy to start—and it's built to the John Deere high standard of quality.

You can get John Deeres in 1½-, 3- and 6-H. P. sizes—either stationary or portable. You can also get a direct-drive pumping outfit that's ideal for the stock farm.

See the John Deere, the enclosed engine that oils itself, at the store of your John Deere dealers.

Write for free booklet. This illustrates and tells all about the full line of John Deere engines. Drop a card to John Deere, Moline, Ill., and ask for Booklet DW-636

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Introduced by us a little over a decade ago, sales the first year 1,000 barrels, the second year 4,300 barrels, third year, 11,000 and last season, over 15,000 barrels. Has this record ever been beaten? "Nothing succeeds like success" and Dibble's Russets are a lasting success in American Potato Culture.

CERTIFIED of course, and at a lower price than the same high quality can be bought for elsewhere. We also have full stocks of all the other good varieties of Potatoes, Alfalfa, Clover and Grass Seeds, Seed Oats, Barley, Corn, etc. "Everything for the Farm" and at prices you can afford to pay.

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SOY BEAN SEED
90 to 100% germination. It pays. Limited quantity. $3.50 per bushel. Address
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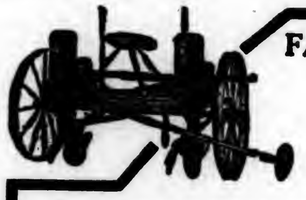
Old Friends —and new

COTTON FARMERS who are still in their prime can remember helping their fathers haul V-C Fertilizers to the springtime fields of long ago. Now their sons are helping them—and V-C remains a family institution. Could V-C be otherwise than trustworthy, with such traditions behind it?

Other regions too are accepting the choice of the Old South as they learn that fertilizing pays. V-C's good name keeps on opening the way to new friends—whom the years will ripen into old ones.

VIRGINIA-CAROLINA CHEMICAL CORPORATION
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similar crops may be explained by deficiency of nitrogen. If non-leguminous green manure crops grow large and rank before they can be plowed danger of nitrogen starvation may be averted by applying a liberal proportion of this element in fertilizing the succeeding crop.

I remember one June when I plowed down rye that was so far advanced that a great deal of the grain in the heads sprouted. Approximately 500 pounds per acre of nitrate of soda, 500 pounds of 20 per cent superphosphate and 200 pounds of nitrate of potash were applied to the acre. Moisture was abundant and the following crop of late cabbage was one of the heaviest I ever have grown.

* * *

IN THIS connection it is worth while to note that annual weeds of almost any kind if plowed under in a succulent condition before going to seed are just about as valuable for soil improvement as any crop we can plant.

Care of Nut Trees

By JOHN W. HERSHEY

WITH the advent of March we have reached the days of sugaring and the many kinds of work that help make our trees as healthy as trees or nature

What has been done to get your trees in shape to give you their best life, growth and production. Failure to prune the dead and broken limbs from your nut trees is apparent the work better be done immediately. Or if the two and three year trees have not been shaped up it is time to get on the job. For the pruning of the older nut trees we advise, after making a very close cut so the would heals across nice and clean to paint it with water glass diluted with water about one-third. This makes a very close tight coating that will repel borers and fungus. This is important wherever one's trees are located but for those in the warmer temperature regions, especially with the pecans, it is all important to seal up wounds and breaks to keep out the borers.

Fertilizing

As soon as spring comes, feed your trees and cultivate them. The act of cultivation will work in the fertilizer and benefit the trees in other ways.

For trees showing a tardy growth, apply a balanced mixture of 4-6-5. This should be washed in or turned under immediately to prevent the nitrogen from escaping. For trees on low bottom land where plenty of nitrogen is present and in the far North where trouble is experienced with poor filling of nuts and of winter kill, 5 to 25 pounds of a mixture of 0-2-1 will greatly help to stiffen up the rapid growing bottom land trees, stimulate maturity of new growth in winter kill troubles and assist in filling of nuts where that is needed.

I have been criticized several times for not being more explicit in writing of a fertilizer formula.

Let me explain the first figure always represents ammonia, which is the carrier of nitrogen.

The second phosphorus, mostly carried in acid rock or bone meal.

The third is potash carried in either muriate or sulphate of potash.

The first is used for growth, the second for developing seed and the third the hardening of wood or woody fiber. It acts permanently like a morning bracer acts in the case of students.

Should one see a formula with any one number missing then the mixture is absent the material represented by the 0.

¶ More than 30,000 farm bulletins have been distributed this year by the Pennsylvania Department of Agriculture in response to requests from farmers and others interested in agriculture. In addition to Pennsylvania and surrounding states, requests were received from 12 foreign countries.







10 Pkts. SEEDS FREE

OATS



Proper Lubrication

By R. U. BLASINGAME

THE American people are great on old sayings or maxims. One of the new maxims of the present age is, or at least it should be, "We float on a film of oil." And with our present mode of transportation, which is largely by automobile, we should be sure that a film of oil is always present.



The old-time buggy and wagon, moving at a slow rate of speed, did not receive very much of the oil that were looking. The reason objection, of course, did force to grease the wagon or hinges was the which was emitted.

Years ago when farmers went to the field they did most of their work walking behind machines which had in many cases no moving parts whatever. And for those machines, which needed lubrication and operated [illegible] a slow rate of speed [illegible] grease cup and oil hole [illegible]

At present most [illegible] nuts are transported at a [illegible] speed by motor truck [illegible] shipping stations or market [illegible] ing, operating at [illegible] and pressures as the [illegible] tor and automobile [illegible] necessity be supplied [illegible] to separate the surfaces [illegible] parts.

Field Operations

Nowadays a great many [illegible] the field jobs, such as plowing, disking, planting, cultivating, spraying and harvesting, are done with machines operated with mechanical power. Into many of these machines have recently been built the highest grade of heat treated steel, anti-friction bearings, case hardened gears, etc.

The prevalence of anti-friction bearings, for instance, has come about through the development of the automobile, truck and tractor. The manufacturers of these high speed, vertical roller bearings have developed ways and means for the manufacture of bearings at such low [illegible] that they can be installed in [illegible] machines, grain drills, [illegible] and any other farm [illegible] not affect the price of [illegible] to any appreciable extent. [illegible] bearings of this kind are [illegible] a highly polished surface. If such bearings are neglected through [illegible] lubrication they very quickly corrode, thereby losing their ability to [illegible] free, to reduce friction to a minimum.

On the other hand [illegible] are lubricated with a cheap quality [illegible] manufactured by some [illegible] by-night concern that [illegible] corroded almost as bad [illegible] the lubricant becoming rancid [illegible] by the entire neglect of lubrication. It unquestionably pays to use [illegible] oils and lubricants from a high grade well-known manufacturer who has gained a reputation for [illegible] products.

Pressure Lubrication

Simultaneously with the development of anti-friction bearings came the high-pressure system of lubrication. Every one is now acquainted with this method of oiling [illegible] pressure gun is usually [illegible] equipment with the tractor, truck and automobile. The manufacturers of this pressure lubrication equipment have designed fittings, not only for [illegible] farm machinery which is now being built, but they have fittings for most all of the old machinery which is now in operation.

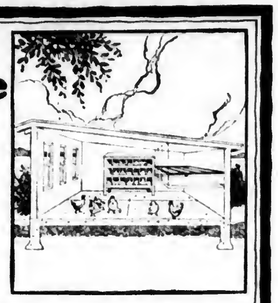
Judging from recent reports these people have done a big business in the agricultural sections of the Middle West selling pressure fittings to farmers. No doubt if they did make the same effort in the East the results would be the same. But anyone does not necessarily have to wait for the representative to sell him separate fittings for his present machinery, because the most of this equipment can be purchased, in many cases, at the local automobile accessory shop or machinery dealer. These fittings are comparatively inexpensive and when one already has the grease guns available modern lubrication can be had for most any machine.

The Gas Engine

We receive from time to time letters from our readers outlining oil specifications as with regard to the test, cloth, viscosity, etc. These factors in an automobile crank or tractor oil [illegible] all been taken into proper consideration in the manufacture of the well known and reputable manufacturers, and so far as these factors are concerned we will require an oil [illegible] quite a while to make its de[illegible] stroke at [illegible] the max[illegible] ex[illegible] whether [illegible] its suitable [illegible]

[illegible] manufacturers [illegible] to [illegible] to [illegible] to

Concrete Floors For Poultry Houses



Recommended by Experiment Station

"The floor is a very important part of the poultry house, especially from the standpoint of maintaining sanitary conditions. The smooth concrete floor can easily be swept, washed and disinfected if necessary." — *Bulletin 370*, New Jersey Experiment Station.

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C. M. LONGENECKER, Box 45, ELIZABETHTOWN, PA.

Poultrymen Gather

By R. L. SCHARRING-HAUSEN

A NUMBER of Warren County New Jersey poultrymen met at the farm of the writer recently to inspect the plant and especially to look over the output of the baby chicks, and to hear Associate Poultry Extension Specialist L. C. Taylor explain the New Jersey sanitation program called "Wage War against Worms and Diseases" which gave such good results in reducing chick losses in 1928. The meeting was to be carefully planned in detail but the meeting was called by A. G. Mc Dean, county agent, who explained the purpose of the meeting and introduced Mr. Taylor who in turn outlined and explained the various points of the campaign.



The first point is to buy or hatch chicks early as early chicks grow faster and meet with better conditions all around than late chicks. In addition the pullets mature in time to lay for the high priced market in the fall.

A Clean House

The second point is to provide a clean house. This means that before the brooders are started the house should be thoroughly brushed down the floor scraped and all accumulated dirt removed after which the floor and window sills should be scrubbed with a strong lye solution, the whole interior sprayed with disinfectant and then whitewashed. In like manner a clean range must be provided. Mr. Taylor explained that a clean range is one on which no chickens have been for at least a year, and on which no poultry manure has been spread for two years.

The fourth point is to avoid crowding. The recommendation along that line is to place not more than 350 chicks in a brooder house. Some brooder companies advertise stoves of 1,000 and even 1,500 chick size, but it has always seemed a very short sighted policy to me, as chicks in such large flocks are seldom brooded successfully so that the poultryman becomes disgusted and blames the stove. I should think that if the brooder companies made more modest claims for their stoves, the poultrymen would have better results with his brooding and not only become a satisfied customer but a disgruntled customer, but also in the pocket for more stoves. I have often wondered why this has never occurred to the companies who make such extravagant claims for their equipment.

The fifth point is to keep young and old separate. Not only do old birds crowd the youngsters away from the feed, thereby stunting their growth but they are also usually carriers of coccidia and disease to the susceptible growing birds.

Wire-Floored Sun Porches

The remaining points have to do with wiring in the roosts in the layers houses, cleaning the drops daily and providing a screened manure pit, means especially of combating worms and of preventing flies from multiplying, as these insects are well-known carriers of tapeworms and influential in the spread of disease.

Mr. Taylor in concluding his remarks stated that from records obtained in 1928 it was found that poultrymen who had carried out all points of this program raised the greatest percentage of chicks and found themselves with very good pullet flocks in the fall.

The writer then explained his methods of starting, brooding and rearing chicks, which have been outlined in this department many times. Of especial interest were the wire floored sun porches which allow the growing birds to get plenty of fresh air and sunshine while keeping them away from the contaminated soil near the buildings until they are old enough to go on range.

After inspecting and discussing other features of the brooding equipment the group visited one of the laying houses to examine the water systems, roosts, hoppers, etc., and to look into a pen where 180 pullets were laying close to 70 per cent, as the figures suggested.

The visitors seemed interested in this section of the poultry business, and I was glad that I had prepared a display along this line, although it was not scheduled on the program. To show the methods used in breeding for high egg records, I had posted a weekly record sheet from the trapnest, an egg record and pedigree from which these records are translated. A March 1st contest report showing the number and weight of the eggs laid by each hen in the pen, and an R. O. P. certificate issued to a hen which laid 254 eggs in her pullet year.

Selective Breeding

I also had three record sheets belonging to pullets which had laid 90 eggs from Nov. 1, 1928 to Feb. 28, 1929, and had the birds themselves and the eggs they had laid that morning on exhibit as well. After having laid at the rate of 75 per cent for four months, the pullets were decidedly in their winter moult, they were in good shape and weighed 4 pounds each. To illustrate the statement often made that high laying birds lay small eggs, the eggs which they had laid weighed at the rate of 28 ounces per dozen, which is a very good weight indeed.

In contrast the record sheet of a rather poor layer showed only 33 eggs for the four months, only seven eggs during the last month of one of the good layers.

By mating such good birds as these to pullets to pedigreed cockerels and continuing the selection along the proper lines, through the successive generations of their progeny, it is possible to raise the egg-laying ability of the flock, when mated to a cockerel of like breeding will bring up the egg laying average in the succeeding generations.

Of course all this trapnesting and record keeping costs money, as the pedigreed stock cannot be sold at low prices but the ordinary poultryman who is not primarily a breeder, though good in his management and feeding methods, will find the possession of such blood a good investment from the standpoint of increased production and plant efficiency, where the cash is not out of all proportion to the sum.

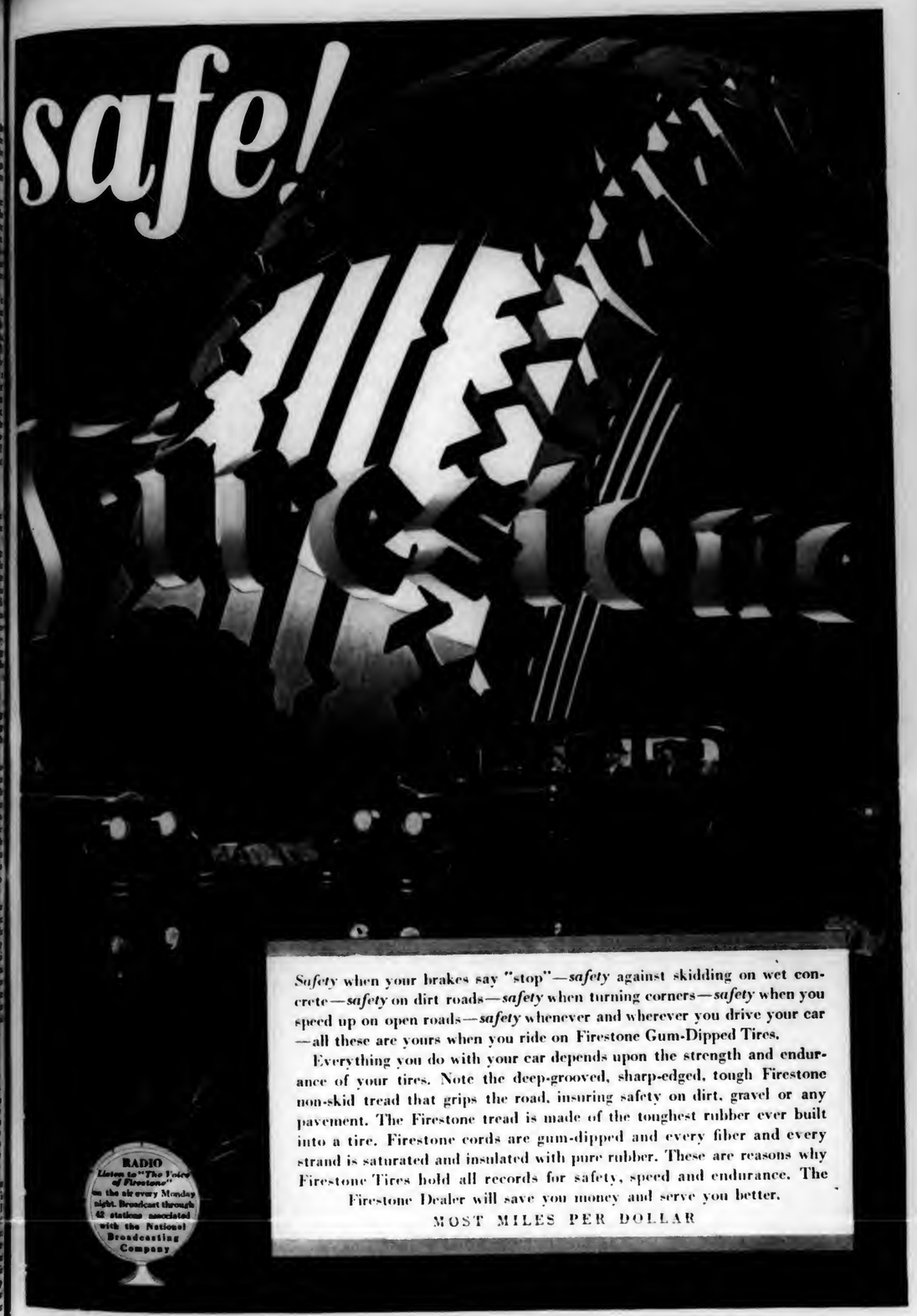
To Prevent Flying

I have been informed that by removing a small cord or tissue in a chicken's wing it is never able to fly to any extent. I do not know how this is done, but if it is a practical way to stop their flying I would be glad to know how this operation should be performed.

D. A. Nelson.

BY removing a piece of the cord on the outer edge of the wing, it is possible to keep fowls from flying. If you will examine the wing of a fowl you will find that there is a white cord near the outer edge. This cord controls the fowl in flying and if it is severed so that it will not grow together again the fowl will never be able to fly properly. This does not mean that the fowl will not be able to use its wing in an effort to climb over fences.

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Poultrymen Gather

BY P. T. SCHARRINGHAUSEN

A



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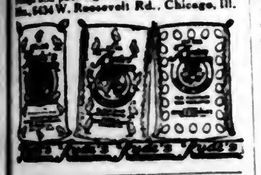
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Artificial Heat

By H. C. KNANDEL



ARTIFICIAL heat for laying fowls is receiving considerable attention by poultry engineers, various manufacturers of poultry equipment and poultrymen. The problem is not new. Years ago heat was used in poultry houses but the idea was discarded as impracticable. Since that time the poultry industry and methods of management have changed to a considerable extent. Some of the great changes are worthy of note.

The mammoth incubator has made its appearance and is now regarded as a fixed piece of equipment on specialized poultry farms. No longer can hens be considered as economical incubators. The loss of eggs required to hatch the cost of feed and increased labor with the resultant loss of egg production have made Old Biddy look out of business standpoint, an unprofitable proposition. The majority of farmers in the East who do not hatch their own chicks probably buy from a hatchery. Incubators great advancement during the past ten decades is significant.

The chick brooder later the long continuous type of brooder and fireballs the battery brooder stand out as great feats for the rearing of young stock in the development of poultry equipment. What a change over the old method of brooding a few chicks under one hen. The new system makes it possible to brood chicks more economically and satisfactorily. A second great step forward in poultry management.

Opinions Change

When artificial light in laying houses was first employed some skeptics believed its practice would result in lower vitality and higher mortality. After due experimentation it has been observed that, when judiciously used artificial illumination is a distinct benefit and is economically sound. Today most commercial poultrymen lengthen the fowls' working day either in the morning, evening or both morning and evening.

It used to be the general opinion that chicks and hens required unlimited range so that they might obtain sufficient exercise. Usually the best place for them to take their "daily grind" was in the vegetable garden or the wife's flower garden. All losses which occurred were charged up to exercise necessary to fowls. Recently it has been observed that chicks can be raised in confinement from hatching time to maturity, that as hens they may be kept in confinement throughout their natural lives, and that as breeders they will produce strong, healthy, vigorous chicks in quantity and quality fully the equal of hens given free range.

All of these developments have had a definite bearing on plans for poultry houses. No longer need fowls be housed in small buildings. The tendency is to construct large buildings perhaps with several floors and capable of housing hundreds and even thousands of fowls under one roof. Such a plan makes it possible to use labor-saving and efficient equipment such as automatic regulated water receptacles, large feed hoppers, litter and feed carriers and artificial heat.

Dampness a Problem

In Pennsylvania, New Jersey, West Virginia and the greater part of Maryland, damp litter during the winter months in the laying pens is of great concern to the farmer and poultryman. The causes of damp litter may be attributed to poor ventilation, great humidity and abrupt changes in temperature.

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Bf. Orps.	3.75	7.25	14.00	67.50
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From Free Range Selected Flocks

	100	500	1,000
S. C. White Leghorns	$6.50	$12.00	$57.50 $110
S.C.B. Rocks & Reds	7.50	14.00	67.50 130
Light Mixed	4.50	8.00	37.50 75
Heavy Mixed	6.00	11.00	52.50 100

100% Prepaid Safe Delivery. Guaranteed.
Fair View Poultry Farm, R. 3, Millerstown, Pa.

BABY CHICKS

From free range flocks of White and Barred Rocks, Reds and S. C. White Leghorns.

8c AND UP

PENNS CREEK HATCHERY, Selins Grove, Pa.

BARRON and WYCKOFF STRAIN

S. C. White Leghorn chicks, 11c each. $100 per 1000. Prepaid and safe delivery guaranteed. Our 19th year. Circular free. $1.00 books order.

THE PENN'A HATCHERY, Liverpool, Pa.

GERIG'S BABY CHICKS

We Import from Barron. Operating special Tom Barron breeding farm. Our 15th year. April chicks, 14c; May 12c. Order now for May; best month for Leghorns. Free catalog.

Gerig's Leghorn Farm, R.R. 6, Auburn, Ind.

CHICKS from leading strain; Postpaid.

	100	500	1,000
S. C. W. Leghorns	$11	$52.50	$100
S. C. Barred Rocks	12	57.50	110
Mixed Chicks	8	40.00	80

L. E. STRAWSER, Box 30, McAllisterville, Pa.

Hampton's Black Leghorn DAY OLD CHICKS

The kind that lay. Circular free.

A. E. HAMPTON, Box F, Pittstown, N. J.

RIVERDALE CHICKS L. Brahmas, Wh. Wyan., Barred and White Rocks, S. & R. C. Reds, W. Leghorns, Anconas, Buff Orpingtons. Write for price list. Riverdale Poultry Farm, Riverdale, N. J.

CHICKS Tancred Strain, W. Leghorn. $11.00 per 100 from our own free range flock. Our breeders are selected for size, type and egg production. Will ship C. O. D. Circular.

Meadow View Poultry Farm, McAllisterville, Pa.

HERBSTER'S QUALITY CHICKS

Barred Rocks and R. I. Reds .... $12.00 per 100
White Leghorns and Mixed ..... 10.00 per 100

Good, strong, livable chicks. Can ship C. O. D.

Herbster's Poultry Farm, Box 171, McClure, Pa.

BABY CHICKS

Produced by veterans in the poultry business. Ohio Accredited Stock. Prize winners at many shows from National down. Developed for many years for high egg production. Free range flocks in best of health. 12 breeds. Catalog free. Low prices quality considered. Don't Miss This Offer

HOLGATE CHICK HATCHERY, Box N, HOLGATE, OHIO

CHICKS with Pep



Produced by veterans in the poultry business. Ohio Accredited Stock. Prize winners at many shows from National down. Developed for many years for high egg production. Free range flocks in best of health. 12 breeds. Catalog free. Low prices quality considered. Don't Miss This Offer

HOLGATE CHICK HATCHERY, Box N, HOLGATE, OHIO

BABY CHICKS

For March and April Delivery. 100% live arrival guaranteed

	50	100	500	1000
White Leghorns	$3.50	$6.50	$32.50	$60
White Leghorns	3.50	6.50	32.50	60
Barred Rocks	4.00	7.50	37.50	70
Rhode Island Reds	4.00	7.50	37.50	70
Silver Laced Wyandottes	4.50	8.50	42.50	80
Light Mixed	3.00	5.00	25.00	45
Heavy Mixed	3.50	6.50	32.50	60

These chicks are hatched from healthy free range stock. Write for Catalogue

THE RICHFIELD HATCHERY, Box 166, Richfield Pa.

STRICKLER'S SUPER-QUALITY CHICKS

High Egg Production Bred. Healthy, Vigorous

Large size Tancred Barron English S. C. White Leghorns. 278 216 egg line matings. No limits used; chicks are extra hardy and vigorous. These quality plus chicks shipped parcel post prepaid, 100% live delivery guaranteed at $10 per 100; $47 per 500; $91 per 1000; $150 per 1,000. 10% books order. Catalog free.

LEONARD F. STRICKLER, Box F, Sheridan, Pa.

ValleyViewChicks

	25	50	100
S. C. W. Leghorns	$3.50	$6.50	$12.00
B. Rocks & R. I. Reds	4.00	7.50	14.00
Heavy Mixed	3.50	6.50	12.00
Light Mixed	2.75	5.00	9.00

500 lots 1c less; 1,000 lots 1c less. Free range 100% live delivery guaranteed.

VALLEY VIEW POULTRY FARM,
N. J. Ehrenzeller, R. 2, McAllisterville, Pa.

ULSH'S Superior CHICKS

White Wyandottes ..... $15.00 per 100
White Rocks ..... 13.00 per 100
Barred Rocks ..... 13.00 per 100

Special prices on 500 and 1,000 lots.

100% live delivery guaranteed.

JAS. E. ULSH, Beaver Springs, Pa.

ZELLER'S EXTRA QUALITY CHICKS

100% Large Type S. C. White Leghorns. Trapnested, production bred matings 11c 100; 477 500; $150 1000. Also quality Rocks and reds 10% books order.

EDGAR A. ZELLER,
2014 Manada St., Harrisburg, Pa.

Chicks, Barron Eng. White Leghorns

Common Leghorns, Barred Rocks, Light & Heavy Mixed, as low as 8c each. 100% guaranteed. "New Circular Free." Prepaid.

TWIN HATCHERY, McAllisterville, Pa.

Baby CHICKS (Smith Hatched) Rocks, Reds, Wyandottes, Leghorns, and all leading breeds. Quality and satisfaction guaranteed. Circular free. Early order discount.

BROOKVILLE HATCHERY, Brookville, Pa.

S. C. W. Leghorns, $11—100. Barred Rocks and Reds, $13—100. White Rocks, $14—100. Mixed $10—100. Mr. Stock is culled for heavy layers. 100 per cent live delivery. Special prices on 500 or 1,000 lots. Circular free.

JACOB NEIMOND, Box 4, McAllisterville, Pa.

QUALITY GUARANTEED

White Leghorns, Barred Rocks, Rhode Island Reds at exceptionally low prices. Write for circular.

MARYSVILLE HATCHERY,
Box 13, Marysville, Ohio

PARKS BRED-TO-LAY ROCKS

Barred Rocks Direct from Laying Pens—$10 per 100. Mixed $10—$95 per 1000. Light Mixed $8—$75 per 1000. Heavy Mixed $9—$85 per 1000. Parcel Post Prepaid. Live Delivery Guaranteed. Catalog Free. Order from this ad.

A. M. Parks & Sons Box E, Altoona, Pa.

that the building be well insulated. As one heat engineer put it, "If only a part of the poultry house can be insulated, make that part the ceiling." The use of some insulating material on the ceiling above which may be placed shavings or straw will help to maintain a more uniform room temperature.

Heat and Ventilation

Fresh air is probably as essential to fowls as to humans. To accomplish this there must be air intakes and air outlets; the latter to take off the foul air. But here is where the shoe pinches. Even with good insulation and ventilation the litter in the house may be damp due to sudden changes in temperature and humidity. If the outside air is saturated with moisture, certainly the air within the poultry house will be damp. It is here that heat may play an important role.

Never should the idea be to keep a warm or hot house for laying hens, but rather a temperature of 40 to 45 degrees Fahrenheit would be most desirable on raw, wintry days. The fowls will remain most comfortable, less fluctuation will occur in egg production, less labor will be required in changing the litter and greater profits will accrue.

It would appear that heating laying houses was the next big step forward in the development of our billion dollar poultry industry. Certainly the problem of artificial heat in houses for laying hens should be carefully and thoroughly investigated.

A Shrub for Every Purpose

(Continued from page 8)

natural tree like an umbrella tree or blue spruce, but all lawn a yard wide. Trees are set at the sides, with shrubbery borders, and the house as the most beautiful part and the center of that picture. No hedge is needed along the roadside.

Besides foundation plantings shrubs add beauty at the entrance. An informal group at each side of the drive breaks the sharp lines, prevents vehicles and pedestrians from cutting corners, and in all accentuates and beautifies the approach. Then along the border of the yard they mark division lines, screen fences or undesirable views and form a background for flower plantings. They are best set not in straight lines, but in curving, irregular, informal groups, with variation in size and form, just as if Mother Nature herself scattered seeds or cuttings there with clumps or masses of particular types. Formality depreciates beauty.

Shrubs have other special uses too. They can hide a barnyard or small building, if something like bush honeysuckle, high bush cranberry, lilac or mock orange is planted.

The old watering trough and pump may be concealed with a few plantings. A few low growing things at junctions or curves in the walks will add beauty and keep folks from cutting short the corners.

The sooner we can get shrubs planted now the more chance they have to become established before warm weather. Make holes large, put in the best soil you can get about the roots, add some well-rotted manure (not fresh) and just a little complete, high-grade fertilizer, and don't forget to keep all plantings well watered the first year. Keep roots in water while you are planting, so that they do not become dried out. Buy from a nursery close home, and if possible we find it best to drive to the nursery, get the plants and transplant them as soon as possible. A safe planting guide is about four feet apart for the tall growing sorts and three feet for the others.

¶ More than 550,000 dog license tags have been sent to the county treasurers throughout the Commonwealth and are now available to dog owners, according to the Pennsylvania Bureau of Animal Industry.



A NEW ROOF WITH A 10 YEAR GUARANTEE

BENO NO BOBS—the coating and tools you need ... cut, nailing a cost. Inexpensive ... able. Covers a roof like a rubber blanket. Try before you buy. Make ... roof like new ... today for details.

Agents Wanted

Liquid Asbestos ROOF COATING



Just Paint it on the Roof

—Before checking ... Only a small paint brush ... a can of "Black Leaf 40" ... needed. While chickens roost, fumes are given off ... and penetrate the feathers; kills ... dividual handling of birds. And your ...

Tobacco By-Products & Chemical Corp., Inc., Louisville, Ky.

"Black Leaf 40" Kills Poultry Lice

Metal Brooder Hover

150 Chick size ... Larger sizes at corresponding LOW prices. Equipped with all latest Practical Features. GUARANTEE ... Baby Chicks Need Heat ... SPECIAL PRICES and ... let FREE.

The Thomsen & Armstrong Co., Box 8 ... Buckeye Corn Cribs—Coffee Lamb Sheds



White Diarrhea

... promoted, or cured, by using Bourbon Poultry Remedy ... in the drinking water during ... first 10 days. Chicks grow ... develop ... Bourbon Remedy Co., Box 2, Lexington, Ky.

Navy Brand Concentrated Buttermilk

From Tuberculin Tested Cows

28 per cent milk solids, 64 per cent lactose, as custard with no fat eight ingredients ... low-priced and economical ... danger from ... Increases egg production and promotes ... hatchability ... food for chicks, broilers and ... bone ... feed direct from the factory in ... about 485 lbs. Write for prices

TITUSVILLE DAIRY PRODUCTS CO.
Titusville, Pa.

LANCASTER QUALITY CHICKS



Our Chicks come from flocks culled for Egg Production and Standard Quality by graduates trained at the Ohio State University. OUR CATALOG tells all about chicks from cover to cover. Write for it.

Lancaster Farms Hatchery, R 33, Lancaster, Pa.

COCOLAMUS HUSKY CHICKS

Tancred Strain S. C. White Leghorns ... Our Tan Strain Brown Leghorns ... Red Rocks, S. C. Rhode Island Reds ... Mixed or Broilers ... Special prices on 500 and 1,000 lots all leading ... free range flocks. Free circular and price list. 100% live delivery guaranteed. Parcel Post prepaid. Write us before ordering elsewhere.

COCOLAMUS POULTRY FARM, Concordville, Pa.

BABY CHICKS

100% arrival guaranteed.

	25	50	100	500
White Leghorns	$2.75	$5.25	$10.00	$47.50
Bd. Rocks and Reds	3.25	6.25	12.00	57.50
Barred Rocks	3.25	6.25	12.00	57.50
Mixed or Broilers	2.50	4.75	9.00	42.50

Special prices on 500 and 1,000 lots. Parcel Post prepaid. Live delivery guaranteed. Free catalog.

JOHN SHADEL HATCHERY
Route 2. McAllisterville, Pa.

We Need New Laid

White and Brown Eggs

direct from the farm. Top net value day of delivery. Our 33 year record is our guarantee to you.

ENYARD & GODLEY, Inc.
171 Ontario St., New York, N. Y.
Established 1895

Look! DUCKLINGS

Postpaid. Live arrival guaranteed. White Pekins, Indian Runners, Buff and Buff Orpington ducklings. Ducklings make the most profitable poultry known. $30 a 100. Catalog free.

Nabob Poultry Farms, Dept. 52, Gambier, Ohio

FAIRMONT'S BETTER PURE FLAKE BUTTERMILK

EASTERN DISTRIBUTORS CARLOAD LOTS
ALWAYS FRESH. WE QUOTE DELIVERED
OMWARE BROS. GREENCASTLE, PA.

Chicks from Blood-Tested Stock

Pennsylvania Superbred Flocks. Shipped C. O. D. Free Circular.

Sunnybrook Poultry Farm, New Berlin, Pa.

EGGS, Etc.—Small consignments from producers in your territory bring very attractive prices. Now. Prompt returns given. Write Dan or Bradstreet. This is your case. ZENITH BUTTER & EGG CO., 170 Duane Street, New York City.

BROODER COAL

CLEAN CHESTNUT ANTHRACITE
ALEX BLACK COAL CO.
3126 Liberty Ave., Pittsburgh, Pa.

Read through this paper carefully. You will find advertisements covering almost every human need. They are filled with hints for the household, hints for health, hints for clothing. Also large numbers of seed, poultry, stock food and implement advertisements. When answering them, mention Pennsylvania Farmer. Pennsylvania Farmer.

Dec. 23, 1929

	100	500	1000
...ite Arrival	$12	$57.50	$110
...ite W. Leg.	12	57.50	110
...Brown Leghorns	14	67.50	130
...arred Rocks	14	67.50	130
...R. I. Reds	14	67.50	130
...inorcas	9	42.50	80
...icks			

...ens are selected for size, type and egg ...duction. THE HEN THAT LAYS IS THE HEN THAT PAYS. Write for ...ormation.

JUNIATA POULTRY FARM
Box R, Richfield, Pa.

CHICKS YEL...

...dvertised chicks. Every breeding bird ...through healthy and well bred flocks ...ed for high production.

...C. O. D. $7.00 books order. Pay the ...for your chicks when they are delivered. ...for catalog and price list on request. ...ity guaranteed. Quality high. Write today.

...TON HATCHERY, Box H, Bluffton, O.

BARRED ROCK CHICKS

...Northern Breeding Farm and Hatchery ...exclusively in the production of ...

BARRED PLYMOUTH ROCKS
...POULTRY FARM. GEORGETOWN, DEL.

...OD BLUFF CHICKS. JUST REAL STAND... QUALITY. Thousands of customers ... Order your chicks from a satisfied ... customer in your neighborhood. Join the ... and reliable plant in your section ... and advertising. My ... prices cuts down expenses and ... poultry raising more profitable. Increased ... and more eggs the result. Hundreds of ... and R. C. WHITE and BROWN ... Chicks. All ... 200 to 299 Egg ... prices. Chicks ... or more, all per ... Live Delivery Guaranteed. ... Free and 100% Live Delivery Guaranteed.

HOUSEWORTH'S LEGHORN FARMS
Port Trevorton, Penn'a

Baby Chicks from High Egg Laying Flocks

...1 years reliability. Satisfied ...tomers our specialty. Prices ...sonable. Write for catalog and ...

BUCYRUS HATCHERY CO.
Box 415 Bucyrus, Ohio

HILL SIDE CHICKS

Will Ship C. O. D.

March and April Chicks as Low as 8c.

S. C. R. I. OWENS STRAIN REDS
S. C. BARRED and WHITE ROCKS
MIXED—LIGHT MIXED—ALL BREEDS and ...
100% Delivery. P. O. Paid. ... Circular free.

T. A. EHRENZELLER, Prop.
Box 11, McAllisterville, Pa.

Penn'a State "Supervised" CHICKS

Flocks inspected by officials from the Penna. Dept. of Agri. Our 19th year—established 1910. Get our low prices on Reds, Rocks, Leghorns and Minorcas. Monster ... free. Write today.

THE KEYSTONE HATCHERY,
The Old Reliable Plant). Richfield, Pa.

BARRON LEGHORN CHICKS

From Large Type Barron English S. C. White Leghorns. Have weight up to 7 pounds. Extra Quality Chicks from free range selected stock. Can ship same day order is received. Prices as low as $10 per 100, $47 per 500, $150 per 1000. 10% books order. Live Arrival Guaranteed. Catalog free.

EDGAR L. CLAUSER, Box N, Kleinfeltersville, Pa.

Clear Spring Quality Chicks

	100	500	1000
S. C. White Leghorns	$11.00	$52.50	$100
Barred and White Leghorns	12.00	57.50	110
Red Rocks and R. I. Reds	14.00	67.50	130
Light Mixed	9.00	42.50	80
Heavy Mixed	10.00	Heavy Mixed	$12.00

For March and April 100% live delivery. Postpaid. Send for circular free, giving full details of all breeds.

CLEAR SPRING HATCHERY,
P. S. Leidy, Prop. Box A, McAllisterville, Pa.

PENN'A CHICKS

have vim and vigor—hatched by men with 18 years experience, from culled flocks. Prepaid and 100 per cent guaranteed. S. C. White and Brown Leghorns, 11c. Rocks, 12c. Reds and Minorcas, 14c. Mixed Broilers, 9c each. $80 per 1 000. Circular free. Our stock, Service after Delivery.

THE PENN'A HATCHERY, Liverpool, Pa.

BABY CHICKS

	100	500	1000
Tancred Str. Wh. Leghorns	$12	per 100	
White Leghorns	11	per 100	
Barred Rocks	14	per 100	
S. C. Reds	14	per 100	
Heavy Mixed	12	per 100	
Light Mixed	9	per 100	

5% less for 500 lots. 1c less in 1,000 lots. 2% less for 2,000 lots. 50 chicks add 1c. Full count. 100% live arrival guaranteed. Parcel Post prepaid. Bank references. Order direct from this ad or write for free circular.

CHERRY HILL POULTRY FARM,
Wm. Waco, Prop. McAllisterville, Pa.

LOOK—QUALITY CHICKS

This quality is bred in the chick through rigid culling and breeding. Guaranteed satisfaction. 12 varieties. Light breeds, 12c. Heavies, 14c. White Wyandottes, 15c. Send for our instructive catalogue.

MILTON POULTRY FARM,
Mahaney, Dept. 7, Milton, Pa.

WYCKOFF STRAIN WHITE LEGHORNS CHIX

$12.00 per 100 $57.50, 500 $110.00, 1,000

100% prepaid safe delivery guaranteed

T. H. Shaw Poultry Farm, Box A, Richfield, Pa.

HILLPOT Quality Chicks

Leghorns-Rocks-Reds-Wyandottes

Have This Important Book Before You When You Order Chicks This Year

This beautiful free book should be in the hands of every man and woman interested in making money with poultry which is one of the most fascinating means of increasing your income or of achieving financial independence. The book, which is thickly illustrated in four colors, describes my breeds fully tells of my careful methods of mating and rearing, discusses most profitable sizes for flocks, contains house plans, construction details and outdoor and easily-followed Feeding and Rearing Charts. It is a book that you will find full of suggestions and inspirations and which you will want to keep handy for frequent reference. Some of my customers claim that they owe to it their first steps toward the comfort and peace of mind that come with an assured income.

W. F. HILLPOT, Dept. 128, FRENCHTOWN, NEW JERSEY

YOU NEED THIS CATALOG!



Big Poultry Manual Given Free to All Buyers of Chicks

Write for details. Every chick buyer should know about Hoytville chicks. Our beautiful illustrated catalog tells all about them. Your copy sent on request.

Guaranteed Chicks

OHIO ACCREDITED CHICKS — ALSO BABY DUCKS

Every bird in our breeding flock is handled and a record kept. Our flocks are inspected by experts trained and authorized by Ohio Poultry Improvement Association. Find out about our guarantee plan. 16 breeds.

Prices Cut. It is to your interest to ... Write today.

HOYTVILLE ACCREDITED HATCHERY, 117 MAIN ST., HOYTVILLE, OHIO



NATIONAL "SUPER-BRED" CHICKS

500,000 Super-Quality Chicks for 1929

INSURE NEXT WINTER'S POULTRY PROFITS BY ORDERING NATIONAL "SUPER-BRED" CHICKS NOW

We breed and hatch 13 of the leading Breeds. Send for our FREE illustrated catalog with prices on our utility and special mated chicks. All chicks sent prepaid. We guarantee 100% delivery of good lively chicks. Member of International Baby Chick Association. You will save money by writing us now.

NATIONAL CHICK FARMS, Box 901, MIFFLINTOWN, PENNA.

BUY EARLE CHICKS . . .

and you have made the first step in "making poultry pay." These pure-bred quality chicks come to you from the best of parent stock, bred to lay and guaranteed to please. We offer the following popular breeds and best strains at the Lowest prices, considering our quality assurance:

	100	500	1,000
Leghorns and Anconas	$13.00	$62.00	$120.00
Barred and White Rocks	14.00	68.00	130.00
R. Reds (rose and Single Comb)	20.00		
Jersey Black Giants	14.00	68.00	130.00

References: Richland Nat'l Bank. Book today on chicks that pay. You may order direct from this Ad or with mail literature. We ship C.O.D. or upon receipt of 10% will send P. Post prepaid with 100% live delivery guarantee.

EARLE F. LAYBER, Prop., Richland Poultry Farm & Hatchery, P. O. Box 1, Richland, Pa.

HUBER'S RELIABLE CHICKS

Make Extra Poultry Profits with Huber's Reliable Chicks

When we say RELIABLE—we mean RELIABLE in every way. Breeding stock of highest quality of 19 years of careful development. Special attention paid to health of flocks and records kept. CATALOG FREE—CHICKS SENT C. O. D. IF YOU WISH.

Write for details—get our illustrated catalog which tells all the story. Our prices reasonable. Send Huber's Chicks a trial order—worth many dollars given free with each order of $10.00 or above. Big discount for early orders.

HUBER'S RELIABLE HATCHERY, W. Main St., FOSTORIA, OHIO

CLIMB ABOARD OUR CHICK SPECIAL!

SATISFACTORY CHICKS

	25	50	100	500	1000
S. C. Wh. Br., Bf. and Bl. Leghorns, Shaver's Anconas	$3.00	$5.00	$10	$47.50	$95
Bar., Wh. and Bf. Rocks, Bf. Orp., Reds, Bl. Minorcas	3.25	6.00	11	52.50	105
Barron Wh. Leghorns, Wh. Wyandottes, Bf. Minorcas	3.75	6.50	12	57.50	115
Fx. Qual Wh. Wyd., Reds, Bar. Wyckoff Wh. Leg., Wh. Min.	4.00	7.50	14	67.50	130
Heavy Mixed 50, $3.50; 100, $6.50; 500, $32.50; 1,000, $60.					
Light Mixed 50, $3.00; 100, $5.50; 500, $27.50; 1,000, $50.					

Black Giants 100, $20. Wh. Pekin Ducklings 25c each. 100% Live Delivery Guaranteed. Bank References. Catalog Free. Order Now.

The NEW WASHINGTON HATCHERY CO.
BOX D. NEW WASHINGTON, OHIO

5 Lb. LEGHORNS

The old reliable heavyweight stock. Produced high up on Pennsylvania's healthy mountain top. Get your chicks from certified record strains above 300 eggs. R. O. P. Hollywood, Tancred, Barron Matings. Hatch weekly pure white eggs up to 24 ounces per dozen. Beautiful Color Plate Leghorn Catalogue Free.

FARM SERVICE
Route 5-16 TYRONE, PA.

Lineaville Gold Medal Chicks still on top, after winning State Gold Medal they were awarded cash for others. You can win with Our Sturdy Chicks.



The Old Reliable LINEVILLE HATCHERY Lineville, Pa.

Write today for free booklet and prices, also free book on brooding.

CHERRY HILL CHICKS

	100
S. C. W. Leghorn—Wyckoff Strain	$10.00
S. C. Everlay Brown Leghorns	12.00
Barred Rocks—Wm. Race's Select	14.00
S. C. Rhode Island Reds	13.00
Mixed or Broiler Chicks	9.00

5c less in 500 lots. 1c less in 1,000 lots. 25 chicks add 2c. 50 chicks add 1c. Full count. 100% live arrival guaranteed. Parcel Post prepaid. Bank references. Order direct from this ad or write for free circular.

CHERRY HILL POULTRY FARM,
Wm. Race, Prop. McAllisterville, Pa.

BABY CHICKS

	50	100	500	1,000
White Leghorns	$6.50	$12.00	$57.50	$110.00
S. C. B. Reds	7.50	14.00	67.50	130.00
Barred Rocks	7.50	14.00	67.50	130.00
White Rocks	8.50	16.00	77.50	
Buff Orpingtons	8.50	16.00	77.50	
Heavy Mixed	6.00	12.00	57.50	110.00

Our White Leghorns are from Tancred and Barron stock. All our chicks are from free range flocks. We sell either cash with order or C.O.D. and guarantee 100% live delivery.

MONROE HATCHERY, Box 10, Richfield, Pa.

QUALITY S. C. Wh. Leghorns $11, 100; S. C. CHICKS Barred Rocks, $13. Light Mixed $9. Heavy $11. Special prices on larger lots. 100% live delivery. Postpaid. New circular free.

EDGAR C. LEISTER, McAllisterville, Pa.

BABY CHICKS

100% Live Delivery

	Postage Prepaid		
	50	100	500
Wh. and Br. Leghorns	$4.00	$11.00	$52.50
Buff and Bl. Leghorns	6.00	11.00	52.50
Anconas	5.00	9.00	42.50
Barred Rocks	6.50	12.50	60.00
Wh. and Buff Rocks	6.50	12.50	60.00
S. C. and R. C. Reds	6.50	12.50	60.00
S. C. Bl. Minorcas	6.50	12.50	60.00
Wh. and S. L. Wyandottes	7.50	14.00	67.50
Buff Orpingtons	7.50	14.00	67.50

All absolutely first-class pure-bred stock from culled flocks. Prompt shipments.

JAMES G. KREJCI,
9507 Mooch Ave., Cleveland, Ohio

BABY CHICKS

FROM HEAVY LAYING FREE RANGE FLOCKS

	50	100	500	1,000
Wyck & Tancred Strn.	$6.50	$12.00	$57.50	$110.00
S. C. W. Leghorns	6.50	12.00	57.50	110.00
S. C. Brown Leghorns	6.50	12.00	57.50	110.00
S. C. Rocks & Reds	7.50	14.00	67.50	130
S. C. Buff Orpingtons	7.50	14.00	67.50	130
Assorted Chicks	5.00	9.00	42.50	80

100% prepaid safe delivery guaranteed. Order from this ad or write for circular.

J. N. NACE POULTRY FARM Box 8, Richfield, Pa.

TANCRED WHITE LEGHORNS 12c each; Wyckoff White Leghorns $9.00. 100 Anconas $11.00—100; R. I. Reds $15.00—100; R. Rocks $15.00—100; Minorcas $15.00 100. Heavy Mixed $11.00—100. Light Mixed $8.00—100. Sixteenth season.

Ezinga Hatchery, Port Trevorton, Pa.



How to Succeed with Poultry

This Free Book

will show you how you can

make Poultry *pay BIG Money*

THINK! You can make your poultry pay you a profit as big as anything on your farm today. You can make it pay you a steady income all the year 'round. Our big free book "How to Succeed with Poultry" will show you the way. It will show you how farmers everywhere are adding hundreds and hundreds of dollars in extra poultry profits to their farm income.

BIG PROFIT in Hatchery Chicks

And then it will show you how *hatchery chicks* make poultry raising easier, more economical, and vastly more profitable. Learn the advantages of getting hatchery chicks all of the same age, same breed, and all at one time. See how they eliminate the worry, bother, and uncertainty of hatching your own chicks; how they develop a bigger, better flock that will assure you a greater profit. Get this big new book and read all the reasons why.

Mail Coupon Now Just sign the coupon and we'll send your copy by return mail. It is up-to-date, interesting, and full of information every poultry raiser should have. It has nothing to sell. It asks nothing that will place you under obligation in any way. And remember—it's free. It's yours for the asking. Mail the coupon now.

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FOR GREATER PROFITS Hatchery Chicks

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	25	50	100
S. C. Reds	$4.00	$7.50	$14.00
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White Leghorns	3.50	6.50	12.00
Light Mixed	2.75	5.00	9.00

500 lots 1c less, 1,000 1c less. Free Range. 100% Delivery.

THE YOUNG PEOPLE

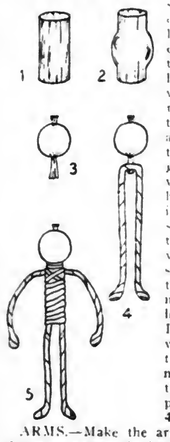
Delightful Doll Favors

THESE little dolls are among the newest novelties for party favors. The dolls may be made in all kinds of designs—the way they are dressed makes the difference. The foundations, or body sections are practically the same for any type.

Materials required: Crepe paper the desired color for dress. White crepe paper. One spool of white tie wire. One piece of wire known as No. 7 or a 30-inch piece of any other firm, covered wire, that is not too heavy. Paste and white cotton.

HEAD.—Cut a piece of white crepe paper 2½ inches square. Paste into tube shape with the grain of the crepe (Fig. 1). When thoroughly dry, stuff the center with cotton (Fig. 2) and tie together tightly top and bottom with spool wire. Cut off the surplus paper at the top, but leave it at the bottom (Fig. 3).

LEGS.—Cut a piece of No. 7 wire 18 inches long. Bend back each end one-half inch, forming loops, which will be the feet. Wrap with a strip of crepe paper, cut across the grain, three-fourths inch wide. Put a little paste on the end of the wire, then place the strip of paper on it diagonally. Turn the end down over the wire and, holding the wire with the right hand, twirl it around and around. At the same time guide the paper with the left hand, slanting it down and stretching it so that it will wrap the wire smoothly. Fasten the end neatly with a bit of paste. Double the wrapped wire through the middle and turn the feet up into position (Fig. 4).



ARMS.—Make the arms in exactly the same way as the legs, using a ten-inch piece of wire.

BODY.—Cut a piece of crepe paper 3½ inches by 5 inches for padding. Fold with the grain to a width of one-half inch, then double through the middle. Place this padding between the forked leg wire, then place the head at the top of the wire and padding and fasten all together with tie wire.

Place the center of the arm wire at the neck crosswise and fasten in place with tie wire, winding the wire around the body, over and under the arms and around the neck to hold all together securely. Now wrap the body with a strip of crepe paper to cover the wire and make the body the required size. Bend the arms into shape and paint the face with India ink. Tint the cheeks with rouge or crayon. See Fig. 5.

DRESS.—To dress the doll cut and gather a strip of white crepe paper the required length for the petticoat. Fasten around the waist with a bit of tie wire. Make the dress skirt in the same way, but a little fuller, then wrap the body smoothly with a strip of crepe paper the color of the skirt, wrapping over the top of the skirt to make a neat finish. Roll several balls of white cotton and paste them to the bottom of the skirt. For the neckpiece, roll the cotton softly around the neck and form a jacket effect as shown by extending it around the waist.

HAT.—Cut a piece of crepe paper long enough to go around the head and six inches wide, the grain of the crepe the six-inch way. Double through the center across the grain and paste the short ends together. Gather at the raw edges and fasten tightly with spool wire. Paste to the doll's head and adjust by pulling into a "tam" shape. Finish with a soft ball of cotton. The doll is now ready to be attached to the top of a box or to be used in any desired way.



This smart little lass is made of crepe paper and wire with a bit of cotton for her "furs"

A booklet on how to make "Party Favors and Table Decorations" including instructions on dolls, fancy folded napkins, flowers and general instruction on crepe paper will be sent to any address for 10c. Send your order to Party Editor, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Third Prize Letter

IF I had five hundred dollars I would buy myself a pure-bred Holstein cow, for which I would not pay less than one hundred and fifty dollars. I would build a small barn for the cow, which I would make of concrete blocks. The barn would have a loft above the stable, in which I would store feed for my cow. The reason for making the barn of concrete is because it would be easier to clean and would be more sanitary. The barn would cost approximately one hundred and seventy-five dollars. To supply the cow with plenty of clean fresh water I would have to drive a pump and make a cement trough. This would cost about fifteen dollars. I would buy an acre of ground for a pasture for my cow to graze on. The land would cost seventy-five dollars. A fence around the pasture would cost about forty dollars. I would have to apply a ton of lime to the ground because the soil is sour. Lime sweetens sour soil and compacts loose soil. The lime would cost ten dollars.

In the spring I would prepare the soil for planting alfalfa. I would sow fifteen to twenty pounds to the acre. Alfalfa makes a permanent pasture and will stay green until late in the fall. It contains more protein than any other roughage feed and is the best feed for cows. I would feed her cow chow to keep up her milk flow. A truck would come and get my milk every morning and carry it to the cooling station.

I would put the rest of the five hundred dollars on the bank which would go to help buy the cow's feed and for other expenditures. I am sixteen years old and am a sophomore in high school. I live on a sixty acre farm situated in the lower part of Delaware.

Russell Matthews.

Sussex county, Del.

Naming the States

Some of our states are known by other names. Can you add to this list?

Pine Tree State—Maine.
Empire—New York.
Green Mountain—Vermont.
Keystone—Pennsylvania.
Buckeye—Ohio.
Wolverine—Michigan.
Blue Hen's Chicken—Delaware.
Peninsula—Florida.
Garden—New Jersey.
Bayou—Mississippi.
Golden—California.
North Star—Minnesota.
Old Dominion—Virginia.
Bay—Massachusetts.
Little Rhody—Rhode Island.
Granite—New Hampshire.
Land of Steady Habits—Connecticut.
Old North—North Carolina.
Palmetto—South Carolina.
Corn Cracker—Kentucky.
Hoosier—Indiana.
Badger—Wisconsin.
Panhandle—West Virginia.



WINNERS IN CLUB SHOW

The first calf clubs following the tuberculin test, in Allegheny county, Pa., were organized last spring at Elizabeth, the State Bank of Elizabeth financing them. The calves were bought and registered under the names of the club members. Two clubs were formed, a Holstein club with eleven members and a Guernsey club with five members.

The calves were displayed at the fall round-up, when prizes totaling $29.50, donated by the B. & O. Railroad, went to the first five places as follows: 1, Harry Hofmaster; 2, Donald Caldwell; 3, Rachael Gillingham; 4, Robert McClure; 5, Helen McClure.

The members are shown above in the order in which their calves were placed by the judge, except that Rachael and Robert have changed places.

For You to Guess

The answers to the following are [illegible] Nos. 7 is primrose. Can you name the others?

1. My first wears my second on her head—
2. A Roman numeral—
3. The Fool before my English cousin—
4. A young man's farewell to his young heart—
5. Her reply to him—
6. My first is the name of a bird; my second is worn by cavalrymen—
7. A very precise lady—
8. A tattered songster—
9. The color of a horse—
10. What a father says to his son [illegible] in the morning.

Conundrums

1. Why is the elephant an unwelcome caller?
2. Why is the alligator the most disagreeable of animals?
3. What is the queerest animal there is?
4. Which is bigger, Mr. Bigger, or Mr. Bigger's Baby?
5. What makes people bald-headed?
6. Why is a baseball umpire like a fish?
7. Why is a train of cars like a bottle?
8. What sort of that has four legs and [illegible] the road?

BURIED JEWELS

One is a coin; one and the first is "up." [illegible] tell me what you're doing
Of [illegible] stake, the race is run
As [illegible] horses jump,
[illegible] Nettie just one lump.
Now [illegible] pretty pony down.
Is [illegible] tame—no, it's brown.
Eyes [illegible] like flashing steel,
And [illegible] like an eel.
But stay glad Maggie hire a blank?
"Oscar B." uncle answered back.
Then said: "I am on duty, sir,
Let Mary or Alfredgo for her."
Watch for the answers next week.

For the Little Folks



TELL US ABOUT HIM

Three prizes will be given for the best stories written about this little dog. You may also say it in a poem if you like. Send your letter to Little Folks' Corner, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Drawn by Eleanor Boyle, Allegheny County, Pa.

A Narrow Escape

(Continued from last week.)

Mother always felt safe [illegible] Virginia if Dan was with her. One [illegible] when she was quite small, she had run away and her mother never forgot the fright it gave her. You see [illegible] the whole family trusted the dog and looked on him as almost one of them.

"Whatever ails him? Oh, what's the matter with my Danne?" wailed the poor child in a panic. "He came at me with his mouth wide open."

Her mother had been looking out the window and saw that the [illegible] was running out of his mouth. [illegible] as it used to do when he was all [illegible] with his drooling.

"Virginia, I believe he's mad."

The dog made motions as though to bite his leg and she had heard that dogs bit themselves when afflicted with rabies.

"Oh, I wish I could shoot him. He might bite the others when they come home."

They got the gun, but mother was afraid to shoot it.

(To be continued.)

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1.—For the first time in history, a woman will act as secretary to the Vice-President of the United States. Miss Lola Wilhams, a small, pretty, blonde young lady who has been secretary to Senator Charles Curtis for the past five years, and has served him so well and faithfully that she is to continue in her present capacity.

2.—The Agecroft Manor, ancient English Manor house which was moved from England to Virginia, has just been left to the city of Richmond together with a $1,000,000 endowment fund for the purchase of fine paintings and statuary. The house was the property of T. C. Williams, who left the structure to the city at the death of Mrs. Williams.

The old estate is one of a very few English manor houses transported to the United States before the [illegible] of a law prohibiting English homes to be moved bodily to the United States or elsewhere out of England.

3.—Photo shows the Golden Arrow—resembling some three-eyed monster from another planet—in which Major Seagrave last week set a new world's speed record of 231 miles an hour at Daytona Beach, Florida. Note on top of the hood the "sight" which he used in "aiming" the powerful car.

4.—"Pet Wash Laundry—10c a Pound!" Photo shows hanging the pups up to dry after they have been rubbed, scrubbed and tubbed in the new Dog and Cat Laundry, Inc., which has been established by Richard Goodwin of Los Angeles, Cal. The pretty assistant who is hanging out the pet wash is May Betteridge.

5.—The remains of what is believed to have been the earliest bakery established by any civilized people were found recently by the Field Museum-Oxford University Joint Expedition to Mesopotamia on the site of the ancient city of Jemdet Nasr. The bakery consists of a group of clay ovens, estimated to have been built about 4000 B. C., according to Henry Field, assistant curator of physical anthropology at Field Museum of Natural History.

The ovens consist of large clay mounds, hollowed out inside, and with holes through the top to permit the passage of heat. At their bases are fire holes large enough for a man to crawl into. Hugh piles of cinders of ancient fires were found inside.

6.—Rainier National Park, Wash. Photo shows a striking view of majestic Mount Rainier, the summit of which is six miles away from the party of nature-coasters in the foreground. They slide down the slopes without a sled, wearing reinforced breeches instead.

TIGHT BINDING TEXT CUT OFF

Pickett's Gap

By HOMER GREENE

Copyright, 1902, The Perry Mason Company
Originally Published in The Youth's Companion

ABNER PICKETT shook his forefinger accusingly. "To all intents and purposes he lied to me, and his corporation has attempted to rob me. Do you think sir," demanded the old man, rising from his chair, with the crimson spreading over his neck and face, "do you think I would sell to any person or to any company, for any money in this world, the right to desecrate the graves of my dead—the right to disturb bodies that were so dear to me in life that I would have given all I possessed to save them from the slightest hurt? Do you? I say, do you?"

Marshall was getting more than he had bargained for; but he was too good a lawyer to permit himself to lose his grip.

"Be seated, Mr. Pickett," he said, firmly, "and keep cool. Now don't you know that, regardless of your agreement to sell the right of way, a railroad company has the right, under the laws of this State, on complying with certain conditions, to build its railroad on any land belonging to any person?"

The old man dropped back into his chair. "No," he replied, "I don't. I ain't a lawyer, but I don't believe that's the law. They say law is founded on justice, and it ain't just, and it ain't human for any one to have the right to disturb my dead in their graves against my will. God's acre in this land and in this age is His Holy of Holies. He sends His rain an' dew an' frost to fall more gently on the homes of the dead than on the homes of the livin'; and it's the duty and ought to be the joy of any man to protect that sacred place from desecration."

Through the hush that had fallen on the great crowd in the room the old man's voice rang pathetically clear. On the faces of the spectators there were no longer any smiles. The whole atmosphere of the court had changed to one of solemn earnestness. Even the examining lawyer saw that it would not be fitting or profitable to follow out that line of questioning. When he again spoke it was in a quieter voice, and on another branch of the subject.

"Mr. Pickett," he said, "when did you first see this line of stakes?"

"Not till the next mornin' after they were set."

"Did you follow the line?"

"I did."

"Did it run through your graveyard at that time?"

"No, sir, it went across the brook and around the graveyard, in as handsome a curve as you ever saw."

Charlie Pickett, sitting back among the spectators, his heart throbbing with pity and pride as the old man's examination progressed, heard this last answer and flushed to his finger-tips.

"Were there no stakes in the graveyard?"

"Not one. I saw the place, though, where one had been set and pulled out. I pulled another out of the same place myself four days later and flung it into the brook."

Marshall paid little heed to this last answer although it was in the nature of a direct challenge. A new thought appeared to have struck him. He gazed at the ceiling contemplatively for a full minute before proceeding with his examination.

"By the way," he said, "how early in the morning was it that you saw this line of stakes?"

"Just about sunrise."

"Where had you come from?"

"From the house."

"Had you been long up?"

"Just got up."

"Did you go alone to look at the line?"

"Yes—no; my grandson Dannie went with me."

"Where did you first see him that morning?"

"There at the house."

"Indoors or outside?"

"Why, I believe he was coming up the path."

"Do you know where he had been when you first saw him coming up the path?"

THE old man waited a moment before answering. Some vague apprehension of trouble about to fall upon Dannie seemed to be taking possession of his mind. "Why, no," he replied, slowly, "I can't just say where he had been."

"Was this the same boy who heard you make that declaration concerning the stakes the night before?"

"Yes—why, yes—the same boy."

He spoke as if he were dazed. His voice dropped almost to a whisper. He gazed out over the heads of the people in the court-room with eyes that were looking into the past. He saw Dannie as he appeared that morning—in his weariness, his nervous excitement—as they stood together in the dew-wet grass of the graveyard. The old man's eyes dropped, his face paled, his head sank lower and still lower, till his chin rested on his breast.

People in the court-room who looked on him knew that something had happened to him; but whether it was physical illness or mental distress they could not tell.

Then the stillness was broken by a slight movement among the rear benches; swift foot-steps were heard in the aisle; a boy came hurrying down to the bar of the court. His face was drawn and pale with excitement and fatigue. His eyes, from which shone both distress and determination, were fixed straight ahead of him. As he went, he held out his hands toward the old man on the witness-stand.

"Grandpap! O grandpap, I did it! I pulled up the stakes! I threw 'em into the brook! I did it in the night—in the moonlight! O grandpap!"

He crossed the bar, wound his way among chairs and tables, reached the witness-box, and stood there leaning against it, and looking up beseechingly into his grandfather's face.

For one moment Abner Pickett sat motionless, as if he were stunned, looking with staring eyes at the boy standing below him. Then he reached his long arms out over the rail and wound them about his grandson's shoulders, and then he hid his rugged face in the soft curls that clustered on the boy's neck.

The moment of silence in the court-room was followed by a confused murmur of voices. People were moving about in their seats and craning their necks, anxious to see. Charlie Pickett was on his feet, his cheeks flushed, his breast heaving with emotion, his eyes fixed on the two figures at the witness-stand.

When Abner Pickett lifted his face from Dannie's neck his eyes were filled with tears.

"Where did you come from, Dannie?" he asked, and Dannie answered, "I came from home, grandpap."

"Not today?"

"Yes, today."

"But, Dannie, how—how—"

"I HAD to, grandpap. I had to tell you. I had to make it right as near as I could, as quick as I could."

Again the old man, leaning far over the rail, drew the boy to his breast. For the moment Marshall was at a loss how to act. He did not quite know what was coming next. Then his experience and his natural shrewdness came to his rescue, and he rose to the situation.

"That will do, Mr. Pickett," he said. "Dannie, you may take the witness-stand."

The next minute Dannie was in the place vacated by his grandfather, and the old man, refusing to go far away, had dropped into a chair by the defendant's table, inside the bar.

Marshall began his questions with gentle emphasis.

"Your name is Dannie Pickett?"

"Yes, sir."

"And you are a grandson of the witness last on the stand?"

"Yes, sir."

"And is it true that you pulled out the stakes set by the engineers of The Delaware Valley & Eastern Railroad Company?"

"Yes, sir, it is."

"When did you remove them?"

"The same night they were set. I began in the potato-field where they left off surveying that night, and I pulled 'em out all the way through the meadow and across the road and in the graveyard and down the gap and along the hill on the other side."

"Was any one there with you?"

"No, sir. I did it all alone. Oh, yes, there was some one with me coming back! The other engineers. I met them in the gap."

"You mean the engineers of the Tidewater & Western?"

"Yes, sir."

"So they were with you, were they?"

"Yes, sir. But not until after I was all through and coming home. Then they made me go back through the gap with them."

"Did they know you had removed the stakes?"

"No, sir, they didn't. I didn't tell anybody, not even grandpap."

"Did any one ask you to remove those stakes?"

"No, sir, not any one."

"Then why did you do it?"

"Well, I just thought they had no right to set them where they did. I thought they wouldn't have done it if grandpap had been there. I thought if I pulled them out they couldn't build any railroad through the graveyard. And then, I got very angry at the engineer for what he said to me when he asked him about the railroad."

"What did he say to you?"

"Well, it you please, I'd rather not tell."

"You needn't. Now, Dannie, didn't you know that you were doing wrong when you removed the stakes, no matter what your motive might have been?"

"I didn't stop to think much about it then. I just went right ahead and did it. But I know now that it was wrong. I've known it ever since it was done. I haven't any excuse to make at all."

"Do you want it understood that you alone are to blame, and that you alone are responsible for this deed?"

"Yes, sir. That's it exactly."

"Well, let us see about that, Dannie. Did you, on the evening of the night in which you removed the stakes, hear your grandfather declare that no person could do a better deed than to pull them all up and throw them into the brook?"

"Why, yes, sir—yes; I heard him say something like that."

"Very well. Did or did not that declaration have anything to do with your subsequent conduct?"

Marshall saw that the sympathy of the audience, and possibly of the court, was with the child, and he desired to trace the moral, if not the actual responsibility for the deed back to shoulders that would not be spared. Dannie looked hopelessly down at his questioner, and then turned an appealing glance to his grandfather, who sat with bowed head and eyes fixed on the floor, and did not see him.

"I'D rather not answer that question," he said at last; and then added quickly, "If my grandfather had had any idea of what I was going to do he'd have stopped me. I know he would. Why, I crept out of the house in my stocking feet so he wouldn't hear me! And I never told him what I'd done till I told him here today. Never! never! never!"

"There, Dannie, don't get excited. Just keep cool and answer my question. Would you have gone out that night and removed those stakes if you had first heard your grandfather say it would be a good thing to do?"

Again the boy looked hopelessly down at the lawyer and was silent. He knew, in his heart, that it was his grandfather's declaration that had aroused him on his midnight errand; but he could not say so. In the midst of the profound silence which followed Marshall's question Abner Pickett rose slowly to his feet.

"I'll answer that," he said. "The boy ain't to blame. He simply did what he thought I would have done. In his heart and soul the child is innocent. If any crime has been committed, I'm the one that is guilty of it."

He spoke slowly, distinctly, yet with a tremor in his voice that betrayed his deep emotion. It was all out of order, this declaration of his, in the midst of the examination of another witness; but no one interrupted him; even court and counsel listened with close attention until he finished his appeal and dropped back into his chair. Then Dannie himself was the first to speak.

"Oh, no, grandpap!" he exclaimed. "Oh, no! Maybe I wouldn't have done it but for what you said; but I ought to have known you didn't mean it. I ought to have known you wouldn't have let me do it. Oh, no, grandpap, I'm to blame! I'm to blame!"

He held out his hands appealingly as he spoke, gazing alternately at his grandfather and the lawyer. Tears were coursing down the old man's cheeks; and out in the court-room many eyes were moist watching this little drama of love and devotion, staged and played in the bar of the court.

It was plain to the dullest understanding that the boy was frank and truthful, and that the old man was not inclined to shirk his share of the responsibility. But Marshall was not yet satisfied. He wanted not only the truth, but the whole truth, and it was due to his client that every fact should be brought out in detail. He took up again the regular order of examination.

"Were you subpoenaed as a witness in this case?" he asked.

"No," replied Dannie, "I wasn't."

"Then what was it that led you to come here to make this remarkable statement?"

"Well, I'll tell you how it was. I got to thinking about it yesterday, after they'd gone; and I thought and thought, till it seemed as if it'd kill me if I didn't tell somebody. And so, last night I told Aunt Martha, and she said the only way to make it right was by telling those who had been injured by what I'd done. I tried to get here before you began, but—but I couldn't make out to do it. I hope it ain't too late."

Marshall looked up at him incredulously. "You haven't come here from Pickett's Gap today, my boy?"

"Yes, sir. I left there this morning real early, before it began to drift much."

"But the roads are absolutely impassable!"

"I know. We had hard work. I came in the stage as far as the poorhouse. The horses gave out

the stage-driver and I, we footed it as far as Brook. From there I walked on to Mooreville."

He recalled that awful journey. Dannie looked wearily, and out over the sea of sympathetic faces turned toward him in the court-room. But he was too tired to see them. They floated indistinctly before him. They seemed to advance and retreat, to expand and contract, alternately to fade and to reform before his aching eyes.

"And did you think it necessary to come here at once of your life to make this acknowledgement?" Marshall.

"Why, I didn't think just that way about it," replied the boy, "but I knew I'd done wrong to keep it to myself so, and I felt I ought to get here and tell about it as soon as I could. I wanted grandpap to know. I never kept anything from him before, and I wanted to tell him first."

"And then," he added, "and then I'd heard that engineer who made the night survey had been afraid of pulling out those stakes, or having 'em pulled out; and I was afraid they'd try to prove it on me here, and maybe find him guilty of it before I could set 'em right. And I wouldn't have had that happen—why, I'd sooner have died in the snow than had them do that! He was so good to run his line around the graveyard! He was so gentle and kind—and—oh, he couldn't have been kinder and gentler to me if he'd been my own father!"

CHARLIE PICKETT, sitting back among the spectators, felt the hot blood surge into his face as the paternal passion flood his heart. He longed to take his boy at once in his arms,—this boy whose quick acknowledgement of his fault had brought up to a hundred eyes, whose simple story of darkness for conscience's sake had thrilled every breast in the court-room,—to take him at once into the shelter of his love, and keep him and protect him against all the world.

But Marshall was asking his last question. "Have you anything more you would like to say to the court, Dannie, in extenuation of your conduct? I do not know what action, if any, the officers of the Delaware Valley & Eastern will take against you. Your offense was certainly a serious one. But in view of any possible punishment they may have in store for you, I want to give you this opportunity to make any further explanation you may wish to make."

"I've told you all," replied Dannie, wearily. "I'm ready to be punished for what I've done. I made up my mind to that before I came here."

Yet even as he spoke the boy's lips trembled and great tears filled his eyes. He could not help thinking of those gloomy and forbidding cells in the county jail.

A gentleman who had been sitting inside the bar, listening intently to the testimony, came over hurriedly and whispered to Marshall. The latter rose and came from his chair and said to Dannie:

"Mr. Rayburn, the general manager of the Delaware Valley & Eastern, informs me that his company will not prosecute you for your offense against the law. He says he believes that your conscience has already punished you with sufficient severity, to say nothing of what you have endured in forcing your way here through this terrible storm to set matters right on what has been heretofore an inexplicable mystery. Moreover, he wishes me to thank you for your frank and manly statement of the facts. That is all. You may leave the stand."

But Dannie did not move. The revulsion of feeling on learning that, after all, he was not to be punished, that the iron doors of the grim old jail were not to open for his admittance, was too strong to be controlled. His face flushed with sudden joy, and then the color all went out and he grew white as death. The lashes of his eyelids drooped upon his cheeks, his hands fell to his sides and his chin sank upon his breast.

A court attendant hurried into a side room for a glass of water. Abner Pickett and Marshall were on their feet in an instant, hurrying toward the fainting boy. But before either of them could reach his side, Charlie Pickett, with great strides, had swung himself from the bench where he was sitting to the boy's side, and had caught him in his arms.

He held him to his breast, looking about for an instant to see what he should do. Then, without waiting to follow any of the dozen suggestions that were given to him simultaneously by lawyers and officers of the court, he started with his burden down the crowded aisle. People gave way before him, looking with sympathetic eyes on the limp little body borne so tenderly in the strong parental arms.

When he reached the long corridor, Charlie saw the door of a jury-room standing invitingly open, and into that he hurried, and laid the unconscious boy at full length on a convenient bench. A moment later, when he looked up, he saw his father standing by his side, bending over the prostrate body. The court attendant hustled in with a glass of water. A young physician, who had been sitting in the court-room, hurried in and offered his services.

"I am a doctor," he said. "Perhaps I can be of some assistance."

He felt the boy's pulse, touched his cheek, and lowered his head to the level of the bench.

"It is only a fainting spell," he said. "He will come out of it in a minute. Brought on by excitement and exhaustion, I presume. I don't wonder at it after the boy's story of his journey through the storm."

GABRIEL, who had followed the party, had, with a quick instinct not unusual for him, constituted himself doorkeeper, and was holding back the curious and inquiring crowd.

"Jest a little faintin' spell," he explained. "Ain't used to court, you know, and the judge an lawyers an' all kind of scairt him. He'll be all right in a minute or two—much obleeged to ye."

Charlie Pickett, leaning over the boy, touched his father's arm.

"Father," he said, "I want to speak to you for a moment. Dannie is safe in the doctor's hands. Will you come out with me?"

And Abner Pickett looked up at him coldly and replied:

"I've no call to speak to you, sir. I'll take care of the boy."

"Then I shall exercise my right as a father in the presence of these people."

Before either of the men could speak again Dannie opened his eyes and looked around him.

"What is it, grandpap?" he asked. "What did I do? Where—oh, I remember!"

Then, as his recollection grew more distinct, he exclaimed, "I'm not to go to jail, after all, grandpap! Did you hear him say so? I'm not to go to jail!"

The horrible nightmare of imprisonment that had brooded over his pillow for weeks had suddenly vanished, and he could not contain himself for joy.

"No, Dannie," replied the old man, gently, "no, not to jail. They've no call to punish you. You've borne a thousand times too much already. Can you get on your feet? There, that's it. Hang on my arm, so! We'll go home."

He started with the boy toward the door.

"Father!"

It was Charlie Pickett who spoke. The old man did not heed him.

"Father!"

The voice attracted Dannie's attention. It had, somehow, a familiar sound. He loosened his grasp on the old man's arm and turned to look at the speaker. Then the blood rushed into his face again. He recognized his friend of the night journey through the gap.

"I'm so glad to see you!" he said, holding out his hand. "Grandpap, this man was good to me. He was good to you, grandpap, and to those in the graveyard, and to all of us."

But Abner Pickett stood speechless, with stony eyes and rigid face. Charlie turned to the tipstaff and the doctor.

"Will you kindly leave us for a few moments?" he asked. "It is a family matter I wish to settle. Gabriel, please close the door and guard it."

Then they were alone together in the room; three generations, the same blood running in their veins, the same will and grim determination shaping every act of their lives. Dannie, stunned by the revelation that had been so suddenly made to him, sank back again upon the bench, looking with bewildered eyes, first on one man, then on the other. He could not yet quite comprehend it; but the joyful truth was forcing itself slowly in upon his mind that this fine, stalwart, lovable man was his father.

When the door was closed Charlie turned to the boy. Frank, impetuous, unselfish as he had ever been, he spoke his mind.

"Dannie," he said, "I am your father. There, sit still; wait till I am through. When you were a baby there was a matter about which your grandfather and I differed. He accused me of telling him a falsehood. I replied unkindly and in anger. What I told him was not true. I admitted it then. I admit it today. He said that no person who had lied to him once should ever have the opportunity to do so again, and he sent me from his house and forbade me to return. I went, leaving you in his custody, knowing that with Aunt Martha also to care for you, you would want for nothing. For thirteen years I have done penance for that lie; but my father has not forgiven me. For thirteen years I have looked forward, day and night, to the time when I should claim you and ask you to come with me, and be my son in fact as well as in name. I am ready to take you now. I want you. Will you come?"

IT was so sudden, so astounding, that Dannie could not comprehend it all at once. The bewildered look was still in his eyes.

"You—are my father?" he asked.

"Yes, Dannie."

"Is it true, grandpap?"

"It is."

The old man, standing with folded arms, his back to the door, his cheeks flushed, his lips set, with lightning veiled under the cold glitter of his eyes, looked the picture of dignified wrath.

Dannie turned again to his father. "And—and you lied to grandpap?"

"Yes, Dannie, I did."

"Is that true, grandpap?"

"That is true."

"Father," exclaimed Charlie, "be just to me! Say that it was the first and last lie I ever told you! Say that afterward I acknowledged my fault and asked your forgiveness, and you would not listen to me!"

"That is true."

Cold as ice, clear as crystal, the answer to his son's appeal came from the old man's lips. For a moment there was silence, and then Dannie spoke again to his father:

"And you want me to come—to come and live with you?"

There was a tremor of joy in the boy's voice at the very thought of such happiness as this.

"I do. I want you. I need you. I cannot live my life as I should without you."

"Grandpap, may I go?"

At last the supreme moment had come, the vital question had been put. Abner Pickett still stood there motionless, with folded arms and lips like adamant.

"You may choose," he said, "between him and me. I will have no divided allegiance. If you go with him, you can say good-by to me today for all time."

Never before had he so veiled the passion in his heart with calm utterance of words. But if his speech was cool, it was determined. He meant what he said to the last degree. It was not enough for his son to come to him with bowed head and penitent words. He wanted the prodigal to prostrate himself in the dust at his father's feet, to yield everything, to receive nothing.

Strange he did not know that a Pickett never had done that, never would do it, never could do it; that even in the confession of a serious fault, the Pickett pride would never humble itself more deeply than honor and conscience might demand.

Charlie Pickett was not deceived by his father's calmness. He well knew that if Dannie came with him it would be outlawry for the boy from the old home. He knew what they had been to each other—those two; could he bend himself to the severance of those sweet relations? Would it not be cruelty to both of them? And yet—and yet he wanted so to have his son!

On Dannie's perplexed face the lights and shadows fell alternately. He knew not what to say or to do. How could he choose between these two—between the father who had come suddenly into his life like a dream of light and sweetness, and the grandfather who had loved him and cared for him, and had been his comrade and playfellow from babyhood?

(To be continued.)



The Cheerful Plowman

USE OF THE DICTIONARY

I KEEP a "Webster's Unabridged" right at my tattoed arm and it's one of the finest things I have about the farm. There was a day I couldn't spell. I put two 'I's in "rat", and two big R's and two big A's right in the midst of "rat". I never tackled "Michigan"; that was too big for me, and when I tried to spell "success" I started with a C.

"I cannot spell," says Jack O'Wisp. "I did not learn at school. The oil that's in my speller crank is rather stiff and cool. I wish that I could spell. I do, but there's no chance I know. When I had a chance to go to school, big dunce, I didn't go."

"Don't worry, man," I say to Jack, "you sure can learn to spell if you will buy the proper book and use it right and well. I spelled like seven crazy men for many years, my friend. I stood my S's on their heads and V's upon the end. I could not spell a word like "IZ" some twenty years ago, and when I erred at "Oregon" the wind began to blow.

"But school is not the only place where man can learn a bit if he has bearings in his brain and thunder in his mit. I learn new words each day I live. I never let one slip until I have it by the throat or grab it by the hip. I study spelling as I go along the road of life, and I corral new words by scores and rope them in the strife. Go buy a book like my good book and use it every day and soon you'll spell 'Seemacherib' in best accepted way."

J. E. T.

TIGHT BINDING TEXT CUT OFF

And they all said: Clark "Cutaways" Are Better

Before Mr. Ernest J. Downing, owner of the "Downing" Fruit Farm, at New Madison, Ohio, bought a disk harrow, he wrote to several farmers who own Clark "Cutaways." Mr. Downing told us in the following letter what these farmers said about them:

"We have written to several owners of have sent us on 'Cutaway' Harrows (disci. It looks good.

"We have written to several owners of 'Cutaway' Harrows. Without exception the answers have shown the owners to be well pleased and two of them seem to have three or more of these tools. Nearly all of them compare them with other makes of disk harrows and all claim the 'Cutaway' much better.

"We are fruit growers. We sell practically all our products direct to the consumer, we advertise and they come here to buy it, thus we get to see and talk with a large number of people every year.

"We are wondering if you would wish to give us the agency for this 'Cutaway' Harrow in this vicinity or district?"



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Farm and Dairy

By L. W. LIGHTY

SO MUCH has been said about convicting and executing the scrub bull that not a few persons have remarked that it is foolish and child's play and that they are tired of it. Nevertheless the scrub bull is a millstone about many a cowkeeper's neck and I doubt if we can say too much in favor of replacing him with a good pure-bred sire, even if it is necessary to say mean things of our old favorite the scrub. I have frequently recited my individual experiences and the profit and pleasure the good pure bred dairy sire accomplished on my farm, and indeed on a number of farms I have known well, and this time I wish to mention a few things observed and reported from the experiment stations.



Using a pure-bred sire with very ordinary scrub cows, the resultant grades gave a great deal more milk than the dams; the second generation did still better and the third still better. The grades also were more persistant milkers, while the dams were quite persistent in standing dry. But there was another notable advantage in the grades—they made better use of their feed, that is to say, they made more milk from the same amount of feed than their dams did. Still further the grades made a better appearance when offered for sale and brought more money. All these advantages in increasing profits are clearly shown in the records. Besides, as the grading up proceeds, the profits increase.

Another phase came out in tabulation I looked at lately. In some cow-testing association work it developed that the grade herds were nearly as good profit makers as the pure-bred herds. It would seem with all these proved facts of the profitable outcome of investing in a pure-bred bull no one should use a scrub bull, still the fact is that in many sections there is only one pure-bred to ten scrubs. Surely those who tell me too much fuss has been made about the scrub bull are on the wrong track—the track that leads to loss.

Let me call attention again to facts found on the farms by the Ohio Station. On farms where low-producing herds were kept the owner was paid less than 11c an hour for his labor, while on farms where high-producing herds were kept the owner was paid above 51c per hour for his labor. Usually supply and demand fix the wages, but here seems to be an exception. You fix it yourself.

Water for the Cows

Because the cow needs a great quantity of water and cannot take enough if it is too cold, and may be harmed if it is impure, the matter of providing the water in the best condition with the least labor is important. I tried several methods and learned something by experience. On a number of well-conducted dairy farms that I visited the cows were kept in an open front or semi-open front shelter with a well-protected water tank in the rear. Often the water was piped from a spring on higher ground and a steady stream of the best water flowed into the tank with an overflow provided. The surplus water was carried out of the way in an underground tile. Where springs are not available a cistern on higher ground furnished the water pumped by wind or gas power. In this case a floating valve is usually used to economize water.

Using the concrete trough as the watering trough is favored by some, but it requires more work than the others and the frequent clogging of the outlet pipe has been the serious objection by others who used it. The question resolves itself for you personally—how can you furnish the cow a good and adequate water supply at the least cost in daily labor?

Quantity and Profit

Profit comes from the difference between the cost of production and the selling price. Quantity may or may not be a factor. If we can produce a hundred pounds of milk for $2.50 and sell it for $2.65 we make a little profit, but if we produce a hundred and fifty pounds of milk costing us $2.65 per hundred we would not be making a cent in our business.

In the alfalfa country, Nevada, at the experiment station they fed cows on alfalfa hay and made a certain net profit. Then they fed a grain ration with the alfalfa and while the quantity of milk was increased considerably the net profit was considerably decreased. This indicates that it is quite possible to feed and increase the milk flow and yet make less profit in the business. The person who does not keep records of production and feeding is very likely to do this frequently. Guessing in dairying is as a rule as unprofitable as guessing on race horses.

❖

Jerseys and Ayrshires

Please give me some information on difference between pure-bred Jersey cows and pure-bred Ayrshire cows for milking purposes as to feed and to about what quantity of milk each breed gives. John W. Hickish.

THE average production of 5,790 pure-bred Ayrshire cows having Advanced Registry records was 10,190 pounds of milk, containing 404.36 pounds of butterfat, or 3.97 per cent butterfat.

In the Jersey breed 8,250 cows with Register of Merit records average 8,580 pounds of milk and 460 pounds of butterfat a year with an average test of 5.36 per cent. It is probable that the Jerseys will produce a pound of butterfat for less feed cost than the Ayrshires and that the Ayrshires will produce a quart of milk at less feed cost than the Jerseys.

There are good and poor cows in both breeds. The point of greatest importance is to get a real good cow that is a high producer regardless of which breed you chose.

A. A. Borland.



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Home of Joseph L. Bauer. This dairyman has made large savings by cooling his milk electrically instead of using ice. The electric cooling unit was installed in the old ice cooler shown at the right in this picture.

Westmoreland Farmers Electrify

(Continued from page 28)

Mr. Bauer is a strong believer in the economy of electricity. When we asked him why, he explained it this way: Before he cooled his milk the old way he had to pay $18 a month for ice in summer. Now his summer electric bills cost about $14 a month and that not only covers the cost of cooling the milk and keeping it at a constant temperature of 34 degrees, but also includes all the power consumed by his other motors used every day, plus numerous lights.

In winter the monthly electric bill runs to about $10 as an average. That is not the cost of pumping all the water used in the house, milk room and dairy barn, including that consumed by the dairy cattle and horses, about one-third in all.

The motor equipment of the farm is:

Milker machine	½ horsepower motor
Churn & bottler	1/3 " "
Grain mixer	½ " "
Water pump	½ " "
Deep well pump for	
milk cooling system	½ " "
Pump on main water	
system	½ " "
Electric washer	½ " "

Mr. Bauer willingly hunted out the power company's bills for the last few months. From them we copied the following figures which vouch very closely for his rough estimates quoted above:

Summer

[illegible]	$14.70
[illegible]	11.17
[illegible]	15.52
[illegible]	11.10

Winter

[illegible]	$12.05
[illegible]	9.84
[illegible]	8.90

The third milk producer and retailer we visited on this trip was Harry E. Steele, also of Greensburg, R. D. Mr. Steele's compressor outfit is not the same make as those used by Mr. Rathvon and Mr. Bauer, but it appeared equally satisfactory. It happens to be one of the machines Professor Blasingame of State College is using in his rural electrification studies, as it is equipped with an individual meter so its consumption of power can be measured accurately.

Besides the refrigerating unit, Mr. Steele's electrical equipment includes a quarter horsepower motor on the pump which forces the brine through the cooler, another quarter horsepower motor on the bottle washer, a battery charger for the radio outfit, electric lights, household appliances, etc. The motor on the compressor is rated at 1½ horsepower.

Mr. Steele's cooler has two features we didn't observe in the others. One is a group of three trays for freezing ice, which is always useful, especially if there is no electric refrigerator in the home. The other is a large bottle of drinking water connected by a pipe with a faucet on the outside of the cold room.

Occasionally in summer the compressor motor is shut off and the door of the cooler is opened for a few hours to permit the frost on the brine tank to melt. Mr. Steele estimates that an inch of frost and ice may reduce the efficiency of the cooling unit enough to increase the electric bill about $4 a month in warm weather. So it is wise to shut it off and de-frost every few weeks.

Lest the above be misleading we should explain that the motor never runs more than a few hours a day. An automatic control turns it on and shuts it off as often as necessary to keep the cooler at a certain predetermined temperature. If the door should be left open too ofi frosting without turning the main switch, the motor would run constantly, merely wasting current.

New Uses Every Day

Every day new uses for electricity are being discovered, and every day electric service is being placed within the reach of more farmers. The Pennsylvania Joint Committee on Rural Electrification reports that electric service has been extended to nearly eight thousand new farms during 1927 and the first eight months of 1928 under the provisions of General Order Number 28. This involved the building of 2,579 miles of distribution lines by the power companies at a cost of more than five million dollars. All together over 25,000 Pennsylvania farmers now have central station electric service, not counting thousands more beyond the reach of electric lines who are using home power plants.

All this means that the day isn't far away when the farm use of electricity in large quantities will be so common that we would not think of writing an article about someone's farm simply to tell how he uses seven or eight electric motors. That will be a better day for farmers. For even though it costs money, electricity contributes so much toward making farm work lighter and more pleasant that we have yet to find a user who doesn't think it is worth many times what it costs.



Getting down to CLOVER

RIGHT now dairymen are getting down to the early cut clover in the hay mows. Those who keep posted on the protein question know that there is no better source of this essential factor in animal nutrition than good clover hay. It is one of the few practically complete proteins, and authorities on dairy feeding recommend, for economy's sake, that the protein in the grain ration *be reduced* when clover hay is used as part of the roughage.

20% Sweet UNION GRAINS meets the situation exactly, and, moreover, is considerably cheaper than other forms richer in protein. With good clover, alfalfa or other legume hay available 20% Sweet UNION GRAINS balances your ration perfectly. It ensures maximum milk flow without undue forcing, keeps the cows in the best of health and guarantees the lowest possible feed cost per gallon of milk.

20% Sweet UNION GRAINS carries all the ingredients found in 24% UNION GRAINS, differing only in the proportions. It is recommended when clover or other leguminous hay supplies some of the roughage, particularly towards spring. The molasses content supplements the slightly laxative properties of the legume hay and aids in shedding off the coat and in toning up the system. This tends to sharpen the appetite, increases the milk flow, and gets the cow on her stride for a profitable year as well as in condition for the pasturing season.

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BULLS—1 two-year-old bull, 4 yearling bulls, 2 eleven-months-old bulls and an outstanding November calf out of 676-lb dam and 1,079-lb. granddam. Some real show bulls out of high producing dams and sired by great bulls.

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TIGHT BINDING TEXT CUT OFF



DOWN on the Mississippi levees the darky laborer's philosophy was summed up in the song "Ol' Man River, he must know sumpin' but don't say nuthin'; he just keeps rollin' along."

Fads and fancies have come and gone in the feed business, but like Ol' Man River, Larro just keeps rollin' along.

Fifteen years ago people said, "26% protein is necessary." Larro experiments proved that 20% was the safe and profitable amount of protein and Larro was made that way. Today most authorities agree that 20% is right—and some are even wondering if it is too much.

The fad for lime in dairy feed has come and gone. The question of changing the protein content of a grain ration to fit the roughage is archaic and dying down.

Digestible nutrients have had their fling—and people have learned that quality and not digestible nutrients is the thing that makes a feed pay.

Other fads will come and go, but like Ol' Man River Larro will just keep rollin' along—until somebody advances a new feeding idea which can be proven better by the Larro Research Farm.

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Dairy Topics

By A. G. HUMPHREYS

UP IN Moose Jaw, Canada, the other day they gathered round a table at a banquet and toasted Canary Korndyke, a cow which gives enough milk in one day to supply the needs of two average families for a fortnight, provided they drink as much as they are supposed to drink by those who are supposed to know. Her former owner, Ben H. Thompson, farmer, gave the banquet. C. M. Hamilton, minister of agriculture for Saskatchewan, and two hundred others prominent in agriculture were in attendance.

The toast was drunk in milk—this is Canada, remember drawn from the queen of domestic cattle, and all the dairy products used at the banquet were supplied by "Canary." She is a champion indeed. A Holstein-Friesian by birth, she was purchased by the Saskatchewan government for the record sum of ten thousand dollars. Her record for butter is one thousand and eighty pounds in 305 days. Her milk production for the same time is 26,896 pounds. We know of a herd of seventy good cows that cannot reach her production. Better have one good cow than several poor ones.

Her Son's Sons

It is possible for the above champion to be the mother of perhaps a thousand daughters. That is putting it pretty high, but for the sake of computation we will say that she may. At the same time it is likely she will give birth to at least one son. Should he be able to transmit her milking qualities to other dams there is no telling what he would be worth. He might easily be the sire of a hundred daughters. A proved sire may cost considerable but he is worth it. Just keep an eye on him always and don't let him get too familiar with you. If several farmers could go together the cost of a good bull would not be so great on any one of them, and the whole neighborhood would be benefited by the deal. It is entirely possible and also probable that one of her grandsons might show remarkable ability as a producer of excellent milk cows.

Washington's Diary

We now have it on very good authority that George Washington was the father of the ice cream industry in the United States. It seems reasonable, since he started so many things, that he might have also started the manufacture of ice cream. In his diary under date of May 17, 1784, we find the following entry:

"Buy a cream machine for ice. 1 pound 13 shillings and 4 pence."

Was this the beginning of ice cream in our land? Dolly Madison is generally credited with having introduced it in the White House, but she was only twelve years old when Washington became president.

What Is in a Name?

Have you ever stopped to think how many things the cow has attached her name to as a sort of appendage? There is the cow-catcher on a railroad locomotive. It at one time was used to kick vagrant cows from the right of way, but lately is employed in clearing the track of automobiles. There is the cowboy who won his name by his close association with cattle. His species is not entirely extinct, but it is going. Perhaps you have noticed a little coffee-brown bird following the cows. It is the cowbird, and takes its name from the fact that droves of them follow cattle for the insects, flies, etc., that frequent the haunts of cattle. They come early in the spring, sometimes as early as the 17th of March, and stay till cold weather drives them away. The cow tick does not confine his operations at all exclusively to cows. Unfortunately he makes himself at home on any kind of the bovine family, and



TO permit your cows to ... without aid is to invite ... It is well known that most ... that lower production have ... origin at calving time. The ... strain of producing a healthy ... coming through with vigorous ... giving capacity calls for definite ... ditioning aid.

As a dependable aid at this ... time Kow-Kare has a thirty ... record of success. This scientific ... pound of Iron, the great builder ... blood purifier, combined with ... herbs and roots fortifies the ... and genital organs for unusual ... Numberless cow owners now ... safe" with every freshening ... using Kow-Kare for a few weeks ... fore and after calving.

For barn-fed cows, when ... dry feeds force down the milk ... in the pails, the invigorating ... Kow-Kare in toning up ... and assimilation will bring the ... quarts of milk by eliminating ... waste. Try this regular winter ... ditioning on your poor milkers ... see what surprising results ... cents per month per cow can ... plish in yield and health.

Drug, hardware, feed and ... stores sell Kow-Kare—$1.25 and ... sizes. If your dealer is not ... we will mail postpaid.

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...23, 1929

...part of it is he makes a home ...me time for various biological ... There are other names of ... cow barn bears an important ... uppermost in the mind of the ... dairyman.

Fox Chases

...rite this there comes faintly ...ey the music of the hounds ... now live the art of chasing ... has passed. But in my fall ... many a night in the early ... have heard the distant cry of ... draw near and nearer pass ... home, and grow fainter and ... in the distance. There is ... enticing in fox hunting. I ...owed the hounds myself be- ... was a "Jonah." Fox hunters ... what that means. If I were ... crowd that went after foxes ...re none to be found, so I had ... hunting confined to my back ... sometimes my feet. But I ...ailed to listen and to enjoy all ... could get out of it.

...arm Practice

By W. D. ZINN

Orchard Grass

...have a piece of ground which I ...ed last fall intending to sow it ... grass on it this spring. It is said ...t very fertile and needs cleaning ... What should I do to secure ...od stand of grass?

C. N. Werner

...R correspondent does right to ...ow orchard grass on thin land ...d remain there longer than any ... grass. I would suggest that he ... from 200 to 300 pounds of su...phate per acre when sowing ...grass and when it is about three ... high apply four pounds of ...te of soda or 80 pounds of sul... of ammonia. If he wants to ... that the nitrogen paid let him ... a check through the field. I do ... believe he will be sorry that he ... the money for the nitrogen.

• • •

Fertilizers

...have been applying 16 per cent ...sphate on oats and potatoes ...h excellent results. As I have a 21 ...h haul over bad mountain roads ...d you advise different fertilizer, if ... what?

C. I. Zwaltzer

...FARMER having a 21-mile haul ...should buy just as many pounds ...plant food in a ton as it is possible ... him to get. There are on the ...ket 16 per cent, 20 per cent, 24 ...cent and 44 per cent superphos...te. There are 320 pounds of phos...ric acid in a ton of the 16 per cent ...le in a ton of the 44 per cent there ... 880 pounds. Our correspondent ...ght need some so-called com...te fertilizer to put in his corn hills ...rows. If so he ought to buy a 15-...5 goods and this formula can be ...ght. In a ton of this he would have ... pounds of plant food, while in a ... of a 2-8-2 goods he would have ... pounds of plant food.

• • •

Fertilizer for Corn

I am plowing down a heavy sod for ...rn. Please tell me what fertilizer to ...pply and how much per acre.

A. R. H. Fry

IT IS a little hard to prescribe a ...rtilizer for corn without knowing ...re about the former treatment of ... land, but one never goes wrong in ...commending the use of superphos...te in the East. Our experiment ...ions are recommending more and ...re the use of all three plant foods ... be placed in the hill or row. ... Our correspondent will not go far ...ong in applying from 300 to 500 ...nds of superphosphate all over ...e ground and 100 to 150 pounds in ...e row or hill. If the land has been ...owing legumes in a short rotation ...d has been top-dressed with manure ...is a little doubtful whether nitrogen ...ll give an account of itself.

Uncle Charlie says—

"At the FEED BOX You decide *Whether or Not* your cow will be



A Big Producer *at the* Pail"

MY DAD used to say: "You and I can do a lot of different things, but there's only one thing that a melon on a vine can do. It can *just grow*."

Plenty of dairymen feel the same way about their cows—they can *just give milk*, so much and no more. If they are good milkers, fine, and if they are poor milkers, it's just too bad.

But I have learned different in my thirty years' experience with dairy feeds. I have found that a dairyman's profits or losses are a long ways decided at the feed box. I've seen many a good dairy cow produce like a scrub because she wasn't fed a milk-making ration. And I've seen many a poor milker pull herself up into the two-hundred-dollar-annual-net-profit-class, just as soon as she was given the right feed.

Let All Pay Their Way

The important thing to my way of thinking is to get the most milk from *every* cow. There is no surer way than to feed Bull Brand Dairy Ration.

Made on a perfectly balanced formula, from choicest protein concentrates, minerals and other essential ingredients, it has held a ten-year record for being the most productive per dollar of feed cost.

Read that over again: *the most productive per dollar of feed cost and guaranteed so.* And now read what a few of the thousands of dairymen who use Bull Brand say about it.

Do You Get These Results?

"My cows gained 10 gallons of milk a day on B-B Dairy Ration," writes Oscar Martin, of Oakdale, Md. "Last month, (December) I fed $82.50 worth of Bull Brand 24% to my 15 T. B. tested cows and my milk check was $378.20," reports Wm. King, of Chester Springs, Pa. "My cows keep in better condition and produce more milk on B-B than on any other feed," says Charles W. Pike, Rensselaer Falls, N. Y. "My herd jumped 40 quarts per day," writes Robert Bell, New Egypt, N. J. "555 pounds of milk in 7 days from one cow," says J. E. Slyder, Seven Valleys, Pa. "Two full pails more milk a day," says M. B. Ryan, Bomoseen, Vt.

We Guarantee You More Milk — or Money Back

Bull Brand offers you the same increased milk production and profits. Feed it to your cows and watch them pick up. Note the improved condition. Count your extra profit dollars. And remember that you are using B-B with this provision: If you find that it doesn't give the most milk per dollar of feed cost, take back the empty sacks to your dealer and get every penny of your money back.

Start your profits at the feed box!

Maritime Milling Co., Inc., Buffalo, N.Y.

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our stables are overflowing so we can spare els on eight Tuscan-old heifers. Some fresh others due soon. Registered Holsteins.
Entire herd negative to blood test for infec... Hoos abortion. Tuberculin tested.
WINTERTHUR FARMS. Winterthur, Del.

REGISTERED JERSEYS.—Yearling bulls and younger also heifers and calves.
D. J. KENEPP. McVeytown, Pa.

DAIRY CATTLE

FOR SALE. Jersey Bull Calf, dropped Dec. 11, 1928, by Reg. of Merit Sire Meldale Merry Prince, Grand Champion West Va. State Fair. Dam also show winner with R. M. record 7,500 lbs. milk, 506 fat, inspected in dam from Island of Jersey and daughter of Imp. Golden Fern's Noble. This calf has large, long deep body and straight back, a show prospect and blood tested. First check for $100 takes him. Fed Accr. Herd No. 47057. Highland Farms, Greensburg, Pa.

Just JERSEYS

Indiana County, Pa. Jersey Cattle Club offers good Jersey cattle for sale. Most of our herds abortion tested. Send for sale list.
J. M. RISING, Pres. Homer City, Pa.
W. S. Wetzel, Sec'y. Marion Center, Pa.

REG. JERSEY BULLS ready for service. Also younger bulls. Accredited herd.
C. P. & M. W. BIGHAM. Gettysburg, Pa.

PURE-BRED JERSEY HEIFERS
6 to 8 months old. Write or call.
E. J. HARSHBARGER, Mattawana, Pa.

DAIRY CATTLE

Holstein Bulls for sale, from an accredited herd, from calves to service-able age, from K. P. O. P. 52, the 1,100 lb. bull ter and 4% bull. Also females.
Crystal Spring Stock Farm. Littlestown, Pa.

PURE-BRED OR HIGH GRADE HOLSTEINS
Heifers, Springers. Tuberculin tested. Springers on hand at all times. Carload or less than carload lots.
STRUBLE & MARTIN.
Milford, Pa. Newton, N. J.

REGISTERED GUERNSEY BULLS.—Three of service age; heifer and accredited herd.
JOHN C. SARVER, R. 1, Millerstown, Pa.

GUERNSEY BULLS.—One to eighteen months from A. R. dams 518 to 646 lbs. fat. Heifers and cows priced to sell, from Langwater Bulls.
A. J. Fell, R. 1, Lansdale, Pa.

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TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

IN SPITE of a dip at midweek, due to lack of packer support, the 812 quotation was reinstated at the end of the week, and the market showed a net gain for the week of 55 to 60 cents over last week's close. It was a week of light receipts, Chicago having only about 100,000 head, the smallest run for a week since last October. Eleven markets had only 409,000 head, against 520,000 last week and 726,000 the same week last year. Shipping demand was strong, taking near 40 per cent of the receipts here.

Average price of hogs this week was $11.60, a gain of 15 cents over last week, and comparing with $8.30 a year ago and $11.40 two years ago.

Cattle Trade Improves

The cattle market showed some improvement this week, demand being fairly good. Light-weight stuff is favored, heavy steers being a little lower for the week. The gain in prices is indicated by bulk of sales quotations, $12@13.75 this week, against $11.50@13.25 last week, and $11.50 @14 a year ago. Top steers this week brought $14.50, with a few yearlings at $15. Average prices of steers at $12.85 showed a gain of 50 cents over last week and compared with $12.75 a year ago. Receipts for the week, at 41,000, showed a slight gain over last week, but shipping demand was materially larger.

There was wild trade in the calf market for a day, sales being made as high as $21, comparing with the all time record of $22 made in 1919. Tops soon settled back to $18.50, a gain of a dollar over last week.

Stocker and feeder trade has been light so far this year. Only 90,038 head were shipped from the nine leading markets during February, comparing with 143,023 head during the month last year, a decrease of 37 per cent. For the first two months of the year shipments totaled 227,918 head this year against 318,572 last year.

Interest in feeding is at low ebb, due to recent losses and high feed prices. On the theory that a good time to get in is when the crowd is disposed to stay out, a few feeders are filling their feed-lots, and they may be right about it. Offerings are light, and there has been enough demand to strengthen prices a little from week to week, until quotations are now around a dollar above the middle of February.

Lamb Feeders Doing Well

In spite of a substantial increase in marketing this week the lamb market closed in about the same notch as a week ago, and average price, at $17.05, showed a gain of 35 cents over last week and was at the high point of the season. The average was $1.15 above the same week last year and $2.35 above the same week two years ago.

Receipts, at 70,000, increased more than 20,000 over last week, but shippers took more lambs and local demand was strong. Top lambs sold at the same price as last week, $17.85 for fed westerns, best natives selling at $17.25. Colorado shippers were responsible for the increase in receipts, sending in 45,000 lambs, against 17,200 last week.

It is a big year for lamb feeders and producers, with no signs of weakness in the market. This is reflected in the demand for lambs, suitable for feeding, nine markets having sent 261,283 head to the country during the first two months of this year, against 179,049 last year.

Quiet Grain Trade

Wheat and oats prices gained a little this week, and corn lost a little, without any important new price factors appearing to influence trade. There has been quite a run of unfavorable wheat crop reports, but it is not considered that there has been enough open weather to judge of winter damage.

Guesses in the main are that abandonment will be near normal, which would mean 11.8 per cent according to the average. A Kansas report the last of the week said that wheat was beginning to green up slowly in all parts of the state, except some of the northwestern counties. In the eastern two-thirds of the state it shows very few signs of winter damage, though it is too soon to ascertain its condition definitely.

There is some apprehension that alternate freezing and thawing has injured it in the southeastern counties. In the western third of the state high winds during the past week have caused the soil to blow badly and this has damaged wheat considerably in the southwestern and extreme western counties.

Present supplies of wheat, in all positions, are largest since 1919.

M. L. Wilson of the Montana Agricultural College warms of the growing competition which American wheat growers must face. As evidence he points to the following:

Canada in 20 years has jumped its wheat production from 112,000,000 to 500,000,000 bushels. Tremendous docks, terminal elevators and transportation facilities are being rushed to completion on the west coast of Hudson Bay to provide more economical facilities for getting wheat to the old world, saving over a thousand miles on shipments to Europe.

The Argentine has wonderful seaboard shipping facilities which are rapidly being modernized. That country exported 140,000,000 bushels of wheat in 1927 and there is room for more expansion.

Russia is now buying machinery and making plans for adding 5,000,000 acres to its wheat acreage in the next three years.

Australia has doubled its acreage in the last few years.

$10,000 for Bull Calf

Last week Fulcher & Kephart of Holyoke, Col., sold Junior Prince Domino, senior Hereford bull calf, that won first place in its class at the recent Denver Livestock show, to J. P. Osborne of Miami, Texas, for $10,000. The calf is a son of the great Prince Domino and strictly of the Anxiety breeding. This price is one of the highest on record for a bull calf and tops the list for any bull in recent years.

Swine Show

The next National Swine Show is to be held as part of the Indiana State Fair, the Indiana legislature having made an appropriation of $25,000 to provide for its administration and a liberal prize list.

March 16, 1929. Watson.

Produce Market Review

THE butter markets declined during the week due to increased receipts and a limited demand. At the opening of the week prices were steady but as the week progressed there was not enough trading to keep dealers from accumulating stock and prices dropped from 1c to 1½c by the close. One unusual feature of the market was the comparatively high price of the lower grades. For instance on Thursday the New York market quoted 92 score at 48½c and 87 score at 47c, a range of 1½c between five scores. These lower grades moved more readily than the top scores since the supplies were relatively light and buyers were looking for cheaper goods.

The egg market in Philadelphia weakened and prices were lower. Receipts were somewhat heavier although they were not as large as normal for this season of the year. At the close of the week the market was steady to firm and trading was more active. Last week and the week previous dealers were unwilling to allow any eggs to accumulate as they were expecting a decline any day. Now there seems to be more confidence as the price has dropped more nearly to a normal level. The best nearby eggs were quoted at 30@31½c per dozen with occasional lots of extra fancy stock bringing a ptemium.

The egg market in New York was steadier toward the close of the week, although prices were considerably lower than last week. Nearby white eggs ranged from 31@37c per dozen, browns 32½@35c and mixed colors 30@34c.

The live poultry market in New York was generally steady. Light fowl were in good demand but heavy stock sold rather slowly. The best grades of chickens were in fair demand although most of the stock offered was rather ordinary. Broilers were rather scarce and met a good demand. Leghorn and colored fowl were quoted at 33c per pound, broilers at 40@ 45c and pullets at 32@35c. The supply of dressed poultry was rather light and the demand was fair with prices holding steady. Hot house broilers were scarce and fancy stock was in good demand. Poorly dressed stock sold at irregular prices. Chickens were in fair demand. Fowls ranged from 26 to 35c per pound, roasting chickens from 30 to 43c and broilers from 42 to 45c.

Farmers with fat fowl and hen turkeys to market will find March 22, 23 and 25 good days as the Hebrew holiday called Purim falls on March 26. Other Hebrew holidays which occur in the near future are the Passover, April 25 and 26 and the Last Passover, May 1 and 2. Live fat fowl, ducks, geese and turkeys are generally wanted.

Crop correspondents reported that there was 31.4 per cent of the potato crop still to be marketed on March 1, compared with 26.7 per cent at the same time last year. In the 19 surplus producing states holdings were reported as 26.7 per cent of the crop, as against 31.3 per cent last year and 34.9 per cent in 1925. Holding in the southern states are estimated at 9.0 per cent of the crop with more than half of the holdings in North Carolina and Tennessee. These March estimates include quantities of potatoes being held on the farm for seed and food.

Little Change in Potatoes

The potato markets showed but little change during the week. Prices showed some variation but this was generally due to quality rather than to changes in demand or supply. The demand was rather slow in most Eastern markets. Pennsylvania round whites were quoted at $1.20@ 1.50 per 120-pound sack in Philadelphia although there were some fancy cars that sold as high as $1.35 per 100-pound sack. Prices in Pittsburgh ranged from $1.20 to $1.75 per 150-pound sack while Baltimore reported sales $1.25 per 100-pound sack. There were very few Pennsylvania potatoes offered in New York during the week and a few sales of bulk stock were reported at about 1c a pound.

Spring vegetables appeared on the market during the week. The Eastern Shore sections ate shipping greens and there was a fairly good demand for fancy stock. Broccoli greens showed a wide range in quality and sold at $1@2 per bushel, although prices advanced to $2.25 on several days. Turnip greens sold at $1@1.50 but the stock was hard to move at 25c.

Asparagus from California, Georgia, South Carolina was on the market and while prices were high they were much lower than those received for the first offerings. Pennsylvania hot-bed vegetables made their appearance and the most important of these was dandelion greens. The first offerings sold as high as $2 per ⅝ basket but later in the week the supply was larger and prices dropped sharply. The war in Mexico is still restricting shipments of tomatoes and peas from that country.

Root Crops

Nearby root crops such as beets, carrots, parsnips and turnips are coming to market. Beets were dull with a slow demand but more active demand is expected for the unwashed stock around the Hebrew holidays. Carrots were rather scarce and there was a good demand for fancy stock which sold at $1.25@1.40 per ⅝ basket. Parsnips were scarce and good parsnips sold at $1.50@1.75 per ⅝ basket. The purple top variety of turnips was very dull but white turnips were in fairly active demand and brought good prices.

The sweet potato market was steady for fancy stock with poorer offerings moving very slowly. The best yellows sold at $1@1.25 per ⅝ basket, while reds brought $1.15@1.35 with exceptional lots as high as $1.50. The market in New York was quiet with the best New Jersey yellows selling at $2.25@3 per bushel with reds and cooking stock bringing $1.50@2.25 per bushel. Delaware and Maryland stock sold at $1@1.80.

The apple market showed some improvement during the week and there was a better demand for fancy stock. The supply of offerings continued to sell slowly. Stock from Pennsylvania and New Jersey has been brought $1.50@2.25 per bushel in Philadelphia. Romes $1.50@2, Stayman Winesaps, Yorks $1@1.65 and Paragon $1.25@1.50 per bushel. The market in New York was firm for fancy stock. Romes brought $1@2.25 per bushel, Delicious $1@2.25, and McIntosh $1.50@4.

W. R. W.

Miscellaneous Produce

Philadelphia

Eggs.—Firsts, 31c; seconds, 30c.

Butter.—Creamery, tubs, 92 score 50½c; 88-89 score, 47½@49.

Poultry.—Fowls, 31@35c; Leghorns, 34@ 36c; young chickens, 35@38c; broilers, 40@ 42c; old roosters, 25@28c; ducks, 32@35c; turkeys, 37@40c; rabbits, pr. 18@20c; Guineas, per pair, $1.20@2.

Apples.—U. S. No. 1, per bu., Maryland Black Twigs, $1.50@1.75; Penn'a Yorks, $1@1.65; New York Starks, $1.45; nearby ⅝ bskts., Ben Davis, 40@65c.

Celery.—Fla., 10-inch crates, washed, 3 doz., $2@2.75.

Beets.—Nearby, ⅝ crates, 65@85c.

Cabbage.—Fla. bpr., Tex. 100 lbs. crts., $2.50@3.

Lettuce.—Calif. iceberg, crates, 4 to 5 doz., $3.50@3.75.

Onions.—Ohio, 50-lb. sacks, 1" S. No. 1, yellow, $4@4.50; Ind., 100 lb. sack, $5.

Potatoes.—Pa. round whites, per 120 lbs., $1.20@1.40; Maine Spaulding Rose, $1.40@ $1.50.

Sweet potatoes.—Md. and Va. bu. hamper, No. 1 yellow, $1.40@1.60, N. J. ⅝ bskts., yellow yams, $1@1.25.

Parsnips.—Nearby, ⅝ bskt., $1@1.50.

Rutabagas, nearby yel, cwt., $2@2.50.

Turnip tops.—E. Shore, bu., 50@1.25.

Pittsburgh

Butter.—Creamery prints, 92 score, 50@ 50½c; tubs, 55@55½c; local tubs, 52@54c.

Eggs.—Fresh, select white, 29@30c; brown, 37@38c; current receipts, 34@35c.

Poultry. Heavy hens, 30@32c; Leghorns, 28@32c; springers, 30@32c; roosters, 20c; ducks, 28@30c; geese, 22@25c; pigeons, 40 @50c per pair.

New York

Butter.—Creamery, higher than extras, 48¾@49½c; extras, 48½c; seconds, 47@ 48c.

Eggs.—White eggs, current receipts average extras, 37c; extra firsts, 36c; mediums, 35c.

Poultry.—Live, by express, fowls, 36c; chickens, 32@36c; pullets, 31@36c; ducks, 28c.

Apples.—Eastern and Southern, bu. bskts., Romes, $1@3; Wealthy, $1@2.25; Delicious, $1@2.25; McIntosh, $1.50@4; barrelled stock, No. Spy, $3@8.50, York Imperial, $3@6.25; mixed varieties, $2.75 @5.50.

Potatoes.—L. I., 150-lb. sack, $1@2.25; Maine, $1.75@2.

Sweet potatoes.—Jersey, best bskt., to 3.00.

York

Butter. Country, 70@75c; separator, 6@68.

Eggs. Fresh, per doz., 35@36c.

Poultry. Hens, dressed, 26@30c; broilers, $1@1.50 each.

Vegetables. Potatoes, 65@90c per bu.; cabbage, 5@20c per head; lettuce, 6@8c bd., spinach, 15@20c; ⅝ pk.; turnips, ⅛ pk.; celery, 5@15c stalk.

Apples. Per bushel, $1.25@2.

Lancaster

Butter. Country butter, 55@60c; creamery, 58@60c.

Poultry. Chickens, dressed, $1.25@2 each; springers, 75c@$1.25 each; fowls, $1.50@2.75 each; squabs, 25@50c each.

Eggs. Fresh eggs, 33@38c.

Vegetables. Asparagus, 25c per bunch; beets, 10@15c per bunch; egg plants, 75c each; string beans, 35@40c per ⅝ basket; beans, Lima, 40@45c per pt. box; cabbage, 10@20c per head; carrots, 8@15c per bunch; Brussels sprouts, 25@30c per qt. box; cauliflower, 25@50c per head; celery 10@25c per bunch; cucumbers, 10@20c each; onions, 12@15c per ¼ pk.; rhubarb, 12@15c per bunch; peppers, 5@8c each; endive, 10c per head; lettuce 10@20c per head; potatoes, 80@10 per bunch; mushrooms, 25@ 30c per pt. box; peas, 25@30c per ¼ pk.; onions, 20@25c per ¼ pk.; green corn, 10c per bunch.

Potatoes. Per bu., 65@75c.

Sweet potatoes. 20@25c per ⅝ pk.

Baltimore

Butter. Creamery, fancy, 51@53c; and dairy prints, 30@32c; packing stock, 30@31c; butterfat, lb., 49@50c.

Eggs. Md.-Pa. nearby firsts (loss off), 30@32c, western firsts, 30@ 29½c.

Live poultry. Hens, old, 4½ lbs. and over, 34@35c; small to medium, 24@ Leghorns, 30@32c; young chickens, broilers, small, 42@45c; Guineas, 1½ lbs. or over, each, 60@81; roosters, 17@20c; ducks, 25@32c; pigeons, pair, 35c; squabs, 30@50c; turkeys, 30@40c.

Apples.—Fancy pack, bu., 81@2.25; bbl., $3@6.75.

Potatoes. Per 150-lb. sack, $1.30@2.

Sweet potatoes.—No. 1, hamper, $1@1.25. Yams, per bbl., $3.25@3.75.

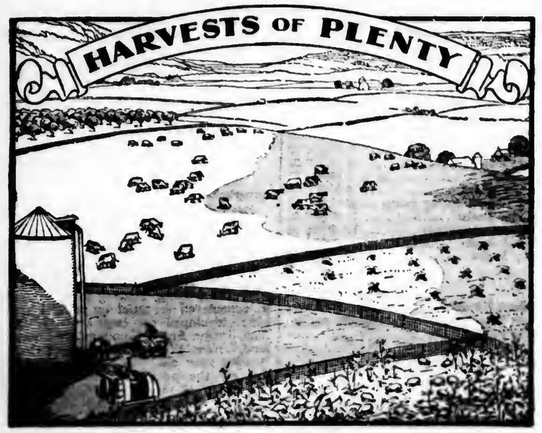


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THE ADVERTISEMENTS in Pennsylvania Farmer contain information that is valuable and important. Read them and when answering them mention Pennsylvania Farmer. It will help us and help you.

Readers' Views

Attacks by Bulls

I AGREE exactly with Theodore Smith in his article "Treat 'Em Rough" in the matter of handling bulls in your recent issue.

I was brought up on the old homestead along the banks of the Chazy River in northeastern New York. When I was about 15 we had a red bull over a year old. He had never showed signs of being unruly, so my sister, two years younger than I, and myself went in the pasture where the bull and the cows were without suspecting any treachery.

One day in passing through I suddenly heard "Br-r-r-r" behind me and looking quickly back there was that young devil tearing along with his head down and his eyes blazing. Fortunately I had picked up a piece of wood we call "iron wood" about the size of a small bat, which I was carrying in my right hand. He was so close that I performed, instinctively, the neatest side-step that was ever pulled off, and as his head just passed me I let him have that club full drive over the snout, and before he could recover I fetched him another over his left eye, putting it completely out of business for many days, and at the same time I gave a yell that would have made an Indian whoop sound like a whisper.

The bull, bleeding at the nose, being young and inexperienced in warfare, kept right on going until he got safely out of reach of that terrible club. As we had no use for him we butchered him shortly afterwards.

A Gentle Jersey

A couple of years later father got a Jersey bull calf. We thought a great deal of him, he was such a fine gentle little fellow. When he became a yearling, and as he had been well cared for he got to feeling a bit peppy, but as yet showed no signs of ill temper.

That fall, following the spring he was a year old, father and I were across the river raking out some potatoes when suddenly I caught sight of the bull cutting through the field on the opposite side of the river, and making tracks up the river in the direction of a neighbor who had quite a herd of cows headed by a large mongrel bull. Father said for me to go after the bull and lead him home with the potato hook in his ring. I pulled off my shoes and socks and, hurrying up the river where the water was shallow, I waded across, but no bull could I see.

I was anxious to head him off before he got to the fence and followed it into the woods. Just as I was rushing past a small clump of hazelnut bushes I heard that old familiar sound of warning, "Br-r-r-r", and quick as a flash out of the corner of my eye I saw Seth, our Jersey bull that we had thought was so gentle, tearing at me with lowered head, eyes flaming and open mouth bellowing rage. Again I worked instinctively. I brought that potato hook down on him for all I was worth, and I was considered as being pretty husky. He turned sidewise just before the hook hit him and when it did the yank I got threw me flat on the ground. I didn't take time to examine which part of the hook was going to hit that bull, and as it happened the force of my blow drove the four times into him just behind the right hip and the hook stayed with him.

A Cowed Bull

I jumped to my feet and looked around for the bull and when I caught sight of him he was tearing through the rapids heading for home. The water wasn't very deep and he sent the spray flying sky high in his mad rush to get away from that thing sticking in him. I can see him now as he tore down the road, across the bridge and into the lane, tail and potato hook flying out behind like a couple of streamers.

Father saw him coming and hurried



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To many farmers the boar on the farm is a problem. We handled boars on the farm for years, but do not recall one of our boars ever having broken a fence. If you have a bunch of fattening hogs on the farm you are bound to have trouble and plenty of it if trouble of you must on keeping the boar just across the fence.

If you are hemmed in on every side with hogs it becomes an out and out matter of shutting up that boar so he where and it the owner is the kind who takes trouble by the forelock he will get that boar "canned" but in the larger gilts in the feeding field come in heat the first time and just so much better for the fence and just so much cussing prevented and running around with the pitchfork avoided.

Common Occurrences

The writer has seen and very likely the reader has also seen, rams in the early fall restrained from a flock of ewes by nothing more than a wire fence. If this is an aggravated case like I have seen the ram may have torn the whole top of his head to the blood It is obvious that such a ram does not go into the ewe flock at some later date in his best serviceable condition or go through the breeding season as well as if his care had been directed right.

A young farmer the other March morning asked the writer to suggest a cause for the death of a sow that he was fattening in a drove of several of the same kind In the morning he had let them out into a frozen stalk field at noon it had thawed and he tried to call them out, but nothing doing At night one sow was found wallowing in a pond of ice-cold water, pretty well dead already and dead enough for the fertilizer wagon in a few hours

Upon inquiry it came out that the pigs had been all weaned the same day and that this bunch of sows were pretty much all in their second heat on full feed Out there in the stalk field after the spring thaw these fattening sows were rutting around Then in order to cool off they went to rolling in cold water.

Probably there is no more commanding distinction in the soundly successful herdsman than his attitude toward animals in heat It is not a matter of patience alone nor a matter of fine animal discernment only, nor of ethics—but as suggested in the foregoing paragraphs, definitely careful management of animals in heat avoids many an exasperation, many wrecked fences and damaged gates, saves the farmer dollars. Hiram Dobbin.

Tri-State Officers

OFFICERS of the Tri-State Sheep and Wool Growers' Association, which met in Washington, Pa., recently, are: President F. W Dorsey, Moundsville, W Va.; vice president, Bert Vickers, Piedmont, Ohio; secretary, John L. Miller, Claysville, Pa.; treasurer, John B Lodge, Cadiz, Ohio Directors: J E. Richardson, McConnelsville, O., Geo. H. Neuhardt, Elm Grove, W. Va.; Charles E. Cruthers, Taylorstown, Pa.

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SEED POTATOES. Irish Cobbler, Certified seed and sprayed Early Ohio. Prepaid $1.25 per bushel, 5 bushels or more $1.15 per bu. Porter Farms, Glassboro, N. J.

BETTER DAHLIAS.—Fifteen splendid mix, safe bloom, labeled $2.25. Gladiolus flowering size, mixed, fifty $1.00. Send for Spring Bulletin. Best Wishes Gladdahlia Farms, Chicopee Falls, Mass.

CERTIFIED SEED POTATOES. Smooth and original strain Carman No. 1. Write today for prices. Write today for prices. Baker & Sons, Fairport, New York

C. O. D. FROST PROOF CABBAGE Leading varieties now ready. 300 $1.00, 1,000, $3.00. Farmers' Plant Co., Tifton, Ga.

FROSTPROOF CABBAGE and Bermuda Plants. Strictly first class, large crates, prepaid $1 per thousand 5,000 or more. Carefully wanted. Guarantee Plant Co., Tifton, Ga.

SEND NO MONEY. — C. O. D. Frostproof Cabbage and Onion plants. All varieties at $1.00, 5,000, $4.00. Farmers' Plant Co., Tifton, Ga.

SEED POTATOES. Russets, Green Mts. and World Wonder that averaged 400 bushels per acre. All raised from certified seed. Write for prices. R. S. Lloyd, Oakfield, N. Y.

HARDY ALFALFA SEED, 95% pure, $6.00 bushel; sweet clover 95% pure, $2.00 bushel. Will send if not satisfied. Geo. Brunner, Kansas, Ohio.

DAHLIAS.—12 for $1.00 (postpaid) All shades and types including Cactus, Pompon, Collarette, Show, Decorative. Send for list. John Dee. J. Miller Clary, Avon, Ohio.

PAY THE POSTMAN. Send No Money. Frostproof Cabbage and Onion plants. All varieties 500, 65c; 1,000, $1.00. Albany Plant Co., Albany, Ga.

BABY CHICKS

BABY CHICKS from quality chicks. We cull closely at only large eggs. Our large, farm pedigreed flocks of from 150 to 1,000 which assures you the utmost in vigor and fecundity. White, Buff and Barred Rocks, $13 Leghorns, $12 per 100. 5% discount on orders booked three weeks in advance Circular free. Lincoln Hatchery, Blanchester Ohio

EGGBORN EGGS AND CHICKS. Big profits among new for spring shipment from 3 to 5 lb. roaster males. Egg breed 29 to 30 lbs. Turn to page 29 for special price bulletin free Thousands of 50 egg contests Shipped prepaid, cockerels at low prices Eggborn Poultry Farms, 900 Union, Grand Rapids, Mich.

LUX CHICKS GUARANTEED to be of as high more than ordinary chicks and as high grade as in America. Pedigreed Barred Rock and White Leghorn breeding stock. Late pullets. Amazing egg records. Turn to page 29 for full details. Turn to page 29 for Lux Chick AA last week and watch your step for wonderful chick values. Catalog free. Lux Hatchery, Napoleon, Ohio.

BILL R. C. White Leghorn Chicks from supervised breeders on our own farm only larger, more vigorous, big type strain of white-shelled eggs layers and elsewhere at reasonable prices. Write for free catalog. Cherry Hill Poultry Farms, Box 4, Mollisterville, Pa.

SUPERQUALITY CHICKS from Imperial Ringlet Barred Rocks, Giants, White, Barred Rocks, Giants, Anconas, White and Brown Leghorns. Low Prices. Pure Bred Stock Free. Low Prices. Pure Bred Hatchery Bros. Hatchery, Dept. B, Ohio

Quality Comb White Leghorns, $12.00; Barred Rocks and Reds, $14.00 100. White Wyandottes, Mixed, $10.00. 100 All good strong chicks. Special price on 500 or more. Reasonable prices. Prepaid delivery. Special price on 500 lots delivery. Circular free. Jacob Reimond, Chandler Pa.

SPRING BROILER CHICKS.—Butcher, we pay extra prices for your pure bred White Wyandottes, Orpingtons Description and folder free, showing boat varieties and market chickens. Farm Service, Elizabethtown, Pa.

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ENGLISH WHITE LEGHORNS Tancred Imported blood. Hatches every week. Write for prices. Get free Catalog prices. Willacker Leghorn Farm, Box 1, New Washington, Ohio.

QUALITY.—4 breeds, Leghorns, Reds, Rocks, Orpingtons. Over 100 Acres Breeding Farms. Every improvement, equipment and experience to produce profitable chicks. All Blood Tested. Bad Brothers, Box 41, Zion, Pa.

EXTRA LARGE Single Comb White Leghorns, exceptionally Chicks, Eggs, Stock Hatches, Lay exceptionally large Write for prices Catalogue Free. Hillcrest Farms, Grampian, Pa

BIRDS EGGBASKET STRAIN. Tancred Leghorns, winter income, $12.50 daily. 500 Chicks $140 for 1,000. Catalog. Birdseye Brothers, Electric Hatchery, Bertrandville, Pa.

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Quality Barred Rocks, 14c, Reds, 15c, Buff Rocks, White Leghorns, 13c, heavy mixed, 12c, light mixed 10c Special 500 and 1,000 lots, postage free. Write for Reliable Poultry Farm, R 2 Millers, Pa.

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BOSCAW WHITE WYANDOTTES. Eggs, Chicks. Big Record Ledger Stock. Trapnested, Winter layers Excellent type, color. Low prices. Catalogue Keiser's Lyon, Grampian Pa

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Pure from vigorous farm flocks White Leghorns, $12.00; Barred, White Rocks, $14.00; Buff Orpingtons, White Wyandottes, $13.00. Black Giants, $20.00 Mixed, $10.00. E. & R. Burger, Crestline, Ohio.

BOOKLET BROWN LEGHORNS.—Tormadden strain day-old chicks. Hatching eggs. Glad Farm, Emporium, Pa.

SEED POTATOES. Irish Cobbler, Certified seed and sprayed Early Ohio. Prepaid $1.25 per bushel, 5 bushels or more $1.15 per bu. Porter Farms, Glassboro, N. J.

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PETERSIME Electrically hatched pure bred Barred Rocks, Reds, "Business Tancred" White Leghorns, Breeders rigidly culled and specially fed for highest vitality Disease free Get catalog, attractive prices stating number. Garber Hatchery, Harrisonburg, Va

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HEAVY'S QUALITY Large Size Tancred-Barron English Single Comb White Leghorn Chicks, from my own flock, $12.00. Circular free. E. L. Heavy, Mechanicsville, Pa.

CHICKS from heavy laying strain Barred Rocks, 12c Mixed 10c 100% arrival guaranteed. Circular free R. J. Ehrleman, Box 50, Mc Alisterville, Pa.

SINGLE COMB REDS. Barred Rocks. Eggs, Chicks Extraordinary matings Fine type Bred for winter production. Catalogue Lee Sievers, Grampian Hills Poultry Farms, Grampian, Pa.

GIANT LIGHT BRAHMAS—Chicks, Eggs Extraordinary large breeders Fine color Record layers Standard bred. Low price Catalogue Giant Brahma Farms, Grampian, Pa.

WHITE LEGHORNS, White Rocks, Buff Orpingtons Chicks that live and grow into large healthy birds Exceptionally heavy layers R. F. Elliott, West Brownsville, Pa.

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BARRED ROCKS from Standard Bred trapnested stock Eggs $8.00 $10.00 100 Chicks $15.00 $20.00 100 100% delivery guaranteed Wood Breed Poultry Farm, McAlisterville, Pa.

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BEST WHITE LEGHORN CHICKS. Tancred strain Satisfaction guaranteed Circular free. Free Ranger Poultry Farm, Richfield, Pa

BABY CHICKS.—White Rocks, Barred Rocks, Reds. Contest winners in White Leghorns. Woodland Poultry Farm, Reedsville, Pa.

CHICKS.—ROCKS AND REDS 13c Brown and White Leghorns, 12c Harry E Kauffman, Mattawana, Pa.

HUSKY BARRED ROCK CHICKS. 14 cents White Leghorn, 12 cents. Paul Clark, Sunbury, Pa

PET STOCK

PEAFOWL, Pheasants, Bantams, Pigeons, Birds, Rabbits Free Circular John Haes, Bellandorf, Iowa

TURKEYS, DUCKS, GEESE, GUINEAS, RABbits, Pets. Free price list. Edwin Souder, Bellefonte, Pa.

POULTRY

SINGLE COMB BROWN and WHITE LEGhorns 337 egg Cockerels, etc. Vera Dutton, Gallipolis, Ohio.

BARRED ROCK COCKERELS. Big bone type Certified stock, hatching eggs and baby chicks. Eugene A Grove, Lime Kiln, Md

DUCKLINGS and GEESE

12 MAMMOTH TOULOUSE GOOSE EGGS $6.00 postpaid $23.50 per 50. From large old breeders. Valuable instructions with each order. Satisfaction guaranteed. Hatch early for size Highland Farm, Sellersville, Pa.

DUCKLINGS.—Mammoth White Pekins. 1,200 weekly. 25c each 10c less in 100 lots. 25% deposit, full remittance with order. Hacher Bros. Hatchery, Dept. H. Bucyrus, Ohio

PARDEE'S PERFECT PEKIN DUCKLINGS $33. Eggs $14 100 "World's Best" Service Satisfaction Duck News" Free Roy E. Pardee, Ash St., Islip, L. I., New York

WHITE PEKIN DUCKS. Eggs and ducklings reasonable. Flocks headed by mammoth 8 to 10 pound drakes Catalog free H A Souder, Sellersville, Pa

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12 MAMMOTH BRONZE TURKEY EGGS $6.00 postpaid Fertility guaranteed Valuable instructions with each order. Breeders, Catalog. Highland Farms, Sellersville, Pa

TURKEY EGGS. From our famous flocks All breeds Also hens and pens. Special prices. Eastern Ohio Poultry Farm, Beallsville, Ohio.

LARE BRED MAMMOTH BRONZE TURKEY Egg. Trowbridge Turkey Farm, Schnecville, Pa

CHOICE MAMMOTH BRONZE TURKEY TOMS, $10.00 each Regal Turkey Farm, Nevada, Ohio

MAMMOTH BRONZE TOMS and yearling hens. Mrs S. Owen, Seville, Ohio.

GIANT MAMMOTH BRONZE TOMS. $12.00. J. D. Moreland, Quaker City, Ohio.

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MY BARRED PLYMOUTH ROCKS are big, vigorous fancy, high producing birds. Eggs $2.00 per 15, $5.00 per 45 and $10.00 per 100 postpaid Circular. R. I. Keene, Spencer, Ind.

BUFF ORPINGTONS PARTRIDGE ROCKS, Silver Spangled Hamburgs. 15 eggs, $1.75. Chicks 15c each Springwater Farm, Kinkletown, Pa.

REDS, BOTH COMBS.—Eggs, $1.50-15; $3.00-30, postpaid Bred to win and lay, 30th year. Circular free Linc Roberts, Pottsboro, Ohio.

EGGS, Spanish Red Caps. Mammoth Buff Pekin Rabbits. Breeders' Supply, Box P, Catskill, N. Y.

BUFF ROCK EGGS for hatching, 15 for $1.25; 50 for $2.25 prepaid Orton Hough & Son, Smithton, Pa

SINGLE COMB RED STOCK. Hatching eggs, $3.00 per 15 Harold Frisk, Mercer Pa

EGGS. Buff Orpingtons, 15, $1.25, 30 $2.25; 100 $4.00. Prepaid. W. Lothers, Pemdark, Pa.

ALFALFA

HAY.—All kinds alfalfa, clover, timothy and mixed Delivered prices Harry D Gates Company, Mechanicsburg Ohio

ALFALFA HAY.—Car lots for sale. Chas. B. Wing, Box 22, Mechanicsburg Ohio

RABBITS

MAKE BIG PROFITS with Chinchilla Rabbits. Real money makers. Write for facts 848 Conrad's Bldg., Denver, Colo

MISCELLANEOUS

DO NOT EXPERIMENT with Your Cows, Horses, etc. Harry G. Cuendell of Highrock, Ohio, writes:—"I used your remedy successfully on two cows, and then recommended them to a friend for two cows which both freshened. This order enclosed is for another friend. Cow Tonics, Heaves, Bag Remedy, Remedies for Failure to Breed, Stanchions, etc. Information and Booklet Free. Breed-O-Remedy Co., Box 2240, Bristol, Conn.

FARMERS SAVE, MAKE OWN SPRAYS. House, barn, chicken house, animals, flies, bugs, garden. Mixtures cost about 25c gallon by our formulas. We sell six formulas for $1.00 Quaker City Products Service, 2304 Hamilton St. Philadelphia, Pa.

WHY BLAME THE BULL when your cow does not breed? Use Cow Catch 1 hour before service Results or your money back; 65 cents for one cow, $2.00 for five cows, postpaid. Woodstock Farm, Route 2, Box 50-C, Renton, Washington.

ROOFING PAPER.—3-ply, $1.35 per roll, 100 square feet, Prepaid. Asphalt shingles, roof coating, paint. Send for price list. Winiker Bros., Millis, Mass.

WATER PUMPS WATER night and day with Riffe's Hydraulic Ram No attention, no expense Write for free catalog. Sold only by H. T Dixon, 15 Park Row, New York

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DONY'S SALVE.—Sold on its merit for 64 years. For sore and scratched cow teats. The great healing compound. Send 25 cents to P. W. Leech & Company, Honesdale, Pa

FOR SALE.—Six Vulcan 2-bottom Tractor plows, $60 each. Jennie Michel Brothers, Wexford, Pa.

FOR SALE.—Huber Traction Engine. Also steel thresher. Box 112, Penn's Farmer, Pittsburgh.

TOBACCO

GUARANTEED HOMESPUN TOBACCO.—Chewing, 5 pounds, $1.50; 10, $2.50. Smoking, 10 lbs., $1.50, free. Pay Postman. United Farmers Bardwell, Kentucky.

LEAF TOBACCO.—Good, sweet chewing, 3 lbs., 50c; 5, $1.25; 10, $2.00. Smoking, 3 lbs., 50c; 5, 90c; 10, $1.50. United Farmers, Mayfield, Kentucky.

FOR THE HOME

100 ASSORTED dishes packed as first quality consisting of cups, saucers, plates, bowls, oatmeals, platters, etc. All useful. Slightly imperfect. $6.50, prepaid. Send money to us for immediate shipment. Home China Co., Millie, Mass

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HIGHLY PEDIGREED GERMAN POLICE PUPpies. Special values. Art quick. Daniel Glick, Lancaster, Pa.

FOXHOUND PUPS, 5 months, Black and Tan, Dutch ears, $12.00 each, from parents which run fox only. Wm. C. Sheeler, Limekiln, Pa.

PEDIGREED POLICE PUPS.—Two females, 11 weeks $8.00 each. Mabel White, Connellsville, Pa

FOR FOX TERRIERS, write R. E. Cope, R. 2, Salem, Ohio.

SMOOTH FOX TERRIER PUPPIES. Wm. J. Brinke, 1224 Brinkerhoff Avenue, Utica, N. Y.

COLLIE and FOX TERRIER PUPS. Handsome and intelligent. Leaders Kennels, Grove City, Pa

SITUATION

DO YOU NEED FARM HELP.—We have Jewish young men, able-bodied sense with, but mostly without experience, who want farm work. If you need a good, steady man write for an order blank. Ours is not a Commercial Agency. We make no charge. The Jewish Agricultural Society, Inc., Box C, 301 E 14th Street, New York City

PRACTICAL NURSE wants care of elderly person or children. Can give reference. Box 552, Clifton Springs, New York.

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WANTED.—Large Black Walnut Trees 75 inches around and up. Also Blackfanner Black Raspberry plants for sale $6.00 thousand Elmer Crone, R. 3, Dover, Pa.

HAY AND GRAIN WANTED

WANTED.—Hay, Straw, Grain, Potatoes, Apples, Cabbage, etc. Carloads. Pay highest market prices. The Hamilton Co., New Castle, Pa.

MALE HELP

WANTED.—Farm Superintendent. One who can keep books preferred. Address P. O. Box 228, Leesonia, Ohio, stating age, experience and salary expected.

HONEY

FINE CLOVER HONEY 2 lbs., 20 cents; 5 lbs., $1.15; 11 lbs., $2.00, all in special parcel post containers, postpaid. R. H. Flory, Depicts Lake, Custer County, Pa.

BULK COMB AND EXTRACTED, white 5-lb. pail, $1.25; amber, $1.10, postpaid. Ed. Mitchell, Castalia, Ohio.


a healthy 2 yr. old is ready for 3 meals a day at table with the family.
WELL, TOMMY NOW I'M 'EMER OLD ENOUGH T'EAT MEAT W' TATERS WITH YER, SO, YE MIGHT AS WELL LEARN T' PUFF A COB O' TERBACCY WITH'IM, TOO.
JOHN!
THERE'S USUALLY A REASON FOR SOME TERRIBLE MURDERS
Don't
EXPRESS YOUR LIKES AND DISLIKES FOR A FOOD IN HIS PRESENCE
NOR DISCUSS HIS LIKES AND DISLIKES
SON, WHY DON'T

Regular PAY DAYS *for the* TRUCK GROWER

TRY each season to top the market with your truck and you won't have to worry about losses. To put money in the bank, produce must grade high and reach the consumer in good condition.

Now and then a strong market will take off-grades at a profit but usually they are not worth their freight. Fruits and vegetables that are uniform in size, shape, color, flavor, and texture bring back the pay checks year after year.

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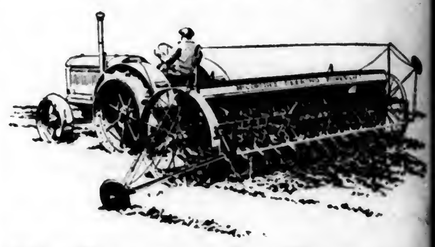
Potash overcomes loose texture, flabbiness, and helps control disease, taking your crop to market firm, meaty, well-flavored, and well-colored. Make sure that your fertilizer contains plenty of potash. It helps you to have a good year every year.

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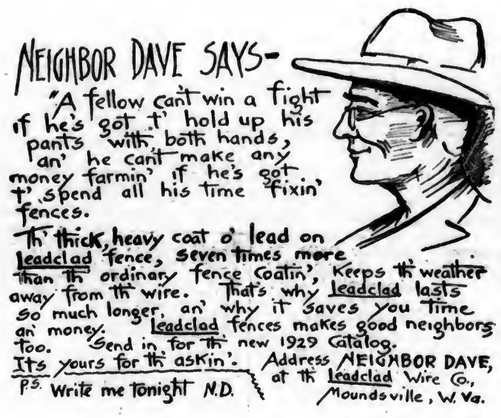
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With so many factors beyond human control, it is unwise to plant with an uncertain or worn-out machine. Plant your 1929 grain crop with a new McCormick-Deering Grain Drill and rest assured that your crop has been planted right. Sold and serviced by McCormick-Deering dealers everywhere.

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Power-Lift Tractor Drills. Horse-Drawn Drills. Press and Fertilizer Drills. Single- and Double-Disk Drills. Hoe Drills. Shoe Drills. Press Drills. Grass-Seed Drills. Broadcast Seeders. Endgate Seeders. With fluted or double-run feed, open or closed delivery, wood or steel wheels, and with many superior mechanical features.

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1879 GOLDEN ANNIVERSARY YEAR 1929



Select Oil *as carefully as* Seeds .....

JUST as good crops come from good seeds, FREEDOM products are superior because they come from the finest of crudes—Pennsylvania.

Even FREEDOM Kerosene, with its clean burning qualities, proves the superiority of 100% Pennsylvania Crude.

For 50 years, other FREEDOM products—oils, gasoline, and greases—have been serving the farm market. This long experience costs you nothing additional—simply mention "FREEDOM" when you buy.

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Our lime, burned from Western Pennsylvania high-calcium grey limestone and sold in these three forms for the past 18 years, represents the standard, unfailing and economical method of sweetening the soil. The wonderful results enjoyed by our many customers over this period of time prove these facts. Can anyone afford to waste both time and money by using substitutes? If your dealer cannot furnish our Agricultural Lime write to us for prices.
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PENNSYLVANIA FARMER

Published Weekly — Established 1877

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March 30, 1929

N. J. AGR'L EXP'T STATION APR 1 - 1929 SMS



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Bargains in FORD'S "Sound Seeds"!

We have Sold Seeds for 48 Years and have Thousands of Satisfied Customers!

For the GARDEN

It is easy to have a glorious display of beautiful flowers if you will plant Ford's Sound Flower Seeds. We grow only the finest varieties and take especial pains in gathering the seeds and caring for them so that they are full of vitality when you get them. Plant them according to instructions given in the catalog and you will surely have success.



Cannas 15c

Our assortment of Cannas includes the very choicest varieties; gives a wide range of color both in flowers and foliage. Price each 15c; 8 for $1.00.

Elephant Ear 15c 7-9 in. bulbs

This remarkably beautiful foliage plant has immense leaves, often three feet long and nearly as broad. Very showy. Thrives in sun or shade. Bulbs grow year after year. Choice 7 to 9 inch bulbs. Prepaid, each 15c; dozen $1.00.

Tuberoses 75c

These old-fashioned, sweet-smelling flowers deserve a place in everyone's garden. Sometimes 25 to 30 blooms on each stalk. Very fragrant. Extra choice bulbs. 75c per dozen.

Gorgeous Lilies 4 for only $1.12

Surprise your friends with the beautiful lilies grown from Ford's Sound Bulbs. These are high-grade, full size bulbs that will bloom this year. Plants grow 3 to 4 feet tall, filled with blooms. One each of Regal, Auratum, Speciosum Rubrum, and Tigrinum, $1.00.

Special Offers

These are bargains in high-grade plants. Don't overlook them when ordering.

Glorious Gladiolus $1.00

16 of our finest varieties of gladioli are selected for this special offer. All fine colors. Good strong bulbs. Regular price $1.37. Special Price $1.00 prepaid.

10 Perennials $1.00

Splendid specimens of best perennials; our selection of varieties. All properly labeled, a real bargain. Strong plants; sure to grow and bloom.

CLARK'S Early Orange Dent

The Finest Early Field Corn Half-Bushel $2.25

We honestly believe that in Clark's Early Orange Dent we have the earliest yellow corn. It is safe from frost in Northern Ohio, Pennsylvania, Michigan and New York. Stalks 9 to 11 feet tall; ears 7 to 9 inches long, and with 16 to 20 rows of kernels. Yields heavily, both in ears and shelled corn. Price for half bu., $2.25; bu., $4.25; 2 bu., $8.00 Not prepaid.

"Old Virginia" Ensilage Corn $3.50 per bu.

Here's the dairyman's most profitable crop. Customers declare it is superior to any other variety, being much sweeter, with larger ears. Keeps better in the silo. Produces the largest amount of milk and meat. We sell thousands of bushels every year which makes this low price possible. Price, bu. $3.50; 2½ bu. (full sack) $7.50; 10 bu. $28.00. Not prepaid.

Special Low Prices on Sweet Corn

We can supply all good standard varieties of sweet corn. This is one of our specials. For a succession of crops, plant Ford's Early, Nectar, and Ford's Golden Sugar. Prices of each per pound, 20c; 5 pounds, 90c; 50 pounds, $7.50. Not prepaid.

Barden's Wonder Bantum, a fine variety, golden yellow. Pound, 25c; 12 pounds, $2.40; 50 pounds, $9.00. Not prepaid.

Certified Seed Potatoes

$1.50 per bu. in 10 bu. lots. It will pay you to plant certified seed potatoes this year at the LOW PRICES we are quoting. Extra choice seed. White Rurals, Rural Russett, Irish Cobbler, Early Ohio and Early Rose. Pk., 60c; bu., $1.80; 5 bu., $8.00; 10 bu. or over, $1.50 per bu.

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Farm Facts and Fancies

By ALVA AGEE

An old colleague in farmers' institute work recently wrote me, enclosing a copy of a letter he had received from a man who had heard him lecture twenty-odd years ago. The man was badly discouraged at the time, and the address gave him a new point of view and courage to try to win out. He had been waiting all these years to meet the speaker and thank him for the service that had been rendered. Of course my old friend was rightly pleased, and the satisfaction is his because he has an honest interest in people. I am convinced that the world makes slow progress and our individual lives are impoverished by inability or want to see each one prosper. The reading of that statement puts the matter too baldly to be acceptable, but how else account for the attitude of indifference? Lack of interest is tough—for on the one having the lack than it is on other people. It narrows abominably.



A Blind Alley

A college degree is a requisite to admission to most professional work. A young man who became a helper in government research work when he left high school, and who later married, has been telling me how hopeless much future advancement now appears. He went into the work on account of his liking for nature studies, and has been so faithful and efficient that he has had about all the advancement in responsibility and salary that now appears possible.

It is an old story to those engaged in college work. Through experience in the field, association with scientists who are interested in the same line of work and much reading and study for the sake of better understanding of all with which he is in touch, he probably is better educated than a majority of recent college graduates. He doesn't say these things, but I have had means of knowing. And now he has let a natural interest in a line of work land him in a blind alley.

Some one will say that he should have gone to college four years, but he didn't. And yet he knows a lot, and could do better paid work if regulations permitted.

A College Degree

Our educators have taken the easy way for themselves. It would not be easy to measure the mental equipment of young people if they were not run through fixed chutes with gages marked on the sides. No machinery has been set up for determining the value of an education obtained outside of fixed channels, and the lack of a board keeps a person out of the company that is passed on to fill the professions.

I know a scholarly man who has hacked his way through ability into a responsible position, and yet he could not get a degree from his college because a year of modern language stood in the way. Probably he would be barred if he asked for it now. It is easier to have a fixed guage, no matter how inadequately it measures actual capacity. We seem to like union rules, and to feel safer when they are enforced. Anyway, they make the educator's work easier.

In the meantime this young man, with wife and baby, cannot realize on the capital he has acquired through earnest work and unusual natural capacity. His advancement would be entirely too irregular.

Books

The public library has made such headway in country homes that it is to be classed with the radio as an educational force. I wish there were less interest in recent books shown by some who select the reading matter. I read a weekly magazine devoted to criticism of new books, because I like to know what is being written, but I rarely buy one of them or take one from the public library.

There is a limit to the amount of reading one can do. Some of the world's brightest men have been writing books during hundreds of years, and would it not be an extraordinary thing if any one year could give us many books that could be rated with the great literature of the past? If I give time to the reading of a new book, the chances are that it is one that will drop out of sight in a short time on account of lack of worth.

I make an exception in biography and memoirs when the writer is worth while, but our librarians should hold up before us the accumulated wealth of great books in all past years. In them are intensely interesting reading in every line—the best of fiction as well as the best of all else, excepting science.

Why Not All Millionaires?

Quite often some one who is highly successful in the financial or commercial world rises to remark that the fault must lie with the individual farmer when he does not prosper, because we have many individual examples of success in farming. Equally, then, why are not all men in commercial life rich as the critic may be? Some are, and why do not all the others get into their class? These critics should have plenty to do in calling attention to the failure of ninety-nine per cent of the men outside of agriculture to get rich. Special circumstances have had a lot to do with landing a few at the top while others equally capable do not keep company with them.

Instances of success in farming are common, but they prove nothing regarding the fairness of farming conditions. Anyway and anyhow, when any financial authority undertakes to tell farmers what's what the only net result is a little irritation that could be done without. The chances are that if the breaks had not been in his favor some other man, equally bright, would have been in his position.

Large Land Holdings

Confirming the belief of many of us that the drift need not be toward very large land holdings to make farming pay, we have the report of a study made by the Ohio Station in twelve counties where one hundred and twenty-three holdings averaged a little over one thousand acres each.

The report says: "The trend, however, is apparent where buildings are available, to divide up large holdings into smaller units and to operate them with tenants rather than with hired labor."

Theoretically and reasoning from experience in industry, food production costs should be lowered by extensive farming practically the personal interest of the man dependent on the income from a farm of average size overbalances the advantages of the large unit of production. There are exceptions, but the rule remains.

He Was Hopeful

A colored preacher in Alabama was one day talking to one of his aged parishioners, who ventured to express the opinion that ministers ought to be better paid.

"I'se sho' glad to hear yo' say dat," responded the parson, warmly. "I'se pleased dat yo' think so much of de ministers. So yo' think dey'd ought to git bigger salaries?"

"Sho' I does," said the old man. "Den mebbe we'd get better men."

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NESHAMINY GARDENS

By R. P. KESTER

SPACE does not permit the discussion of all the inquiries received on gardening, fruit growing and chickens which come with the request that they be answered in the Neshaminy Garden notes. This week I shall take up a series of questions found in the following letter, and this will answer, incidentally, several other similar inquiries.



"I want to talk to you about baby chicks. I have been trying to raise them under stove brooders for years. My experience has always been that they will not stay under the hovers after ten days old, or even one week, but hunt the corners and this gives me no end of trouble to prevent them from smothering. I never raised over seventy per cent, and generally about fifty per cent. Always there are two pullets to one cockerel among those coming to maturity; i. e., about twice as many cockerels died as pullets. You have had remarkable success, and I would like to ask you the following questions: 1 What size is your house? 2 How many chicks do you brood in it? 3 What is the diameter of the canopy? 4 How high do you keep the edge of the canopy from the floor? 5 Do your chicks stay under the hover after they are a week or ten days old? 6 Do you let the chicks out of doors after first week or ten days? 7 Do you use electric lights in brooder house? 8 Do you have any trouble with chicks crowding into corners when darkness comes instead of settling down under the hover?

"The brooder which I first used had the hover set not over six inches from the floor. The ones I have now are much higher, but I have not had any experience with them as yet. It occurs to me that the temperature would get too high under the old one, although the temperature at the edge was correct"—S. F., Berks county, Pa.

• • •

Our friend "S. F." has evidently read in this column the last two years the statement that we had raised 97 per cent of the baby chicks bought each year. That statement taxed the credulity of several people, but it is the unvarnished truth. I do not take the credit for the unusual success. That belongs to Albert, my son-in-law, who had full charge of the chickens. But I think I can explain how it was done and thus answer the questions raised above.

The chicks had a new house each year. We built them for laying hens and used them each year to brood the chicks. Each house is 16x20 feet, although the part used for the 500 chicks was about 16x16 feet. The coal brooder stove was set up in the center of this space. We have come to the conclusion that not over 400 chicks should be brooded in one flock, or under one hover. Another thing to keep in mind is that, almost without exception, the manufacturers over rate the capacity of their hovers. In other words, a hover listed as having a capacity of [illegible] chicks is right, after the first week, [illegible] 500, or even 400 is better.

A baby chick knows a little less than nothing at first, hence it is necessary to act accordingly. We enclosed a circular space around the brooder by using 18 inch poultry netting and fixing it on the inside with cheese cloth or other material. This "fence" is placed around the brooder about four feet from the edge of the hover at first, and the space is enlarged as the chicks grow. By doing this the chicks are kept not too close to the hover and it is impossible for them to find any corners to pile up in.

I am inclined to think that the trouble with our friend was that the hover was too low and it got too hot under it. Chicks like warmth, but they will not stay where it is too hot so they can get away. The height of the hover from the floor should be adjustable so that it can be varied with the weather, and with the age of the chicks.

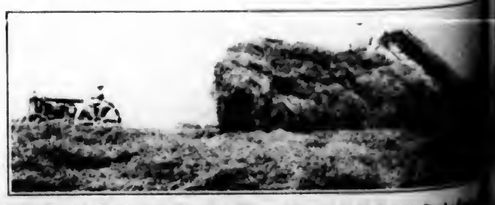
The diameter of our canopy is 60 inches and it is rated as a [illegible] chick brooder, although it is now [illegible] large for 500, and would not long be for that many if started as early as February. We get ours each year the first of May.

With the enclosure mentioned above we never had any trouble in keeping the chicks comfortable when the hover is adjusted properly. Of course they are not always directly under the brooder under the hover. The fence helps to confine the heat to a smaller area on the floor, hence a ring of warmth forms just under the edge of the canopy and entirely outside. But they stay where it is most comfortable, gradually moving as warmth increases or decreases.

Our chicks were not let out on the ground until they were more than half grown. The floor was covered with peat moss to a depth of three inches. This, and keeping them off the ground until nearly grown, helps to prevent trouble from coccidiosis, one of the most disastrous of chick diseases.

As stated above, we have not hatched chicks earlier than May first, and have had no need for electric lights. The days are long enough through the summer season so that lights are not necessary.

In addition to the brooding principles which Albert followed, part of his success is due to following a regular schedule in feeding and watering and to keeping everything as sanitary as possible. In addition, he used a well known brand of commercial chick feed. That brand is only one of many on the market today, most of them good. While you can fill the chicks up on a feed that is less expensive in price, yet we have found that it pays to use a feed that has all the essential elements combined in the proper proportions, something the layman is not likely to do if he tries to get along more economically by mixing his own feed. The reliable feed manufacturers have at their command the very best and latest findings of scientific research and experimentation in the matter of feeds and



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The Human Side of Europe

A Visit to a Czechoslovakian Farm

By ELLEN S. BRINTON

I HAD a particularly interesting visit to a farm about 15 miles out of Prague, Czechoslovakia. It was so different from any farm that I would find in America that I had difficulty in making my hostess understand what I was looking for.

All farms are still designed after a pattern adopted apparently in the Middle Ages—that is the buildings are in a hollow square or a series of squares. I was taken into the court yard.

"But where is the farm?" I asked, and again they would point out the stone buildings that looked like a block of city homes. I could not see outside or over the top and so I always had to guess that the fields were some place way off in the distance.

We entered an arched door. The owner lived in a very elaborate house at the right, gay in color with red tile roof, and the walls too, ornamented with colored tile. There were balconies overlooking the village street, but no entrance except through the main gate and then into the house door. As usual electric lights were available.

Inside the court all the gayness seemed to vanish, or perhaps it was the piles of manure that seemed to spoil the appearance for me. The back of the house was utterly different from the front. Down the other side of the square was a continuation of chicken house, places for pigs, and straw and storage rooms above. The opposite side of the court was identical in design but used for a cow stable. At the end, along the village street, was another home matching the owner's in design. Here lived a married son and his family.

Through the door in the very corner we entered a hall and then into rooms looking almost like our American homes. Electric lights and shaded lamps, rugs, pictures, furniture all very similar. Up stairs had a very modern appearance, and one of the children was hastily removed from the bathtub that I might see the furnishings of that room. Then we went to the kitchen. This was a clean white room that looked astonishingly like a small room in an apartment house. A very attractive painted folding table and chairs in the corner probably were for the maids—and there were several in sight. The most curious object was the stove, a huge affair of white tile. Faggots were burned as fuel.

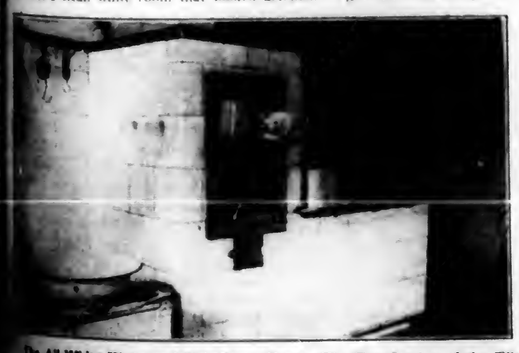


The Back of the House Pictured Below. Cows on the First Floor at the Left; Hay and Supplies Above

As a final bit of hospitality I was asked if I would like a drink of cream. Of course I accepted gratefully. The day was hot, and the walk from the station had been very dusty—anything to drink would be acceptable, and cream sounded like a delicious treat. It was brought on a dainty tray in high glass goblets, and on a plate were slices of rye bread. I was shocked to find the cream so sour it was almost thick. Hastily I tried the bread at home—rye bread was sweet and that I thought would cover up the other taste. But it too was sour—and so sour that even the caraway seeds could not disguise the flavor. There was nothing to do but get them down somehow for the sake of politeness and when my hostess apologized because the cream was "not sour" enough I could surely say honestly "I prefer it that way."



The Outside of a Czechoslovakian Farm. The Owner Lives in This House. His Son and Family Live in Another House on Opposite Side of the Gate.



The All-White Kitchen of This Same Home. The Top Section of the Tile Stove Is an Oven, with Fuel Door Underneath.

The sour bread and sour milk habits of the eastern Europeans was not a new idea, but I had forgotten I was in that section. To drink sweet milk and cream as we know is something that must be taught. Ideas of sanitation around the dairy are almost unknown so that milk naturally sours quickly. Cold springs for cooling milk do not seem to be available. Ice and ice houses are not heard of. Pasteurized milk is known only in the big cities and its use has to be developed by education.

This is the only place where I considered the wholesomeness of the food given me, and when I thought of the cows in the tight, hot stable only a few feet from where we sat and of the strange barefooted woman who took care of them and the milk, I was thankful I had been inoculated for typhoid before leaving home.

With all my questioning I did not get to see the fields but they took me all around the buildings, and I saw how the field workers lived, one family to a room, not much better style than the animals. I found here the only silo noticed on my whole trip. Corn does not grow here (and no one knows even the name) and I was puzzled as to what was put into the silo until I thought of tops from the sugar beets, which proved to be correct. Sugar beets are grown generally for sugar factories as well as for feeding cows.

This farm had about twenty-five cows milking. They were in a room next to the kitchen, mostly tied to rings in the wall. Almost never did I see stalls or stanchions. Land and pastures are scarce and there are no fenced fields as we have here. So far as I could learn milking cows are stabled practically all the time, and green feed is carried to them. This means alfalfa, grass, beet tops, or anything available.

Aside from the work in this system, sanitary conditions are what I would call bad. Windows are small and there are no ventilators. The air always seemed to be thick with moisture, heat and odors. Not enough straw is available for bedding or absorbent purposes, so that keeping the cows clean in these stables is a problem.

I mentioned in an earlier article that the medical and health authorities of these sections are interested in treating milk to ultra violet rays for the purpose of increasing the anti-rachitic properties. I am wondering whether the question would not solve itself if the cows were at pasture and in the sunshine as in this country.

But Europeans cling to old ideas even after the reason for their existence has passed. For instance, the hollow-square arrangement of farm buildings is evidently an inheritance from the Middle Ages, when protection from unfriendly neighbors was often necessary. It would seem now that protection from disease through sanitation were a greater need.

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Volume 100, No. 13 — Established 1877

AN EXCEPTION

AN occasional refreshing exception is noted in the current scramble for tariff adjustment at the special session of Congress. The lumber industry announces that it desires no tariff on its products and cites the National Grange's protest against such duties. Is there any other great industry that doesn't want something done about the tariff?

A BOOK SOLDIER

THOSE who lack respect for book farmers might learn something by reviewing the career of the greatest general the world has produced—Ferdinand Foch. For he was a book soldier, never having seen a battle or even a minor engagement before entering the late war. We have no desire to belittle dirt farmers or to exalt unduly book farmers, for both are essential to the development of our industry just as a thorough book soldier was essential in cooperation with "practical" soldiers in the great war.

ENOUGH NITROGEN

PRODUCTION of nitrogen in the United States during 1929 will amount to about 230,000 tons. This amount is five times the maximum hoped-for capacity of the cyanamid plant at Mussel Shoals. In about two years facilities for nitrate production will be sufficient to supply all our needs. Thereafter no submarine blockade, such as was seriously threatened in the late war, can cut us off from our supply of nitrogen for fertilizer and munitions. All of which proves several things about the capability of American industry and the futility of politicians' dreams.

NO WOOL CONTRACTING

CONTRARY to the custom prevailing in most recent years little if any western wool has been contracted on the sheep's back. This may indicate several things, all or none of which time may prove correct. It may point to a lack of confidence in the market, it may mean that growers outguessed buyers last year, or it may be one of the results of the changed buying methods of mills. But to the ranchman it apparently means primarily a lack of customary cash at this time of year, for instead of celebrating his relief from the clutches of the speculator or worrying about the effects on the market he is lamenting the loss of the dollar or so a head usually advanced by buyers at the time of contract. This and similar reactions to the absence of future trading show that the buyer is performing some service in assuming risks and in making available cash at a time when producers have arranged their operations to use it.

PURE-BRED GRADES

WITHIN a few weeks two men have asked us for information about the registration of certain horses. On investigation we find that the association by which the ancestors of these horses were recorded is defunct. It ran for some time in opposition to the recognized national registry association of the breed, it even gained official recognition, but there was no real need for two such organizations and the weaker one passed out. Now those who patronized this association have horses which are actually pure-bred but which must be classed and sold as grades. Breeders who want to avoid "orphans" or grades in future generations of their pure-bred animals should record them in an association which is and promises to continue the recognized registry association of the breed.

TWO IN ONE COUNTY

MARCH 13 Thomas A. Stiger died in the hospital at Williamsport, Pa., of injuries inflicted by a bull. Several readers have sent us notice of his death but nobody has given any account of the attack which cost his life. In the same county a few days later James Hill, a well-known farmer near Clarkstown, was attacked and badly injured by a bull. A breeder of livestock, Lester Bull of Hughesville, Pa., sends in this report and says: "I was attacked by a yearling bull when I was about ten years old, and since that time have been a firm believer in showing the brutes who is boss and getting them acquainted early in life with the business end of a fork—not to be cruel, as I admire good stock, but make a pet of a bull and take your chance."

WHY OATS?

IN SPITE of advice and gas engines oats production continues to increase. Oats prices since the war have averaged about the same as before that event, while other farm commodities average about 40 per cent higher. That farmers should continue to raise more oats in view of the smaller demand due to the displacement of horses by mechanical power must mean that the oats crop in the rotation serves some useful purpose. That crop is desirable in starting clover, it is easy to grow and farmers are used to it. There is a question, however, whether these reasons are sufficient to warrant the increased production of oats when some other crop might serve the same purpose and produce greater direct profits.

CREDIT FOR BEGINNERS

A LADY who is concerned about the future of agriculture says: "Cities have building and loan associations, payment as rent and other ways of starting to own a home, but nothing is ever done for the boy who wants to own a farm." She suggests a fund to be loaned without interest to young men who want to start in farming and asks what we think of the idea. We think it is impossible. Who would supply the money to be loaned without interest?

As a rule in this region a young man of reasonable ability and known integrity can get enough money to make a start in farming. If he has first earned and saved some money he can buy a farm on reasonable terms as to interest and principal, and that is all the various city plans offer. All of them provide for the payment of interest and some of them for too much interest. After the farmer has paid half or more of the value of his property he may obtain a land-bank loan repayable gradually over a long period. This capital is provided by the sale of tax-free bonds issued against his mortgage. No city plan has such an advantage as this, which we mention merely to show that there is no discrimination against ambitious young farmers.

What all of us should do is teach young people to work, save money and establish credit so that they may own a farm some day. Moreover we should teach ourselves to quit talking them away from farming and into something not half so good in the long run.

OLD PASTURES

LETTERS received from readers asking how they can improve or maintain permanent pastures indicate a growing interest in high yielding grazing lands. That old pastures may be rejuvenated and made to carry more cattle or sheep has been proved by experiment stations, by county demonstrations and by the experience of farmers. As farms grow older and the need for lowering the cost of production becomes greater the pasture is one part of the farm which will get attention. Those interested in making their permanent pasture land work harder for them should get in touch with their county agent and have him show what can be done with worn out grazing land.

AN ANCIENT INSTITUTION

DURING the past winter several state legislatures have considered bills to establish an ancient institution, the whipping post. We can't find that any of these bills has been enacted. Probably none of them will be, for the tendency of the times is against corporal punishment even when administered at home or in school. The whipping post is rated as a barbarous institution where it is not known and as a very effective and useful one where it still exists. For instance Canada still believes in it, so does Delaware, and both have defeated all efforts to abolish it. We believe as they do. Instead of life imprisonment for habitual criminals we should apply the cat-o'-nine-tails. Who has ever known a criminal who was whipped more than once?

AN EASTERN ADVANTAGE

THE freight rate on 100 pounds of apples shipped from Chambersburg, Pennsylvania, to New York City is 32 cents. From Inwood, West Virginia, the rate is 24 cents. From Wenatchee or Yakima, Washington, it is $1.50. Remember these rates, then consider that Pennsylvania shipped only 298 carloads of apples to New York City during the past shipping season and West Virginia 224 carloads. But Washington growers absorbed the $1.50 freight rate and shipped 3,800 carloads to the eastern metropolis. Facts like these apply also to other important staple crops grown on eastern farms, potatoes for example.

Our farmers are learning that quality marketing of strictly graded and packed products has made possible this western competition. The facts present a challenge and an opportunity which they will accept. That is one of the reasons we are not pessimistic about the future of eastern agriculture.

BABY CHICKS

THE American Baby Chick Producers Association will meet in Peoria, Ill., July 9-12, and the International Baby Chick Convention will be held in Minneapolis, July 31-August 2. Efforts are being made to interest the public. A special attraction of the latter convention is an exhibit by the U. S. Department of Agriculture depicting the poultry industry from the nest box to the dining room. The increasing influence of the poultry industry on farm income and the growing prominence of the baby chick in the poultry business should make these conventions of interest to farmers and poultrymen as well as to professional chick producers.



Meridale Merry Prince, a Register of Merit sire owned by Highland Farms, Westmoreland county, Penn'a, and three of his first daughters. They are, left to right: Prince's Fern of H. F., Prince's Fern Noble of H. F., and Prince's Blue Belle of H. F. The latter at three years made an official record of 13,494 lbs. of milk and 632.17 lbs. butterfat.

Eastern Farm Comment

By MILES HORST

FROM the standpoint of attendance and general interest in the program, the annual meeting of the Clearfield County Dairymen's Association held at Curwensville, Pa., last Saturday was pronounced the best ever held by that association.

During the forenoon separate meetings were held for the men and the women. Paul Wagner, a member of the Tamaqua Kiwanis club, in addressing the men, emphasized the desirability of removing the barrier of misunderstanding which exists to a large degree between urban and rural folks based on ignorance of the problems of both. He told of the good that has come out of the club's venture in sponsoring the county boys' and girls' dairy club and asked that more of this work be done in the future.

Byron Bretsch of Ringtown told of his experience of putting paper caps on tomatoes. He found it a profitable venture. Christ Wagner of Lewistown stressed the importance of cow-testing association work. County Agent Hollinger gave a brief report of his year's work. He emphasized the importance of grading potatoes at this time for those desiring to sell the stocks still on hand to the best advantage.

The women's session was equally interesting. Miss Laura Reynolds was in charge. A report of the Home Economics work now in progress in the county showed that there were six organized girls' clubs and nine organized women's clubs now in active operation. The total number in these clubs is 200. The principal speaker at this session was Miss Ethel Jefferies of State College. Her subject was "How to Make Home products Attractive for Exhibition Purposes."

At the afternoon session men and women met together and listened to an address by H. G. Nissley. In his talk he predicted that in the future we would see many agricultural mergers in line with the trend in other businesses. He said that science and methods must continue to dominate production and marketing and agriculture must organize to survive.

Clarke Clemmer of the Eastern States Exchange spoke on the importance that good seeds have to successful agriculture.

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DAIRY calf club work has not progressed as rapidly in many of the southeastern counties of Pennsylvania as it has in other sections of the state. Occasionally we receive criticisms of the Extension Service for not pushing the work faster in this section. These critics usually forget that successful calf club work must be built on a health program. The majority of dairy herds in southeastern Pennsylvania are still untested for tuberculosis. To start a boy or a girl with a calf in an untested herd may bring grief to the youngster later on, should the young heifer go down under the test.

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JUDGING from the very favorable comments received from several of the herdsmen who attended the herdsmen's short course offered at State College two weeks ago, this course should be added to the list of short courses already recognized as annual events at the College. The twenty-two herdsmen in attendance received six days of intensive training in herd management and in the principles of feeding, disease, breeding and farm butchering.

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ROY S. BOWEN of Tioga county and a member of the Wellsboro Cow-Testing Association, set an enviable record in cow testing in this county last year. Under ordinary farm conditions, he brought his herd of nine registered Holstein cows through the year with an average production of 20,400 pounds of milk and 656.5 pounds of fat.

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"WOULD you advise growing spring wheat on my farm?" asks a reader living in Franklin county, Pa. I have observed a number of fields growing spring wheat in southeastern Pennsylvania during the past several years and in most cases the results were not satisfactory. I know of no man in this area who has repeated the crop.

AFTER following the interesting discussions running in this paper last fall on the necessity of tramping silage at silo filling time I proceeded to try an experiment of my own. My two silos are forty feet high and each holds about 125 tons of silage. The one we decided shut to the top and then blew it full of cut corn with nobody in it. The other was filled according to our accustomed method of having a man handle the distributor pipe, keeping the cut corn level in the silo and tramping it at the doors and around the edges. Both silos are now empty. We found no difference in the quality of the silage in the two silos. That coming out of the silo where the corn was kept level was slightly easier to take out.

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LAST week the building committee of the Pennsylvania Farm Products Show Commission together with an architect and an engineer visited the fair grounds at Indianapolis, Toronto and Springfield for the purpose of studying the types and adaptations of farm show buildings on these three outstanding fair grounds. The suggestions gained on this inspection tour will be added to those already suggested by the Commission in drawing up the final plans for the proposed show buildings to be erected at Harrisburg.

The future housing of the show depends on the successful passage of the bill, now in the House and the Senate, providing for an appropriation of $1,340,000 to be used in erecting permanent buildings for Pennsylvania's future winter farm show. While this bill is still in the appropriation committee, as are all appropriation bills, sentiment in both houses is favorable to its passage. The Governor will most likely sign it, if passed by the legislative branches, for he has already included it in his budget.

The plans of the Show Commission are to have the final draft of the building ready when the money becomes available, so as to erect the buildings without delay.

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THE stocks of grain on Pennsylvania farms March 1, 1929, were considerably short of the average on hand on the same date during the past five years, according to the State Bureau of Statistics. Corn fell 6,000,000 bushels short of the past five-year average; wheat, 2,000,000 bushels and oats 3,000,000 bushels.

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THE fact that 10,000,000 bushels of potatoes grown in the United States last year were certified to by the proper agencies as being desirable for seed does not mean that all of these are of equal quality and will produce the same results when planted.

They were grown under widely different conditions. The varieties of certification vary in different states and the methods of supervising the growing, rogueing and marketing of the potatoes certified for seed also vary. Growers when purchasing seed of this kind will do well to keep these differences in mind.

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E. M. FUNK, secretary-treasurer of the Pennsylvania Poultry Association, has issued an appeal to the poultry producers of Pennsylvania to become active members of this Association. We endorse this appeal most emphatically. We know by our contact with the poultry industry of Pennsylvania that a very small group of unselfish men in this industry have been fighting the battles of the industry in this state in all its various aspects without support of the thousands who are engaged in it, and yet who directly and indirectly are reaping the benefits of the efforts of these few men. This Association today, according to the secretary, has a paid-up membership of 250. It ought to have at least 2,000 members. The annual fee is $2, which fee also entitles members to a quarterly bulletin issued by the Association.

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APPARENTLY German dairymen put more stock in cow-testing associations than do American farmers. A report from Germany says that nine per cent of the 9,000,000 cows in that country are enrolled in well organized cow-testing associations. In America the percentage is two per cent. Among the states, California leads with 10.2 per cent of its cows on test, New Jersey comes second with 7.6 per cent of its cows enrolled in such associations, while Pennsylvania stands tenth among the states with 2.7 per cent of her dairy cows enrolled in these record taking associations.

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THE Pennsylvania Experiment Station at State College made a distinct contribution to the vegetable industry of this state when it developed the strain of cabbage known as Penn State Ballhead cabbage. Last year a measured acre of this variety of cabbage produced 23.76 tons of marketable heads at the Experiment Station. This is more than twice the average commercial production per acre of late cabbage in Pennsylvania. A characteristic of this strain which makes it so profitable is the fact that so large a percentage of the plants mature heads of uniform size and shape. The Station is continuing its development of this strain of cabbage so as to make it more resistant to the fungus disease, blackleg, which is causing heavy losses to Pennsylvania growers.

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A COUNTY Guernsey breeders' association was organized in Clearfield county, Pa., recently. W. L. Thorpe was elected as its president, J. H. Smith as vice-president and J. T. Bunnell as secretary-treasurer.

This association was organized for the purpose of promoting the breeding and improvement of pure-bred and grade Guernsey cattle in the county and to aid its members in buying, breeding and selling first-class Guernsey cattle. The membership is limited to breeders of Guernsey cattle using a pure-bred sire.

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THE Marion Center Jersey Bull Association lately purchased a son of the famous Jersey bull, Pogis 99th of Hood Farm. This sire will be used in the higher producing herds listed in the Association. Many of these already have passed the 500 pound butterfat herd average.

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A FARMER in Chester county writes for advice on a situation peculiar to Chester and Delaware counties. He tells me there are many foxes in his neighborhood and that lately they have killed some of his turkeys and many of his chickens. He wants to know whether he can collect damages for the losses.

Some ten years ago a bill, sponsored by hunting clubs in Chester and Delaware counties, was passed by the Pennsylvania legislature prohibiting the State Game Commission from paying bounties on foxes killed in these two counties. The bounty being removed, the incentive to kill foxes in this area was removed and few have been killed. At the same time hunting clubs have been bringing into the area new foxes annually. The result is good sport for the hunters but frequent losses of poultry on the part of farmers unfortunately situated.

The state has no law authorizing any of its agencies to pay for damages caused by these foxes. Several hunting clubs, however, realizing the situation, have compensated farmers for their losses.

TIGHT BINDING TEXT CUT OFF



April in the Flower Garden

The Month for Greatest Preparation for Summer

By L. L. Rummell

APRIL is the month that counts if you expect a garden of dreams in summertime. By this month you should have studied your flower and shrubbery catalogs and placed your orders. Likely the hot bed is going and your choice specialties are through the ground and laughing at the cruel winds outside the little glass roof. They are going to give you vivid color weeks, months even, before their sisters seeded outdoors.

There is work aplenty to do in the yard in April preparatory to the May plantings. First is the big clean-up. We want to clean up all trash, leaves, flowers, stalks, etc., about the borders and beds. They may harbor insect pests or disease germs from last year's garden. If you had iris borer, cut off all old tops and burn them, thus destroying the eggs. Cleaning up all old weeds and debris will help to rid the place of many wintering insects, stalk borer for instance. I don't like to burn all this organic matter, but I prefer to do that rather than run chances on bugs and disease.

The winter overcoat on the perennial beds must be shed in April. As soon as the weather seems settled, alternate freezing and thawing are over, and some new growth starts under the straw or leaves, remove it. We spade this coat of straw and leaves under in the garden, although I can forgive a gardener if he burns all of it too, provided he saves the ashes at least. Sanitation is next to godliness in the garden, and while it seems wasteful to maintain a bonfire it has its recompenses in checking various pests.

My diary for the last three years shows that I have been safe in doing this about April 10, although last year in an open spring we uncovered the latter part of March. We have spaded up the flower beds, mixing in this winter mulch and some manure, about April 20 to May 1, waiting til the ground works up fine and crumbly, not wet, and yet giving it time to settle and be worked down before planting in May.

If you did not get your shrubs and rose bushes planted in March, there is still time to do the job if you go after it early in April. I have set roses in late April with success, although I prefer to get them out at the earliest moment in the spring; or better still, plant both shrubs and roses the fall before.

Lawns must be given attention in April. We take the bare spots that persistently show up every spring, rake them, add a little new rich loam, and seed with a mixture of Kentucky bluegrass and redtop (three to one). The lawn needs to be rolled—that is often as good as a fertilizer treatment. Then give it a heavy application of a high-grade fertilizer and some sulphate of ammonia. Next week we shall present the whole story on lawns and their care.

If flower seeds were not put out in March, these should be seeded now as soon as possible in their permanent location: sweet peas, shirley and opium poppies, calendula, larkspur, portulaca, cosmos, calliopsis, sweet alyssum, petunia and such similar hardy flowers that seed theemselves. It is better to seed thick and later thin out to the desired quantity. Little covering is needed for these seeds, and for the very small seeds like petunia, portulaca and poppies, the seed should merely be raked in light with the fingers or pressed firm with a brick or board. Four times the thickness of a seed is a good rule for depth of planting any seeds. Buy only the best varieties from reputable dealers.

Later this month I hope to get a story ready on preparing the perennial borders. This ought to be done in April, rather early in the month. It is the plan to make a new bed in the yard, along the border, say beside the driveway or fence, prepare to do this early now. Spade up the bed, work in manure and fertilizer, and get the place all ready to receive the perennial plants in April and the transplanted annuals in early May. I like to get such spading done early to allow old sod and manure to rot some before plants are set, and the bed settles down some after spading. If plants of various perennials are to be bought, they should be mostly transplanted in April. Especially is this true of perennials that bloom early in the spring, as columbine, early Shasta daisy, sweet William, pinks, digitalis, etc.



The Appearance of the Flower Garden in July Depends Largely on Its Treatment in April

Old clumps of perennials may be divided now, and they will do better after division. Phlox, Shasta daisy, primroses, golden glow, lythrum, chrysanthemums, sweet William, forget-me-nots, monarda, rudbeckia and sedums may be divided from last year's large clumps, some two or three times even, and still give a good rooting system to each division. This is no time of year, though, to divide or transplant iris, peonies, Oriental poppies, tulips, narcissus or lilies. This work comes in the fall.

One exception might be made here among lilies. One of the greatest creations in lilies of recent years is an imported Regal lily, a beautiful big waxy, fragrant, white lily. Among about a dozen sorts in our garden it leads them all in size, fragrance and texture. We planted some bulbs in early spring and they produced bloom the first year, more than doubling themselves every year. Madonna lilies have difficulty in holding their number, but these Regal lilies had over 30 blooms last year where three years ago two bulbs had one flower each.

It may be you started your first annual seeds in a hot bed or in small pots or flats in the kitchen. If you did this in March as suggested, the first plants are now demanding outing now. If you have them in the kitchen, make some shallow box three inches high, fill with rich soil and transplant the tiny seedlings. A few transplantings will develop a better root system. If you have a cold frame with good glass cover transplant the tiny plants to it after the middle of April and they will get a well start for a month before it is safe to put them outside in their permanent location.

There is always danger in getting too busy in April. The gardening fever bursts after a long winter hibernation and frequently a fellow starts digging before the ground is fit to work, or he sows annual seeds too early and the late frosts nip his young plants. Down in the southern counties of the state this may often be safe, but for the northern half at least it is better to be safe than sorry.

Hardy annuals may be seeded in the fall. There is danger in uncovering hybrid tea roses too early and pruning them. If these roses are pruned too early, before leaves show, the twigs dry out and die back farther. We have suffered loss like that in years past, so this year we wait till leaves start before pruning roses.

April brings us the first flowers of the season—crocus, daffodils, hyacinths, tulips, dwarf iris, arabis, English daisy and phlox subulata. Last year we cut the first dozen Empress daffodils April 2, and on April 21 the Kaiserkroon tulips were in full bloom, with many of the early type tulips. For magnificent size of flower in both daffodils and tulips we fertilize them with sulphate of ammonia or a pinch of soda just when the buds start. Dissolve a few tablespoonfuls of this nitrogen fertilizer in water, sprinkle along the row of plants, and sprinkle again with clear water to wash any fertilizer off the leaves. This fertilizer is cheap (four or four cents a pound) and it works quickly to increase the size of plants and flowers.

Daffodils, hyacinths and tulips forced in a greenhouse and sold for Easter trade need not be discarded, but should be planted outdoors for bloom another year. One year we got about 200 tulips from a florist who had them ready for Easter and did not sell all. These we allowed to dry out with what after they had bloomed, then put them out doors, and the next year we had a beautiful row of early tulips at no cost. About 75 per cent bloomed although they were not as good of course as when forced the first year.

You can enjoy other early spring bloom if you cut the branches of some of the flowering shrubs now, bring them into the house, and keep the ends in water. Pussy willows have long been handled that way. It will surprise you to get forsythia (golden bell), honeysuckle, deutzia and mock orange blossoms so early in the same manner.

The success of one's flower garden depends in large measure on the treatment it receives in April for flowers demand attention at the right time.



A Pool with Shrubbery Started—Some Day It Will Be the Central Object



This is part of the pure-bred Milking Shorthorn herd owned by Edison M. Hay, Master Farmer of Somerset county, Pa.

Why Pastures Need Fertilizing

By J. B. ABBOTT

PASTURING land may be an excellent way to maintain its fertility or it may be, and in a dairy country frequently is, very much the reverse. Consider, for example, what a dairy cow does to the soil when she is kept elsewhere than in the day pasture over night and in woods approximately half the excrement outside the pasture. The plant food removed in this way is shown by the table below. It may be urged that the grain usually fed to the dairy cow while on pasture ought to offset this loss of plant food; but practical experience in the college and heaviest grain feeding dairy region in America lends little support to that theory. In that region pastures have generally been developed not only the deficiencies with respect to available phosphoric acid and lime which are to be expected on typical upland soils after a few years of use but also equally serious deficiencies with respect to nitrogen and potash.

With respect to young stock and dry stock the common solution of this problem of short pasturage has been the historic American solution that is, move along to another piece of land and proceed to skin that too. Usually plenty of such land has been available at a low price in the form of abandoned fields and farms.

With respect to the milking herd, which has to be kept near the buildings, the common solution has been to grow and haul in green feeds and summer silage and to feed more grain during the pasture season: but with ever-increasing labor costs and grain costs that has ceased to be a profitable solution except in regions of very high-priced milk. In the great wholesale milk producing regions the dairy farmer without a good pasture is licked before he begins.

One need not, however, do without a good pasture if he has any suitable land. The cost of making a really first class pasture does not exceed, acre for acre, the cost of growing and hauling in green feed. The green feed lasts one season: the pasture lasts indefinitely with but a small annual cost of maintenance.

Improved pastures cost more than natural pastures as a matter of course, but that is not a matter of any practical significance since adequate natural pastures are not to be had. The question is: Is improved pasture cheaper than heavy barn feeding of green feeds and grain during the pasture season? And the answer is: Yes, it is cheaper to fertilize the pasture and send the cows after their feed than to grow the feed on tillage land and send a man and team after it.

PLANT FOOD REMOVAL PER COW PER SEASON

	Nitrogen	Phosphoric Acid	Potash
6000 lbs. milk	20 lbs.	12 lbs.	8 lbs.
1750 " dung	19 "	9 "	5 "
2000 " urine	20 "	11 "	27 "
Total	59 "	32 "	40 "

Tries to Humor His Volusia Soil

A NUMBER of years ago Harris Dickson, the famous writer of "Old Reliable" stories, told a story of a judge in Memphis. He had just sentenced a negro woman for giving her 10-year-old boy an unmerciful beating. Before having her taken from the court room the judge asked her if she had anything to say. "Yassuh," she replied. "Judge, was you ever de daddy of a motherless black boy?"

So, in reply to my good friend "Charlie" Preston of Lancaster county in the March 2 issue of Pennsylvania Farmer I am going to ask him if he ever "daddied" a Volusia soil. If he did he would know that with all the theoretically correct formulas plus a cultpacker and Forward variety he would conclude after a term of years that he had better give it up for something more profitable.

When I came here 13 years ago wheat occupied a prominent place in the rotation, and buckwheat outside the rotation. For then dairying was in its infancy and Doctor Nixon had not come to Pennsylvania to tell the farmers how to grow potatoes. Wheat and buckwheat were the cash crops to buy the steers to fatten through the winter months. I believe I am safe in saying that where ten cars of wheat were shipped out ten years ago not one could be gathered up now.

That oats are slowly taking the place of wheat in Butler county is shown by the figures taken from the 1927 triennial census of the assessors, whose figures are almost exactly correct. In 1927 the average farmer of Butler county averaged 2.7 acres of wheat and 9.0 acres of oats.

Your suggestions on the cultpacker and Forward wheat are good. I do not have a cultpacker but have used a roller, which I believe for our average Volusia soil would give as good results. On a Volusia soil I do not like to go on a planted crop with anything as heavy as the tractor wheels. The cultpacker being a tractor-drawn tool and the roller a horse one I would prefer the roller particularly for this reason. I believe other farmers in northern Pennsylvania will stand back of me on this.

I think our main reasons for not being able to get good consistent yields of wheat are our soils and our winters. There are spots on my farm where we always get good wheat but on the majority of it wheat is a gamble. Last year was naturally a poor wheat year here but in the field where I grew 13 bushels a soil expert could have drawn a soil map without taking a single boring. On some places there was hardly enough wheat to tell what kind of a crop was being grown, while not 25 feet away, on a guess, the wheat would run 25 bushels per acre.

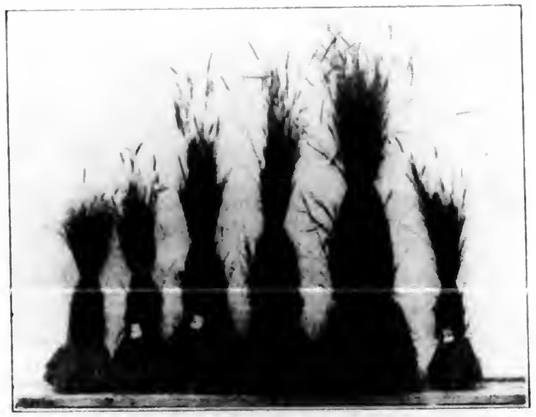
In the eight-acre field which is planted to wheat, now in early March, the whole field looks fine, but if it runs true to past form, along in June I will show you a fine crop on one end of it and fair a crop on the other end. There is one 12-acre spot on my farm where I expect to use three different kinds of fertilizers on three different types of soil—straight acid, 12-5, and the third with all the three elements in it, all due to the type of soil.

Since the article referred to by friend Preston was published I had a letter from G. P. Williams, Delaware county, Ohio, in which he explains why wheat is in the Wooster rotation. They are in a natural wheat soil belt where yields of 50 bushels per acre are not uncommon. You must have some like that in Lancaster county too, for I notice in 1926 and 1927 your county average for the two-years was 26 bushels per acre. At the same time Butler county averaged 14.5 bushels.

We can grow oats here though. My nearest neighbor to the east of me grew 90 bushels per acre one year. So oats it will be. Nothing like a friendly argument, though, Charlie.

Hugh Fergus.

Butler county, Pa.



Relative growth of grasses on different plots in a pasture test. Left to right—no treatment; superphosphate only; superphosphate and lime; superphosphate, lime and potash; lime, complete fertilizer; no treatment.

Sweet Clover Pasture

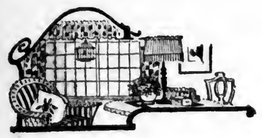
MR. GEORGE R. PITTMAN of Barnesville, Belmont county, Ohio has learned that it is possible to secure a stand of sweet clover in an old permanent pasture without plowing or any sort of cultivation. An old permanent pasture sod which had largely gone to weeds was limed in the fall of 1926, two tons per acre of fine ground limestone being used. At about this same time he applied 200 pounds per acre of 20 per cent superphosphate.

In January, 1927, he made a broadcast seeding of unscarified sweet clover. A good stand was secured that season which produced considerable pasture. Since sweet clover matures seed only during the second year of its growth, Mr. Pittman again seeded with sweet clover in January, 1928. This gave him plants both one and two years old so that there would be some seed produced each year. He reports that bluegrass is slowly coming back into the sod and the carrying capacity of the pasture has been greatly increased.

A similar experience of Mr. Harold Sumption of the same county gives additional evidence that sweet clover can be started and grown in a pasture sod without cultivation. Mr. Sumption had a hill field which had not been cropped since about 1920 when a wheat crop failed. Timothy and weeds held sway until the autumn of 1926 when rye and a pasture mixture of grasses and clovers were sown. With this seeding two tons per acre of limestone and 400 pounds per acre of 20 per cent

(Continued on page 38)

TIGHT BINDING TEXT CUT OFF



The Farm Home



Our Resources

By HEPSY NEFF

WITH the return of spring sunshine we find tiny green shoots pushing their way through bare ground where last year's jonquils and lilies-of-the-valley bloomed. But we are surprised to see a handful of green instead of a mere base of one flower stem. Those of us who have grown spring bulbs for many years know that the multiplying growth makes a mass that must be divided often to gain best results. The same increase follows the planting of any bulb or seed; in wild flowers, grasses or clovers; indeed in every living bit of nature.

Increase and multiply is the law of nature if man does not hinder. A few grains of wheat brought from far-off Egypt and planted in a protected spot yields returns for increased planting which become tons in a few years. So the intelligent feeding of children multiplies stalwart, capable citizens who again multiply the returns from farm and factory and business and again multiply the wealth of nations.

The failure of intelligent provision for growth in man as in plant and tree, brings poverty, want and decay. The hills of China were once covered with rich, virgin forests and fertile soils. But few years of the last centuries have passed without famines in China, caused by bare hillsides from which unprotected soils were washed into streams, clogging river beds and adding new perils year after year. Even in our own land the bare hills of the Middle West, once heavily forested, have left unprotected soils to be washed into river beds while we vainly try to control raging torrents by higher banks, and fail disastrously. Everywhere Nature has made her methods plain and we refuse to see. Year after year our blindness adds to our poverty of body, mind and spirit.

> "When I survey the wondrous cross
> On which the Prince of glory died,
> My richest gain I count but loss
> And pour contempt on all my pride."

More than nineteen hundred years ago a human being, perfect in body, mind and spirit was given to the world. The purpose of that short life was to bring more abundant life to all mankind; to prove that life need not be empty, barren or useless. "And they brought unto Him many that were diseased and He healed them every one." He began where we must begin; with the body, the physical. He made clear His plan for growth by saying, "Feed my lambs ...Feed my sheep." The laws of plant and tree; of body, mind and spirit are fixed. Life forever means growth. Nature never disappoints. We do not plant an acorn and fear that it may prove to be a maple; nor a grain of wheat and find a stalk of corn. We plant with a faith which has never been shaken. We may plant a thought, a purpose, a truth with equal confidence.

The snows of winter brought not only signs of death but real death to the unprotected. Day by day new signs of life appear and we have laid not a finger's weight upon a bud or blade of grass. The message given to the lowly woman of Samaria still belongs to the world. "If ye had known...ye would have asked...and He would have given," the more abundant life.

As the Twig Is Bent

TO sit in a parked automobile and watch the people pass reveals the fact that a very large percentage of individuals carry through life a poor bodily posture. We lived near a man about whom one member of the family remarked, "When Mr. Good's head gets there his wife will know that it is time to have dinner ready for the rest of his body will be there pretty soon." He was a splendid type of man yet his appearance was greatly marred by round shoulders and head thrust awkwardly forward.

During the adolescent period the tendency to stoop is very noticeable. The body is subject to tension and strain and, like the sapling swaying in the breeze there is the tendency to lean or bend, especially if the child is nervous or the health none too robust. The body grows so rapidly at this time that the child feels laggy and awkward. It is of vital importance at this period for the child to have proper food in order that strength may be furnished for growth and repair; plain wholesome living; milk a-plenty, real butter rather than substitutes; fruits, vegetables, well cooked meat, rice, eggs, whole wheat bread, plain cakes and plain desserts.

Admonition and nagging are not very effective in correcting round shoulders. While one child will respond by quickly throwing the shoulders back and the next minute forgetting all about it, another child will hunch over even more than ever to show his resentment. They are sensitive (just like grown-ups) and do not like to have their shortcomings pointed out.

Any bright child can be made to understand that a slouched-over position cramps the lungs and robs the body of fresh air when only a portion of the lung is inflated with life-giving oxygen. To send the blood tingling through the whole system and to keep it properly purified the entire lung area must be brought into full play. Children readily understand why they should straighten up but they need further guidance and help.

An appeal to "good looks" will help at this period for the child desires to look attractive. Military training has done a great deal for boys. We have seen many alert, erect young men who have been transformed from almost slouches to men of correct bodily posture.

The case of the round-shouldered child is really serious for the external appearance tells much about mental processes and habits. A storekeeper puts into his window samples of his wares. Dress, personal appearance and bodily carriage tell much about an individual.

Do not nag the child who is stoop-shouldered but rather furnish an incentive toward correct posture. A visit to a school room sometimes reveals that a child is sitting at too low a desk or that the eyes need glasses or some other faulty condition unsuspected by a busy parent.

Augusta Rex.





Ruby Ring's Improved Room

Up in My Room

By GERTRUDE S. STEWART

RUBY RING wanted a pretty room all her own. She had some nice ones in other girls' homes. She had read of 4-H girls planning attractive rooms. How they would overcome all sorts of drawbacks and old, undesirable furnishings; and how they learn to fix up and take care of their rooms.

The one and only place in which home where she could be that by birth was a small room off the kitchen. There her two had often played "tough house". The walls had shot holes for special ... ceiling, so she would need to ... much of broken plaster. There ... been wall paper but it was now ... streaked and torn.

Ruby, like the most of us, had ... little cash on hand, but decided to ... vest what she had in paint. She ... ed and patched the walls, then ... them a good sizing and tinted ... boards over with good wall paint ...

Woodwork came next and after filling the ... she painted the window frame, doors, and foot ... with ivory. The floor had two coats of floor ... and was varnished.

A sewing club had been quite an influence ... life and how glad she was for the several ... she had just finished using unbleached muslin ... the collection she had her bed spread and ... cover, table runner, curtains and decorative ... for both her bedroom chairs. All of these ... were gayly embroidered with butterfly motifs ... made also the braided rug by the bedside.

Since her bed was white, she painted the ... and table white also. Then up in the attic she ... the old mirror and small flower table which she ... into clean white dresses and the flower ... completed the picture. She is happy and proud ... her family, too. They expressed their pleasure ... giving her a white toilet set for her dressing ...

The Stranger in the Midst

By HILDA RICHMOND

MUCH has been said, and well said, about ... duty of the country community toward ... comers. Strangers are bound to be lonely ... they should be treated courteously. A woman moved into a neighborhood that had been recommended as unusually neighborly, complained that while she and her family were well received at church and general gatherings, they were left out of the ... social functions that are so near to all hearts.

But there is a side seldom thought of by ... strangers in the midst, and that is their ... to prove themselves worthy. The community ... owe much to the newcomers, but they in turn ... to the new people they meet the proof that they ... good citizens and worthy to be received as ... and neighbors.

How many families going to a new ... remember to have the complimentary article ... local newspaper copied into the journal where ... are moving. This is not pride nor conceit, but ... good way to introduce the family to the new neighborhood. How many remember to get a letter of introduction to the banker, the minister and the county superintendent of schools from the people "back home?" How many strangers meet the people half way or better and show that they appreciate attentions.

There are two sides to the matter, and not ... least important is the attitude of the newcomer. ... the good people are not in the old home ... hood. It is a good sign if people are careful ... opening their homes to newcomers until the ... have been properly introduced. For the sake ... young folks in the homes parents must be ... about their associates, and unless newcomers ... well recommended it is but natural that they ... more slowly received than if they can present ... credentials from the very first. And often the ... people who complain about lack of attention ... if they would, look back to days when they ... ed slowly" in accepting strangers in their ...

Tighten the Family Ties

...'s family reunion is just about ... nicest social gathering of ... days and right now is the time ... for those who "care not", but ... be.

...e is no reason on earth why ... members (or even one) of any ... or group could not plan a re... Whether few or many to spond ... invitations sent, officers may be ... a good time enjoyed, and ... new reunion is born!

...ally it is best to start such a ... by having a picnic since no ... can know for how many to ... The place of meeting should be ... centrally located or very easily ...—preferably both.

... this first reunion of any kind, ... family, school or neighborhood ... invitations may be very properly ... or printed on ordinary postal ... Mention all necessary data, such ... time and place of the meeting. ... rule it works very well to say ... sandwiches for the family and ... other thing." It is well, however, ... hostesses to be prepared so that ... menu be varied and interesting. ... reunions usually invite us to ... a cup, fork and spoon."

...gin now to plan for this season's ... Have at least one this summer. Some of the dear folks' addresses ... not be known, but there is great ... in locating the long lost ... Let us then be busy re-establishing old friendships, strengthening ..., and making new ones.

Mrs. F. M. Anderson.

Last of the Sewing Prizes

...OW often children are bewildered ... by difficult buttons! How often ... are spoiled when the goods ... away from under the buttons! ... this is due to the buttons be... sewed on too tight.

To make button sewing just right, ... over a pin (placed over the holes) ... finished pull out the pin. Your ... is firm, but there is room for ... of buttoning, and long life for the ... beneath.

Note: I use a toothpick and prefer ... a pin.—G. S. S.

Clean and Shining

...NE can of iron enamel has worked ... wonders toward making things ... clean and shining at my house. ... enameled kitchen range is still ... of my dreams unfulfilled so I applied the enamel to all parts of my ... rusty old range except its top. ... result is a neat stove that is easy ... keep clean and which needs no ...cleaning.

One coat of the enamel made the ... pipe spick-and-span. My oil-heater ... in the same class as my range, ... but growing shabby, the ... enamel quite transformed its appearance. The original finish on the ... registers had worn off so I gave ... a renewing coat.

From a discarded oil range I salvaged ... four grates that protected the flame. ... I cleaned and painted with the ... enamel. They are fine as ... dish holders on the kitchen table ... look so much better than the old ... magazines and catalogs that I once ... for that purpose.

These little things seem to have ... the house more than anything else I did during the spring upheaval.

Alice Margaret Ashton.

War-Time Trick Lives On

While Hooverizing with meat and ... sugar, eggs and butter, during war ... days, we women around here learned ... an overall idea that is ever a good one. ... Knees do get thin after a very short ... time with a family of growing boys.

All right, when you see them beginning to look as if the next washing ... would mean patching too, try this plan. ... Cut off both legs at the crotch, reverse ... them front to back, and sew them up ... again. You can do this by hand or machine, and the seam is barely noticeable. It beats weekly little patches, both for looks and for wear.

Lillie S. Stedman.

Food Value of Dandelions

THRIFTY housewives not only serve ... dandelion greens on the dinner ... table but provide a supply for future use. ... The freshly picked young leaves may be ... preserved in a stone jar by being packed in alternate layers of salt and covered with a weighted plate, or they may ... be canned, says the State College of ... home economics at Cornell University.

Before canning, wash them thoroughly, tie them in a piece of cheesecloth for convenience, and blanch them in boiling water until they are thoroughly shrunk. To chill them, plunge them in cold water and remove immediately. Pack in clean jars to within one-half inch of the top, add one teaspoon of salt and one tablespoon of vinegar to each jar. Fill the jars with boiling water to within one-fourth inch of the top, use a new rubber, adjust the cover and partly seal it. Boil the jar with its contents in the hot water bath for one and one-half hours or heat it in the pressure cooker for forty minutes under ten pounds' pressure. Remove the jars from the cooker, seal them, and invert them to cool.



Parade of Juvenile Fashions

Style No. 2991 is an exceptionally practical bloomer dress in printed cotton broadcloth, with the bloomers peeping below hemline. Just two major parts to the pattern, the front cut along perforated line from centre neckline and finished for closing. The front and back are gathered to shoulder yokes. The bloomers have elastic at waist and knees. Comes in sizes 2, 4, 6 and 8 years.

Style No. 2680 will make any young lad of 2, 4, 6, 8 and 10 years happy, for it is a real boy's suit with shorts that close at sides, and sports blouse with turn-down collar, shirt sleeves gathered to wristbands and patch pocket at left side. The shorts can be made of tweed, jersey or poplin, with blouse of cotton broadcloth, rep or linen, or the entire suit can be made of linen, chambray, cotton broadcloth, khaki cloth or pongee.

Style No. 2536 is a one-piece affair of printed pique for wee maids of 2, 4 and 6 years, that requires only 1⅞ yards of 40-inch pique to copy it in the four-year size. It is cut in front armhole edges which forms the yoke, the lower edge of which is gathered and stitched to upper edge. The skirt is treated in the same manner, cut in at each side of waistline. Chambray, printed linen, dimity voile crepe de chine and gingham are suggested.

How to Order

Write your name and address clearly. State number and size of each pattern. Price 15c each, two for 25c. Address Pattern Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.



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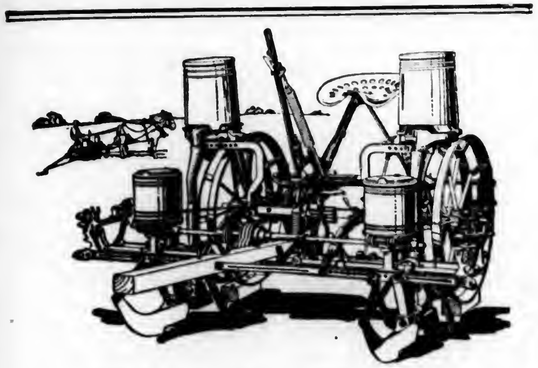
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Farm Practice

By W. D. ZINN

A FARMER writes that by following the advice of the writer in the use of commercial fertilizer he bought a farm five years ago that would not produce a ton of hay and now he is wintering twenty-five cattle from the products of the farm. That is not only encouraging to the writer



but it ought to be more so to the farmer. He is interested in maintaining a permanent meadow and asks if it can be done and if so how.

If our readers will refer to some of my articles written twenty-five years ago I suspect they will find where I said it could not be done. Like Bill Nye I am finding that a lot of the things I know are not so. A doctor said to me a few years ago that he was losing confidence in me because I was not teaching like I did several years earlier. I told him that I had lost confidence in him because he did not treat typhoid fever like he did twenty-five years ago, but he said, "We physicians have learned a few things during that time," and I told him that we farmers had learned some things also.

Given a good sod I now believe that sod can be maintained indefinitely by applying lime every few years and 100 pounds nitrate of soda, or the equivalent in sulphate of ammonia, and 250 pounds superphosphate per acre. Suppose the nitrate costs $3 and the superphosphate $4.50, there would be an annual expense of $7.50, and every six years a ton of lime should be applied. This would make the annual expense run to about $9.50, but it this land was producing three tons of hay per acre that would not be a prohibitive expense by any means.

• • •

Fertilizer for Potatoes

We have been trying to raise late potatoes. We plant the Rural Russets from the 1st to the 12th of June. Spray them three or four times and last year had a yield of around 225 bushels per acre.

We use 1,000 pounds of 20 per cent superphosphate and 400 pounds of muriate of potash and apply about 1,000 pounds per acre, half broadcast and half in rows. We usually follow clover with potatoes covered liberally with manure.

What would you think of adding some nitrogen to the above mixture and how much? What do you think of a 4-12-4 fertilizer for potatoes? Our soils are sandy and shale loams and not in as good condition as we would like to have them. David S. Hill.

SOME farmers would be satisfied with a 225-bushel yield of potatoes. There is little hope for a satisfied farmer. There is possibly no better late variety than the Russet. The application suggested is in the right proportion and proper amount. There is no better crop with which to follow potatoes than clover. The authorities in Pennsylvania are recommending that the year preceding the growing of the potatoes the land be given to the growing of soy beans, the beans turned down in the fall and the ground replowed in the spring. This procedure has been producing wonderful results, and you cannot argue against the fellow who is getting the potatoes.

The 4-12-4 goods is a high cost fertilizer for potatoes, but a 4-12-10 goods would be a great deal better. Potatoes are very hungry for potash.

• • •

Manure in Piles

Would like to hear from some one in regard to manure being hauled out in heaps and left there until reloaded on the spreader to be spread. We have only two fields on our farm where the manure can be loaded directly on the spreader and spread at a good advantage, the rest of the fields being out a long uphill haul from the barn. P. E. B.

THERE are two kinds of manure, cold and hot manure. Cattle manure belongs to the first class and will not heat if put in piles, while horse manure belongs to the latter class and will heat and during this heating process a good deal of ammonia is driven off into the air. There is another way by which the plant food in manure may be lost and that is by leaching. This is the more serious because while the nitrogen is lost by heating all three elements of plant food are lost by leaching.

It sometimes becomes necessary to sustain some loss and in the case of our correspondent this is true. If the piles of manure are four to six feet high there is but little loss from heating and in the case of cattle manure none from heating.

• • •

Wants Permanent Pasture

We have one field on our farm of about 20 acres that we would like to get in grass for pasture. This field is on a ridge and is slate ground but in fairly good shape. How shall we sow the ground just so it is? John C. Fenton.

THERE are two ways by which the correspondent may proceed to put this field in permanent pasture. The first would be to plow it and sow a pasture mixture of 14 pounds orchard grass, three pounds each of timothy and redtop and three pounds each of red clover, alsike and sweet clover per acre, the last to be sown on a well-limed soil only. Another good mixture for permanent pasture on this soil is 10 bushels of orchard grass and six pounds of alsike clover. Sow at the rate of one bushel of oats and apply from 200 to 400 pounds of superphosphate.

The oats may be used for pasture after they get 12 inches high, care being taken not to let the stock in on it when the ground is very wet. Or the oats may be cut for hay when they are in the milk stage.

The other method of seeding is to harrow pretty thoroughly and sow either of the above-named mixtures. We consider orchard grass the best variety of grass to sow on that kind of land. It will withstand more drouth, stand better than any other grass on such land and stay in the land longer. Alsike will benefit either seeding very much and so will superphosphate.

• • •

Hog Pasture

Having just moved on my farm and having no experience whatever would appreciate advice. What is best to plant, white sweet clover or rape for pasture hogs? Bruno Mertz.

SCARCELY any crop will surpass Dwarf Essex rape for hog pasture. One advantage it has over sweet clover is that if sown about the time the growing season sets in it will be ready to turn on in about six weeks after it is sown. It is a cool-weather crop and may be sown in March. It requires a fertile soil to produce best, the land of our correspondent being so rich he should apply a so-called complete fertilizer like a 4-16-4 goods, or a formula near that, and put on from 300 to 500 pounds per acre. Sow 3 to 4 pounds of rape seed per acre.

Sweet clover will produce good pasture, but it takes longer for it to come on. Sow 15 pounds of inoculated scarified seed per acre, but do not sow it on sour land or you will invite failure. Sow one bushel of oats per acre with the sweet clover. It may be turned on when the oats are about 12 inches high and it will produce a lot of pasture for the hogs.

It might be an advantage to sow three pecks of oats with the rape per acre.

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Delaware	Geo. J. Howe's Sons	Blairsville
Elk	M. W. Trainer	Indiana
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Orchard Windfalls

By S. W. FLETCHER

WASHINGTON apple growers are getting together on a program to advertise "Washington Apples." One-half cent a box, and possibly one cent, will be deducted from the grower's pay check for this purpose by the large cooperatives. Their modest advertising program of last year was so successful that it is to be continued and extended. Meanwhile, the "Apples for Health" campaign, which has been in the process of being born for several years, apparently has definitely failed to get under way. The response, in the East at least, has been very meager. There was no interest whatever in it at the recent Harrisburg meeting. Probably this is due more to lack of confidence in the present organization, which has not handled the matter in a way to win confidence, than to lack of interest in the proposition itself. In theory, the "Apples for Health" advertising campaign on a nation-wide basis, to increase the consumption of apples, is sound; in practice, it has fizzled. Meanwhile our western competitors will not fail to take advantage of this opportunity to exploit, not "apples," but "Washington Apples."



• • •

A PERMANENT sod seldom is desirable in an apple orchard, a temporary sod, especially if it is partly of legumes, frequently is. A Franklin county, Pa., orchard which has been in bluegrass sod for many years, now gives unsatisfactory response to an application of twenty pounds of nitrate of soda per tree. It should be broken and tilled for one season, or seeded down again in June. Throughout the state, annual tillage with cover crops is giving way to the temporary leguminous sod, except in the peach orchard, which must be tilled.

So far as moisture conservation is concerned, where an orchard has been in alfalfa, sweet clover or grass long enough to make a good surface mulch, it goes through a dry season better than many cultivated orchards. All sod orchards should be mowed before the grasses go to seed, with the exception of sweet clover.

• • •

THE fruit trees will soon burst into leaf and bloom. The early spring growth is mostly on food material that was stored in the tree last season. Nitrogen applied in the fall is taken up by the roots and stored in the tree for use the following spring. This has been suggested as a means of preventing the unfavorable effect of spring applications of nitrogen on the color of the fruit.

Experiments at the Maryland Experiment Station seem to indicate that fall applications of nitrogen are about 80 per cent as effective as spring applications: that is, eight pounds of nitrogen applied in the spring are equal to ten pounds of nitrogen applied in the fall.

Whether the gain from fall applications, because of improved color of fruit, and less wood growth, will offset the increased cost, is rather doubtful. For the present, it is safer to continue applying nitrogen in the spring, but it should be early spring, two weeks before the buds burst.

• • •

SHELDON FUNK of Berks county has found it profitable to put part of his peach crop in cold storage. He has held the fruit there for three or four weeks, with little loss of flavor. As a rule, however, it is not wise to hold peaches in storage a day longer than is necessary to dispose of them at a fair price. Mr. Funk found that soft peaches, which could not be shipped any distance without settling, acquired greater solidity in storage.

• • •

THE above-ground common storage seems to be gaining favor in the southern parts of the state and in states south of Pennsylvania, as compared with the bank cellar or underground storage, which is the more common type in the central and northern part of the state. In the warmer districts it is difficult to bring the temperature of a below-ground storage low enough in the fall to keep the fruit well, since the storage temperature is controlled by the normal temperature of the ground at that time of the year. Ventilation on frosty nights does not change it much.

In the above-ground insulated storage, on cold nights can be taken advantage of to cool down the house, which is then kept closed until another cold night. The above-ground storage, however, requires more attention in ventilation, and there is danger of freezing the fruit if the doors are left open in very cold weather. Both types are useful, under different conditions.

• • •

THERE is still plenty of room for Pennsylvania apples in Pennsylvania markets. A survey of seventeen cities made by the Department of Agricultural Economics at Penn State showed that 50 per cent of the apples consumed by Williamsport were grown outside the state; Johnstown, 20 per cent, Coatesville, 60 per cent, Philadelphia, 51 per cent, York, 5 per cent, Chambersburg, 1 per cent, Pittsburgh, 37 per cent. The average for the seventeen cities was 32 per cent.

Most of these out-of-state apples came from Washington, New York and Virginia. Aside from some early apples, most of them could and should be grown here. The low percentage of outside apples sold in York is a tribute to the improved packing and merchandizing of the local growers, some of whom have developed a box pack equal to the best that the West can produce.

Reporting on variety preferences, 348 retailers gave Wimesap and Stayman as first choice, 232 Baldwins, 197 Delicious and 140 Jonathans. As to the preferences of retailers on packages, 7 per cent favored barrels, 46 per cent baskets, 43 per cent boxes and 3 per cent bulk. The drift away from the barrel and toward the box and basket is unmistakable.

• • •

ACCORDING to R. D. Anthony, low yields cut the profits in fruit growing fully as much as low prices. A survey of 100 Pennsylvania orchards, including 2,500 acres, revealed that the average production over the five-year period 1921-5 was only a little over three bushels per tree per year. This does not pay running expenses. Only a fourth of these trees had an average yield of six bushels, and but six per cent produced over nine bushels.

Low average yield is due fully as often to poor soil, or a site that is frosty, as to lack of cultural skill in spraying, fertilizing, pruning, tillage and the use of green manuring crops. Too many Pennsylvania orchards were planted during boom days on sites and soils that are unfavorable to a low cost of production, because the average production is low. These marginal orchards will be gradually squeezed out. The future holds no promise for profit in fruit growing except under the most favorable natural conditions.

• • •

THE "liquid duster" seems to be gaining favor in Delaware, judging by the commendatory remarks at the recent meeting of the Peninsula Horticultural Society. It was reported as giving good coverage, even in the tops of tall trees, and also inside the trees.

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Garden and Truck Crops

By GILBERT S. WATTS

COUNTLESS intensive intercropping systems may be devised and a great many of these can be made to work out satisfactorily as far as the space requirements of the plants are concerned. However, many such combinations increase labor requirements very materially. This alone may make an otherwise sound plan inadvisable under ordinary circumstances. On the other hand, there are a great many standard and tried plans that increase the labor little or not at all. Two rows of peas or early snap beans may be planted midway between squash rows, or between strips reserved for the squash rows. A lettuce plant in the row between each two cabbage plants is a popular combination. A row of sweet corn may be grown between each two squash rows or widely spaced cucumber rows.

A part, sometimes all, of the expense incurred in caring for a new berry plantation during the first summer may be met by growing intercrops. But care must be exercised to select quick growing intercrops of a growth habit that will not result in injury to the more important berry plants. Last April in a three-acre new raspberry plantation we drilled in a double row of early dwarf peas midway between each two raspberry rows, these latter being spaced nine feet apart. A fine yield was secured and the pea vines were worked into the soil as soon as the second and last picking had been made. Early lettuce, beans, beets, bunching onions or spinach could be used in a similar manner. But allow plenty of space, at least three feet between the raspberry rows and the nearest rows of the intercrops.

In the new strawberry plantation two rows of very early radishes or spinach may be sown eight inches apart in the centers of the middles between the berry rows. This is an excellent intercropping scheme where the land is not inclined to be weedy. On very weedy land any kind of intercropping is likely to prove more bother than will be offset by the gain in crop.

• • •

IN Massachusetts several thousand roadside market customers replied to questionnaires. This group of consumers considered freshness, then quality, then price as the most important factors when buying produce. The wide-awake roadside market operator makes the word fresh mean all that it can mean. He realizes that no other retail distributor enjoys so great an advantage as he in this matter of being able to offer things at their absolute best. And he sees to it that his customers find it a real, not an imaginary advantage to fill their market baskets in the country.

• • •

ALMOST any day we may be able to get the first seeds into the ground; peas, spinach, onions, lettuce, radishes and so forth. In the rush and enthusiasm of planting time it is easy to overlook the fact that reasonable economy in the use of seed not only saves on the seed bill but is likely to save even more in labor, to say nothing of the finer vegetables produced in stands that are not too thick. Lettuce almost always is planted more heavily than necessary. Spinach standing too close in the row goes to seed much faster than when the plants are two or three inches apart. Examples could be multiplied.

• • •

THOSE who chew tobacco while working with tomato plants under glass or in the field will not be overjoyed to learn that mosaic, a serious disease of tobacco and tomatoes, may be introduced by the "broadcasting" that invariably goes with the "eating" of tobacco. In a recent issue of the Market Growers' Journal it was pointed out by A. G. Newhall that there is conclusive proof that mosaic of tomatoes may start in this way.

This disease is characterized by mottling of the leaves with various shades of green and by stunted and deformed leaflets. In serious infestations yields may be reduced very materially. Affected plants should be removed and destroyed without brushing them against healthy plants.

The MARKET PLACE

By W. R. WHITACRE

TODAY is the first day of spring according to the calendar and the weather has been mild and warm. Farmers in the Eastern Shore sections are already shipping greens to the market and truck growers in New Jersey are preparing for the early crops.

There are a number of things that I have noticed about the marketing of the early spring crops that make a big difference in the prices received. Spinach, dandelion greens and turnip tops are generally packed in bushel baskets, and while the size of the container is the same there is a big difference in the amount they contain. A basket may seem full in the field but after it has been jostled and bumped around on its trip to market the contents often sink far below the rim.

Full Measure Pays

The wholesale receiver often shakes the basket or dumps the hamper into an empty one to make it appear full, but the buyer does not go entirely by appearance as he lifts each basket and selects the heaviest ones. The comparatively small quantity needed to give good weight pays since the buyers will pay a premium for a heavy pack. This tendency is becoming more noticeable, especially since retailers are selling more vegetables by weight rather than measure.

When we bought spinach here in the city at the retail store we noticed that the retail price did not show much variation but the amount of spinach which you received when buying a half peck did vary greatly. Consumers complained of this and in a number of stores such commodities are now sold by weight.

The same principle applies to the early bunched vegetables such as radishes and rhubarb. When the price is very high during the early season it may be profitable to make a moderate sized bunch but as the price drops it is better to put in a few more stalks so that your bunches are larger than the average run. Even during the early part of the season the large full bunch brings more than skimpy ones.

Popular Varieties

I have mentioned in this column the importance of selecting varieties of vegetables that are popular on your market but as planting time draws near it seems appropriate to mention it again. Most markets show a decided preference for certain varieties of vegetables or fruits. For example the full podded Lima beans usually command a higher price than the longer flat pole Lima. The red button radish is more generally in demand than the white although this depends somewhat on the relative supply of each on the market. Savoy spinach is more popular in the Eastern markets than the smooth leafed type. Golden Bantam corn outsells most of the early varieties but later Shoepeg is particularly popular in Philadelphia and brings top prices. The new Marglobe tomato has proved outstanding from a market viewpoint. The hollow crown type of parsnip is preferred to the flat top.

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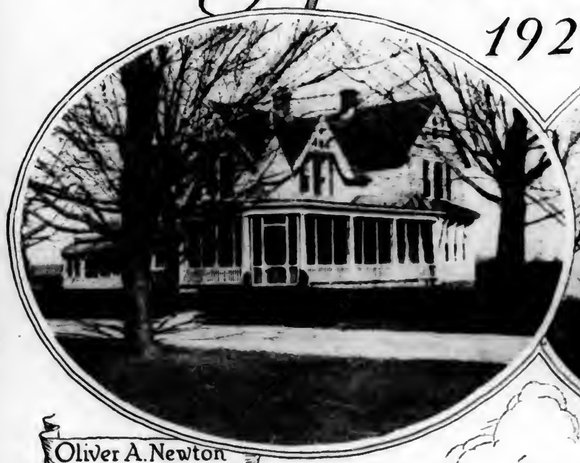
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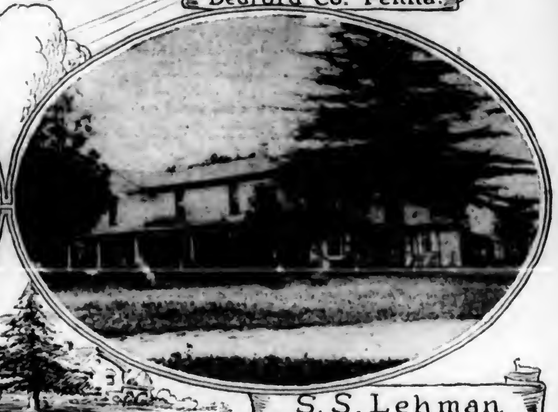
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CHICK TO LAYING HEN

Flesh—bone—feathers—rich blood . . . they're all in QUISENBERRY QUALITY Growing Mash. Leading poultry raisers have standardized on this famous feed—because of the *certainty of results*. Perfectly balanced feed requiring no mixing—no bother—yet enables you to beat the market by many days. Makes prize winners and record layers.

QUISENBERRY QUALITY

GROWING MASH

A trial order from your nearest dealer will prove its merits. FREE!—Write today for "CROWS & CACKLES" and other valuable literature, pointing the road to profit "the Quisenberry Way".

QUISENBERRY FEED MFG. CO.
Kansas City, Mo. Buffalo, N. Y.

MONTCALM GAME FARM

Your breeding flock of turkeys needs new blood

Get it from the Montcalm Game Farm

Our Mammoth Bronze toms and hens excel in size, vigor, early maturity, bone, thickness of flesh and correct markings. Do not inbreed and lower the vigor of your birds. Use of our high-class young toms, or a trio of carefully selected birds, will increase the livability of your poults and help get your turkeys off to the early market and high prices. We guarantee all our stock. It must give satisfaction or money refunded.

Write for catalog and prices.

MONTCALM GAME FARM
R. F. D. 3, Box K,
Phoenixville, Pa.



Just Paint it on the Roosts!

—Before the chicks roost. Only a small paint brush and a can of "Black Leaf 40" are needed. While chickens roost, fumes are slowly released and penetrate the feathers; killing lice. Eliminates individual handling of birds. Ask your dealer or write us.

Tobacco By-Products & Chemical Corp., Inc., Louisville, Ky.

Black Leaf 40
Kills Poultry Lice

White Diarrhoea

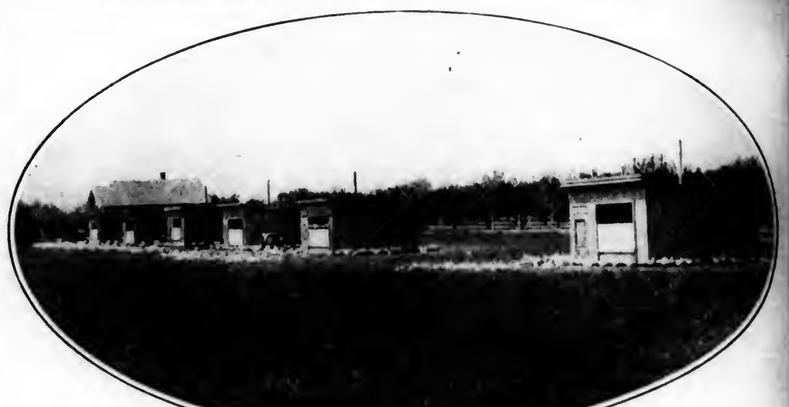


prevented, or cured, by putting Bourbon Poultry Remedy in the drinking water during the first 10 days. Curves gapes, cholera, sorehead, roup and colds. Use it daily to keep your chicks healthy.

Small size 60c, half-size $1, size $1.50. At druggists, or by mail postpaid.

Bourbon Remedy Co., Box B, Lexington, Ky.

PUREBRED BARRED ROCK CHICKS
Now 12c each. Heavy mixed, 10c each. Prompt service, 100% live delivery guaranteed.
CHAS. F. EWING. R. 1, McClure, Pa.



A glimpse of the farming operations of Oliver A. Newton and his son, Warren C. Newton of Sussex county, Delaware, Master Farmers for the year 1928. The Newton' orchards total 125 acres of apples and peaches and they sometimes have as many as 4,000 pure-bred chickens on the farm, besides many more baby chicks in the hatching season. They start most of their chicks in stationary brooder houses which are carefully screened against flies. The brooder pens are cleaned and disinfected twice weekly. Chicks are kept off the ground until from eight to twelve weeks old, when they are placed on green range in the movable colony houses shown here. Pullets are raised on grassy ranges as far from the mature stock as practical.

Chick Troubles

By R. L. SCHARRING-HAUSEN

SOME poultrymen are able to raise 80 to 90 per cent of the chicks they put into the brooder houses; others are so unfortunate as to lose that many. Of course, some loss is to be expected. However, each dead chick aside from its original cost and the value of the feed it has eaten means one less broiler to sell in June or one less pullet to lay eggs in October. Financial success means keeping loss down to a minimum. The purpose of this little article is to discuss the common chick troubles, and point out what we can do to avoid or remedy them. Right now I want to suggest that it would be a good idea to save the article on "Cannibalism in Chickens" in the March 2 issue and the one on "The Chick's Nursery Days" in the March 9 issue and keep them where they can be referred to during the spring, as both articles contain valuable information on chick management which might save the trouble of writing in case something happens in the chick flock.



Bowel Troubles

One of the first troubles is bacterial white diarrhea—B. W. D. This is a disease which may be transmitted from infected parents through the egg to the chick, or come from eating the droppings of infected chicks. This disease may be avoided to a large extent by purchasing chicks from tested flocks, and by careful sanitation in the incubator and brooder pen. This disease is very contagious, usually fatal, and may cause severe losses during the first few days. There is no cure for it, and chicks which have it had better be killed as soon as discovered to avoid the spread of infection. Such chicks usually act sleepy, refuse to eat, often take on a humped-up appearance and may "yip" shrilly.

Other bowel troubles, not contagious, may come from chilling, overheating, crowding, wrong feed, spoiled feed or mouldy litter. They may cause serious losses or stunt the chicks. The remedy is to remove the cause, although nothing much except good care can be given in case the trouble arose from wrong temperature conditions.

Toe picking is often very bad, and individual treatment consists of removing picked chicks and daubing the injured toes with tar which will prevent the others from continuing the picking. It is a good idea to keep an injured chick in a warm place by itself for a few hours until the toe has dried up, when it will no longer attract the other chicks. The article on cannibalism goes more into detail

Parasites

Probably worms and coccidiosis cause more chick losses than any other combination. Young chicks are very susceptible to worms. After they are six or eight weeks old they seem to withstand them much better. For that reason I am strongly in favor of confining chicks to the house or to a sun porch until they reach that age, unless absolutely clean range can be provided.

Roundworm eggs are usually present in the soil and in the droppings of adult birds, and for that reason it is best to take care of the chicks before attending the laying birds, in order to avoid tracking infected soil or droppings into the brooder house. A very good plan is to provide a shallow trough which is kept filled with sawdust saturated with a strong disinfectant, and to scuff the feet around thoroughly in this before entering the brooder house.

Coccidiosis attacks young birds six week of age and up, and causes bloody droppings, extreme thinness with overgrown feathers and drooping wings—a sight too often seen in young birds. The same sanitary precautions used to combat worms will help with coccidiosis, although it is a very difficult ailment to keep out of the flock. Plenty of milk in the diet will help to prevent it, and the standard treatment, once an outbreak occurs, is to take away all other feed and provide a mash composed of 40 lbs. dried milk, 40 lbs. cornmeal and 20 lbs. bran, which is fed until the birds get better.

Cleanliness Important

Cleanliness in the brooder house is very important in combating coccidiosis, and if the litter is kept dry and the house is cleaned out every few days after the chicks are a few weeks old these measures combined with clean range and disinfecting the house before entering the brooder house or pens, will help a lot in avoiding this trouble.

Mature birds are very often carriers of both worms and coccidiosis, and it is very important to keep the old birds away from the young stock. If these ailments are to be kept out of the chick flocks.

Leg weakness used to be a serious trouble, but in these days everyone knows that it is caused by the lack of direct sunshine, and can be avoided if chicks not exposed to direct sunlight by feeding one per cent of cod-liver oil in the mash.

Care of Poults

I read your article some time ago about Reid's Turkey Farm and I was very much interested in it. Should one keep the feed-hopper before the little turkeys all the time, or do you hurt them on their feed? How old is a little turkey when it gets its first feed?

Mrs. J. F. Myers

LITTLE turkeys should be fed from 60 to 72 hours old before being given their first feed. The first few days they may be fed five times a day, allowing what they will be cleaned up in twenty minutes or so, after which the hoppers may be before them all the time. Many turkey breeders have been successful in raising the poults by following methods which have worked with baby chicks.

R. L. S.

Egg Grades

At a farmers' meeting last week I got into an argument about the standard weight of a dozen of eggs. I said it was 24 ounces. Two against me claimed it was 23 ounces. One of the other two ships eggs to New York and claims he is right.

A. L. Post

ACCORDING to the U. S. Department of Agriculture, the [illegible] for U. S. Extras states that eggs must approach 24 ounces per dozen net, though individual eggs may weigh as low as 22 ounces to the dozen. The same is true in the second grade of eggs known as U. S. Standards.

On most markets the best grade eggs will approach 24 ounces per dozen, though it is possible that some individual eggs may weigh less than 22 and some of course will weigh more.

H. C. B.

Danger of Infection
Among Baby Chicks

Success in raising baby chicks is dependent upon proper care and management. Readers are warned to exercise every sanitary precaution and beware of contaminated drinking water. Baby chicks must have a generous supply of pure water. Drinking vessels harbour germs and ordinary drinking water often becomes contaminated and may spread disease through your entire flock and cause the loss of half or two-thirds your hatch before you are aware. Don't wait until you lose half your chicks. Take the "stitch in time that saves nine." Remember, that in every hatch there is the danger of some infected chicks—danger of diarrhea in some form and other loose bowel and intestinal troubles. Don't let a few chicks infect your entire flock. Give Walko Tablets in all drinking water for the first two weeks and you won't lose one chick where you lost dozens before. These letters prove it

Mrs. Bradshaw's Remarkable Success in Raising Baby Chicks

"Dear Sir: I see reports of so many losing their little chicks, so thought I would tell my experience. I used to lose a great many of the little downy fellows from bowel troubles, tried many remedies and was about discouraged. As a last resort I sent to the **Walker Remedy Co., Dept. 507, Waterloo, Iowa,** for their Walko Tablets for use in the drinking water of baby chicks. I used two 50c packages, raised 100 White Wyandottes and never lost one or had one sick after using the Tablets and my chickens are larger and healthier than ever before. I have found this a young thoroughly reliable and always get the remedy by return mail."—Mrs. C. M. Bradshaw, Beaconsfield, Iowa.

Never Lost a Single Chick

Mrs. L. L. Tam, Burnettsville, Ind., writes: "I have lost my share of little chicks from the usual baby chick troubles. Finally I sent for two 50c packages of Walko Tablets, used it in all drinking water, raised over 500 chicks and I never lost a single chick. Walko Tablets not only tend to prevent baby chick troubles, but they also tend to give chicks increased strength and vigor. They develop quicker and feather earlier."

Fever Lost One After First Dose

Mrs. Ethel Rhoades, Shenandoah, Iowa, writes: "My first incubator chicks when but a few days old, began to die by the dozens. I tried different remedies and was about discouraged with the chicken business. Finally I sent to the **Walker Remedy Co., Waterloo, Iowa,** for a box of their Walko Tablets to be used in the drinking water for baby chicks. It's just the only thing to keep the chicks free from disease. We raised 200 thrifty, healthy chicks and never lost a single chick after the first dose."

You Run No Risk

We will send Walko Tablets entirely at our risk—postage prepaid—so you can see for yourself what a wonderful working remedy it is when used in the drinking water for baby chicks. So we can prove—as thousands have proven that it will reduce your losses and double, treble, even quadruple your profits. Send 50c for a package of Walko Tablets for $1.00 (or extra large box)—give it in all drinking water and watch results. You'll find you won't lose one chick where you lost dozens before. It's a positive fact. You run no risk. We guarantee to refund your money promptly if you don't find it the greatest little chick saver you ever used. The Pioneer National Bank, the oldest and strongest bank in Waterloo, Iowa, stands back of our guarantee.

WALKER REMEDY CO., Dept. 507,
Waterloo, Iowa.

Send me the [illegible] 50c regular size, for [illegible] economical large size package of Walko Tablets to try at your risk. Send it on your positive guarantee to promptly refund my money if not satisfied in every way. I am enclosing 50c (or P. O. money order) [illegible] acceptable.]

Name .....

Town .....

Post .....

Mark (X) in square indicating size package wanted. Large package contains about two and one-third times as much as small.

Nest Box Notes

CLEANLINESS in the brooder house is a very important factor in raising the chicks. Some sort of light, dry absorbent litter such as peat moss, peanut shells, planer shavings, buckwheat hulls or cut straw should be used. Personally I prefer peat for chicks, as it can be bought from almost every feed dealer. For the first couple of weeks while the chicks are small it will suffice to scrape up the droppings which have accumulated under the hover during the night; but as the chicks grow it soon becomes necessary to clean out the litter often. If this is done every five days as soon as the chicks are three or four weeks old it will help to prevent coccidiosis.

• • •

IN selecting eggs for hatching do not set small eggs. Such eggs will produce small chicks and as the size of egg is an inherited tendency the resulting pullets will probably lay small eggs when mature. Large eggs bring a premium in most markets and poultrymen who are doing constructive breeding work now count as much on size as on number of eggs laid in selecting females for their breeding flocks.

• • •

CHICKS which are to be brooded outdoors will suffer from leg weakness unless fed cod-liver oil. From a pint to a quart per 100 pounds of mash is the proper quantity, and it should not be mixed more than a week or two ahead it loss of potency is to be avoided. Cod-liver oil is now a recognized part of the poultry ration, for old and young birds at all times of the year, with the possible exception of the months when the birds are on range in sunshine.

• • •

THE little flat water thermostats which control the heat of the brooder stoves are filled with ether, and if this is lost out the thermostat will not work. If it does not rattle when shaken, it is probably spoiled and should be replaced, as temperature control is vital in brooding chicks.

• • •

OVERCROWDING in the brooder house is one reason why so many chicks are lost. Three hundred and fifty chicks in a 10x12 house are enough, in spite of the claims of brooder stove manufacturers that their stoves will take care of 500 to 1,000 chicks.

• • •

"LAST season I thought I would save space by putting 500 chicks in a brooder house," said a poultry raiser to me the other day. "But I didn't earn anything by it. Within a short time losses had brought the number down to where it should have been."

• • •

FEEDING the right sort of mash to the young chicks for the first few weeks of their lives is especially important in order to avoid losses from digestive disturbances and to get them growing nicely. Where a good formula is known and there are proper facilities for mixing, a home made ration may be desirable, but in the majority of cases the use of a commercial chick starter may be better all around. On account of the use of dried milk and other high priced ingredients in such starters, their cost is necessarily somewhat higher than other poultry mashes, but there is a wide range of prices in the chick starters put out by various firms, and a high price need not always mean a superior quality. Some companies for a number of business reasons may be able to put a good mash on the market more cheaply than others, and I believe that poultrymen can buy chick starters put out by any reliable firm with confidence, regardless of price.

R. L. S.



Strong, husky, fast growing chicks raised on AMCO STARTING AND GROWING MASH by Mr. Frank B. Frymoyer, McAllisterville, Pa.

CHICKS hatch *and* grow best *on* AMCO

HOW many of your eggs will hatch this spring, and how many of the chicks will live to repay what you put into them? Will your results equal those of Frank B. Frymoyer of McAllisterville, Pa.? This poultryman can prove with figures how AMCO STARTING AND GROWING MASH has helped his flock. You can get results just like his.

Low Mortality

For two years he has raised his chicks on AMCO STARTING AND GROWING MASH. The first year, 91 per cent of his original flock were well-grown and healthy at eight weeks of age. Last year, out of 430 chicks saved for flock replacement, the mortality was only 5 per cent. And the rate of growth was as big a tribute to AMCO as the unusually low mortality.

High Hatchability

Mr. Frymoyer has fed his hens AMCO LAYING MASH WITH ALFALFA LEAF MEAL for the past three years. His average hatchability with 31,000 eggs in 1928 was 80 per cent. Since vigorous germs depend largely upon feeding, there can be no doubt that he picked the right feed for his hens.

Your results can be like these, if you use AMCO OPEN FORMULA POULTRY RATIONS. The logical time to swing to them is *now*, when AMCO STARTING AND GROWING MASH saves the extra cost of a needless chick starter.

DIVISION OFFICE: MUNCY, PA.

AMCO FEED MIXING SERVICE
AMERICAN MILLING COMPANY
EXECUTIVE OFFICES: PEORIA, ILL.
Plants at: Peoria, Ill.; Omaha, Neb.; Owensboro, Ky.
Alfalfa Plants at: Powell, Garland, and Worland, Wyo.

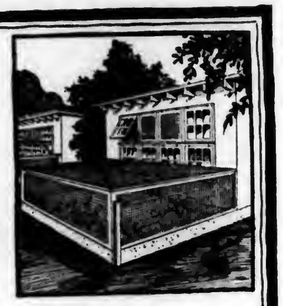
PENNSYLVANIA THRESHERMEN and FARMERS' MUTUAL CASUALTY INSURANCE COMPANY
Mechanics Trust Bldg., HARRISBURG, PA.
PROTECTS both the OWNER and EMPLOYEE
Get our rate on special minimum for farmers - - *Write today.*

BABY CHICKS C.O.D!
Send no money. Just mail your order. We ship C. O. D. and guarantee live delivery of chicks. From pure-bred inspected and culled flocks.

Prices on	25	50	100
S. C. Wh. and Br. Leghorns	$3.00	$5.50	$10.00
Bd. Rocks and R. I. Reds	3.50	6.50	12.00
Wh. Rocks and Wh. Wyandottes	4.00	7.50	14.00
Broiler Chicks	2.50	4.50	8.00

Box 980
Bellefonte Poultry Farm, Bellefonte, Pa.

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Keeps Chicks Healthy

Raising your chicks on a concrete sunporch keeps them off contaminated ground at the very time they are most susceptible to coccidiosis, blackhead and intestinal worm infection.

Chicks get more direct sunshine than is possible when they must be kept indoors.

In addition, your house and yard need not be moved to new, unused areas because concrete is easily kept clean.

Build Your Own Paved Yard

Building a paved yard is about the same as building a sidewalk of concrete.

"Modern Poultry Houses," a 24-page booklet tells how. Your copy is free.

PORTLAND CEMENT ASSOCIATION
A national organization to improve and extend the uses of concrete
Jenkins Arcade Building, PITTSBURGH, PA. — 1315 Walnut Street, PHILADELPHIA, PA.
Concrete for Permanence

HILLPOT Quality Chicks



Leghorns-Rocks-Reds-Wyandottes

SEND FOR THIS USEFUL CHICK BOOK

You will find it a valuable guide in selecting your chicks for the coming season and a constant help in rearing them. The book, which is illustrated in color, describes my breeds fully; tells of my careful methods of mating and rearing; discusses the most profitable sizes for flocks; contains house plans and construction details and concise feeding and rearing charts. Send for your copy to-day.

W. F. HILLPOT, Dept. 128, FRENCHTOWN, NEW JERSEY



NATIONAL "SUPER-BRED" CHICKS
Insure Your Future Poultry Profits by Ordering NATIONAL "SUPERBRED" CHICKS NOW

	50	100	500	1,000
S. C. White, Brown & Buff Leghorns	$6.75	$13.00	$62.00	$120.00
Tancred & Hollywood White Leghorns	7.25	14.00	67.00	130.00
Barred & White Rocks, R. I. Reds	7.75	15.00	72.00	140.00
White Wyandottes, Buff Orpingtons	9.00	17.00	82.00	160.00

Light Mixed, $9.00 per 100, Heavy Mixed, $10.00 per 100. Also Black Minorcas, White Minorcas, Ancona, Blue Andalusians and Jersey Black Giants. Send for our free catalog and prices on our Special Mated Chicks. We guarantee 100% live delivery. Member International Baby Chick Association.
NATIONAL CHICK FARMS, Box 404, MIFFLINTOWN, PENNA.

HERE: NEARLY EVERYONE RAISES Full Blooded "AMERICAN" Quality Chicks

Write now for our new low prices. Your opportunity to get our special flock mating chicks at utility prices. Chicks shipped C. O. D. Catalogue and prices on request. 100% live arrival guaranteed. 15 breeds. Write now.
AMERICAN CHICKERIES, Box 318, GRAMPIAN, PA.

BABY CHICKS Order direct from this ad and save time.

	25	50	100	500	1000
Free Range bred	$2.25	$4.25	$12	$68.75	$115
White and Brown Leghorn	2.25	4.25	12	68.75	115
Anconas & Black Leghorn	2.25	4.25	12	68.75	135
White and Barred Rocks	2.75	7.25	14	68.75	135
Rhode Island Reds	2.75	7.25	14	68.75	135
Heavy mixed broilers	3.25	6.75	12	58.75	115
Light mixed broilers	2.25	4.25	8	38.75	75

Full count and quality guaranteed. Catalog free. For Greater Profit Utah Poultry Farm & Hatchery, Hatchery chicks Box 16, Fort Trumbull, Penn'a

CHICKS Will ship C.O.D.

	25	50	100
S. C. Reds	$4.00	$7.50	$14.00
Barred Rocks	4.00	7.50	14.00
White Leghorns	3.50	6.50	12.00
Heavy Mixed	3.50	6.50	12.00
Light Mixed	2.75	5.00	9.00

500 lots 5c less, 1,000 1c less. Free Range, 100% Delivery. Circular.
W. A. LAUVER, McAlisterville, Pa.

BABY CHICKS
From free range flocks of White and Barred Rocks, Reds and S. C. White Leghorns. 5c and up.
PENNS CREEK HATCHERY, Selin Grove, Pa.

BABY CHICKS
WILL SHIP C. O. D.
S. C. White Leghorns ..... $10.00 per 100
Barred Rocks ..... 12.00 per 100
Heavy mixed ..... 10.00 per 100
Light mixed ..... 9.00 per 100
Special prices on large lots. 100% live delivery guaranteed.
SWARTZ POULTRY FARM
Earl Swartz, Route 3, Williamstown, Pa.

Chicks S.C.W. & Br. Leg'hns $11.00 per 100
S. C. Barred Rocks .. 12.00 per 100
S.C.W. Leg. Tan. Str. 12.00 per 100
Assorted chicks ..... 9.00 per 100
Special price on large lots. 100% live delivery. P. O. paid. Order from adv. or circular free.
Chester Valley Hatchery, R.2, McAlisterville, Pa.

PENNA. STATE CERTIFIED LEGHORN CHICKS
Pure Hanson and Hanson-Wyckoff Strains. The Best. Catalogue describing our 300-egg stock. Reverdy Pottenger, M. D., Jr. Entries ..... RIDGEWAY
POULTRY FARM, H. A. Campbell, Jamestown, Pa.

5 Lb. LEGHORNS
The old reliable heavyweight stock. Produced high up on Pennsylvania's highly mountain top. Get your chicks from certified record strains above 200 eggs. R. O. P. Hollywood, Tancred, Barron Matings. Hatch every week pure white eggs up to 24 ounces per dozen. Beautiful Color Plate Leghorn Catalogue Free.
FARM SERVICE, TYRONE, PA.
Route 8-10

100% Live Arrival	100	500	1000
Pure Strain W. Leg.	$12	$57.50	$110
Quality Brown Leghorns	12	57.50	110
Quality Barred Rocks	14	67.50	130
Quality R. I. Reds	14	67.50	130
Mixed Chicks	9	42.50	80

All breeders are selected for size, type and egg production. THE HEN THAT LAYS IS THE HEN THAT PAYS. Write for literature.
JUNIATA POULTRY FARM
Box R, Richfield, Pa.

BABY CHICKS
8 Leading Varieties—White Leghorns, Black Minorcas, Rocks, Reds, Wyandottes, Anconas, Barred Rocks, Buff Orpingtons.
$9.00 per hundred and up.
Free Catalog and Price List.
Lunks Hatchery, Tiffin, Ohio

CHICKS with Pep
Produced by veterans in the poultry business. Ohio Accredited stock. Prize winners at many shows from coast to coast. Developed for many years for high egg production. Free range flocks in best of health. 12 breeds. Catalog free. Low prices quality considered. Don't Miss This Offer.
BLUE COME HATCHERY, Box N, HOLGATE, OHIO

BABY CHICKS
Order direct from this ad and save time.

	25	50	100	500	1000
White Leghorns	$2.50	$4.50	$8.00	$37.50	$70
Barred and White Rocks	2.75	5.00	9.00	42.50	80
Buff Orpingtons	3.00	5.50	10.00	47.50	90
Rhode Island Reds	3.00	5.50	10.00	47.50	90
Anconas	2.50	4.50	8.00	37.50	70
Heavy Mixed	2.50	4.50	8.00	37.50	70
Light Mixed	2.25	4.00	7.00	32.50	60

Pullets and Cockerels from healthy free ranges
THE ROSEFIELD HATCHERY, Box 106, Richfield, Pa.

TER QUALITY CHICKS
Our Chicks come from flocks culled for Egg Production and Standard Quality by poultrymen trained at the Ohio State University. OUR CATALOG is chicken tight cover to cover. Write for it.
Lander Farms Hatchery, R 33, Lancaster, O.

BARRED ROCK CHICKS
A big modern Breeding Farm and Hatchery devoted exclusively to the production of BARRED PLYMOUTH ROCKS
CRANE POULTRY FARM, GEORGETOWN, DEL.

BARRON LEGHORN CHICKS
From Large Type Barron English S. C. White Leghorns. Hens weigh up to 7 lbs. Quality chicks from free range selected flocks $12.50 per 100, $62.50 per 500, $120 per 1000. Live Delivery Guaranteed. Feb. 14-21-28 Chicks 100% Live Arrival. March 4-11-18 100% Live Arrival. 10% Books order. Catalog Free.
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LOOK—QUALITY CHICKS
Bred to lay in the chick through rigid breeding. Guaranteed satisfaction. Leghorns, Reds, Rocks, Wyandottes, Minorcas. Light breeds, 12c. Heavies, 14c. Circular free. Send for our instructive poultry booklet. It's free.
MILTON POULTRY FARM, Dept. 7, Milton, Pa.

S. C. W. Leghorns, $11—100 Barred Rocks and Reds, $13—100. White Rocks, $14—100. $10—100. My stock is culled by expert. Prices low. 100 per cent live delivery guaranteed prices on 500 or 1,000 lots. Circular free.
Box 4, McAlisterville, Pa.

KELLER'S EXTRA QUALITY CHICKS
From Large Type R. C. White Leghorns, Tancred strain. Special producing bred matings. $10—$15; $11—$50; $150—1000. Also quality Rocks and reds 100% live delivery guaranteed.
2304 Seventh St., Harrisburg, Pa.

Chicks, Barron Eng. White Leghorns
Tancred Leghorns, Barred Rocks, Light & Heavy Mixed, as long as last, 9c each. 100% guaranteed. Free Booklet Free." Prepaid.
FIRST HATCHERY, McAlisterville, Pa.

Baby CHICKS (Smith Hatched) Rocks, Reds, Wyandottes, Leghorns, and all leading breeds. Quality and satisfaction guaranteed. Circular free. Early order discount.
BROOKVILLE HATCHERY, Brookville, Pa.

EVANS'S English White Leghorns
Culled of 18 years of breeding from directly imported strain stock, with pedigrees of 250 to 300 eggs. Chicks from large and vigorous Husky A.P.A. farms. Fully guaranteed. Free mating list.
Atlantic, Penn'a

Chicks with an official heavy-laying ancestry

KERR'S 1929 CHICKS

Most baby chicks are bought for the ultimate source of egg production. The sooner a pullet starts laying after she is mature the greater will be her egg yield and the cheaper will be the eggs she produces, providing she comes from a heavy-laying ancestry.

Kerr's chicks are bred to lay. They have an exceptional egg-laying inheritance based upon four generations of public egg-laying contest winnings. These winning records are as high as 294 eggs in White Leghorns, 280 in R. I. Reds and 277 eggs in Barred Rocks.

The type, constitutional vigor, livability and rate of growth of Kerr's chicks are strictly in keeping with their unusual inheritance for egg production. Both utility and special matings chicks furnished from flocks that have passed the blood test for Bacillary White Diarrhea.

Write for booklet with prices, giving illustrated account of the Kerr way of producing living, profitable chicks. Liberal discounts on orders up to February 1st.

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Department 6
Frenchtown, N.J. Trenton, N.J. Binghamton, N.Y. E.Syracuse, N.Y.
Lancaster, Pa. Danbury, Conn. W. Springfield, Mass.
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20TH CENTURY "MARVEL" CHICKS
Special Mating Imported Barron S. C. White Leghorns
Our flocks for this very Special Mating consist of 350 YEARLING hens carefully selected by an Expert Poultryman. These hens weigh not less than 4½ pounds, and up to 6 pounds. They produce better than 250 eggs per year, per hen, inspected from TOM BARRON of England.

Standard Bred "MARVEL" Winter Layers
THOUSANDS OF PLEASED CUSTOMERS can tell you about the splendid chicks and wonderful profits made by our Marvelous High Class, Heavy Laying Standard Bred, American Cert-O-Culd Matings for 29 years; Pure Bred, carefully culled for size, type, color, vigor and egg laying ability. Look at the low prices—100% Live Delivery Guaranteed; you can safely order from this advertisement. Reference: Commercial Bank, Penn Square, Lancaster.

	50	100	500	1000
S. C. Wh. Br. Buff, Rich. Leghorns, Anconas	$7.00	$13.00	$60.00	$110.00
Barred and Wh. Rox, R. C. and S. C. Reds, Blk. Minorcas	8.00	15.00	70.00	135.00
W. Wyandottes, Buff Orpingtons, Buff Minorcas	8.50	15.00	75.00	145.00
Imp. Barron, W. Leghorns, W. Minorcas, Parks' Bxd	9.50	18.00	85.00	160.00

Heavy Mixed, $12.50 per 100; Light Mixed, $9.50 per 100; White Pekin Ducklings, 25c each.
Terms: Cash, Cashier's Check, Post Office Money Order or Registered Mail. Book today on chicks that pay. You may order direct from this Ad, or still mail literature. We ship C.O.D. or upon receipt of 10% will send P. Post prepaid with 100% live delivery guarantee. EARLE F. LAYMEN, Prop., Richland Poultry Farm & Hatchery, P. O. Box 1, Richland, Pa.

HUBER'S RELIABLE CHICKS
Make Extra Poultry Profits with Huber's Reliable Chicks
When we say RELIABLE we mean RELIABLE in every way. Breeding stock of high quality of 18 years of careful development. Special attention paid to health of flocks and rewards kept. CATALOG FREE—CHICKS SENT C. O. D. or by parcel post. Write for details—get our illustrated catalog which tells all the story. Our prices reasonable. A book on Raising Chicks worth many dollars given free with each order of $15.00 or more. Big discount for early orders.
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BABY CHICKS C. O. D. Send Only $1.00
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Prize winners at big shows. Read about Mary Howard who made over $1,000 profit on one year with birds of our breeding. All leading breeds. Chicks shipped C. O. D. Write today. Free picking instructions with Wolf's "No Pick." Order box today. $1.00 postpaid. Satisfaction guaranteed or money refunded.
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Write Today—We Can't Tell the Whole Story Here.
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Buy your stock eggs and baby chicks from breeders whose flocks have been culled and certified for Standard qualities as well as production. Send for list of breeders and hatcheries.
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Our Hollywood White Leghorns are headed by cockerels (dams' records 290-300 eggs per year) direct from Hollywood or by sons of above. English and Tancred Leghorns if you prefer. We also hatch Barred and White Rocks, Reds, Tancred Leghorns if you prefer. We also hatch Barred and White Rocks, Reds, Wyand., Anconas, Buff Orp., Dark Br. and Buff Leghorns. L. V. Caldwell of Mesopotamia, Ohio, made $126.90 on 300 chicks last year. T. E. Walker, Dover Center, Ohio, says, "I can't recommend New London Chick Hatchery too highly." Write for catalog which tells all about our stock. Prices are attractive. Write today.
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Ohio Accredited Leghorns Rocks Wyandottes Reds Legorcas Well bred selected females mated to pedigreed cockerels from official R. O. P. hens producing from 200 to 300 eggs. Rocks British Columbia Breeding with high egg production. Wyandottes From stock bred by Canada's best breeders. Reds Heavy Layers. Excellent size and color. Every chick Ohio Accredited. Ten Free Chicks with each 100 ordered now. Write for literature today.
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BUY EARLE CHICKS . . . and you have made the first step in "making poultry pay". These pure-bred quality chicks come to you from the best of parent stock, bred-to-lay and guaranteed to please. We offer the following popular breeds and best strains at the Lowest prices, considering our quality supreme:

	100	500	1,000
Leghorns and Anconas	$13.00	$62.00	$120.00
Barred and White Rocks	14.00	68.00	130.00
R. Reds (crowns and Tumpkins)	14.00	68.00	130.00
Jersey Black Giants	20.00		

Reference: Richland Nat'l Bank. Book today on chicks that pay. You may order direct from this Ad, or still mail literature. We ship C.O.D. or upon receipt of 10% will send P. Post prepaid with 100% live delivery guarantee. EARLE F. LAYMEN, Prop., Richland Poultry Farm & Hatchery, P. O. Box 1, Richland, Pa.

YOU NEED THIS CATALOG!
Big Poultry Manual Given Free to All Buyers of Chicks
Write for details. Every chick buyer should know about Hoytville Chicks. Our beautiful illustrated catalog tells all about them. Your copy sent on request. Guaranteed chicks
OHIO ACCREDITED CHICKS — ALSO BABY DUCKS
Every bird in our breeding flock is banded and a record kept. Our flocks are inspected by experts trained and authorized by Ohio Poultry Improvement Association. Find out about our guarantee plan. 14 breeds. We have limited number Chicks from Ohio R. O. P. pedigreed stock. Write today.
HOYTVILLE ACCREDITED HATCHERY, 117 MAIN ST., HOYTVILLE, OHIO

Linesville Gold Medal Chicks still on top, after winning State Gold Medal they are winning cash for others. You can win with Our Sturdy Chicks.
The Old Reliable LINESVILLE HATCHERY Linesville, Pa.
Write today for free booklet and prices, also free book on brooding.

CHERRY HILL CHICKS

	100
S. C. W. Leghorn—Wyckoff Strain	$12.00
S. C. Everlay Brown Leghorns	12.00
Barred Rocks—Wm. Nace's Select	14.00
S. C. Rhode Island Reds	14.00
Mixed or Broiler Chicks	9.00

4c less in 500 lots, 1c less in 1,000 lots. 25 chicks add 2c. 50 chicks add 1c. Full count. 100% live arrival guaranteed. Parcel Post prepaid. Bank reference. Order direct from this ad or write for free circular.
CHERRY HILL POULTRY FARM,
Wm. Nace, Prop. McAlisterville, Pa.

BABY CHICKS

	50	100	500	1,000
White Leghorns	$6.50	$12.00	$57.50	$110.00
R. C. R. I. Reds	7.50	14.00	67.50	130.00
Barred Rocks	7.50	14.00	67.50	130.00
White Rocks	8.50	16.00	77.50	
Buff Orpingtons	8.50	16.00	77.50	
Heavy Mixed	6.50	12.00	57.50	110.00

Our White Leghorns are from Tancred and Barron stock. All our chicks are from free range flocks. We sell either cash with order or C.O.D. and guarantee 100% live delivery.
MONROE HATCHERY, Box 10, Richfield, Pa.

BABY CHICKS

	25	50	100	500
Wh., Bl., Br., and Br. Leghorns	$2.75	$5.50	$10	$40
Rocks, Reds and Wyandottes	3.50	7.00	13	60
Heavy Broilers	3.25	6.50	12	50
Light Broilers	2.75	4.50	8	30

Twenty-four page catalogue free. 19 years in business. Hogan tested flocks. Postage paid. 100% delivery.
JOHNSON'S HATCHERY, ICKESBURG, PENN'A

FOR GREATER PROFITS Hatchery Chicks
CHICKS FROM JANUARY TO SEPTEMBER, 1929
Barred and White Rock, White Wyandotte, Rhode Island Reds, White Leghorns, Anconas and heavy mixed. Our flocks have been culled by Mr. Lloyd Baker a graduate of Pennsylvania State College. also having several years practical experience. Write us your wants.
L. R. WALCK HATCHERIES
Dept. 6 Greencastle, Pa.

Schwegler's THOR-O BRED BABY CHICKS
Our breeders are bred for high egg and meat production. Barred and White Rocks, Red Leghorns, Barred and White Rocks, R. I. Reds, Anconas, Buff Orpingtons, White Wyandottes, Rose and single comb White Leghorns. 100% live delivery guaranteed. Write for free CHICK BOOK.
SCHWEGLER'S HATCHERY
25 SOUTHAMPTON, BUFFALO, N. Y.

BABY CHICKS

	25	50	100	500	1,000
S. C. W. Leghorns	$3.25	$6.50	$12	$57.50	$110
Bld. Rocks & S.C. Reds	3.75	7.25	14	67.50	130
Heavy Mixed	3.25	6.50	12	57.50	110
Light Mixed	2.50	4.75	9	42.50	80

A Special Discount on orders placed in advance
PINECREST POULTRY FARM & HATCHERY
Herbert Miller, *Prop.* Box 2, Richfield, Pa.

BABY CHICKS

100% arrival guaranteed	25	50	100	500
White Leghorns	$2.75	$ 5.25	$10.00	$47.50
Bld. Rocks and Reds	3.25	6.25	12.00	57.50
Heavy Mixed	2.75	5.25	10.00	47.50
Light Mixed	2.50	4.75	9.00	42.00
Pekin Ducklings	7.50	15.00	28.00	
Mixed Ducklings	6.50	13.00	25.00	

JOHN SHADEL HATCHERY
Route 2, McAlisterville, Pa.

COCOLAMUS HUSKY CHICKS

	25	50	100
Tancred Strain S. C. White Leghorns	$3.50	$6.00	$10
Beer Lay Strain Leghorns	3.50	6.50	12
Red Rocks, S. C. Rhode Island Reds	4.00	7.50	14
Mixed or Broilers	2.50	5.00	9

Special prices on 500 and 1,000 lots. all heavy laying free range flocks. Free circular and price list. 100% live delivery guaranteed. Parcel Post prepaid.
COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

Clear Spring Quality Chicks

	100	500	1000
S. C. White Leghorns	$11.00	$52.50	$100
Barron and Wyckoff Leghorns	12.00	57.50	110
Barred Rocks and R. I. Reds	14.00	67.50	130
Light Mixed $9.00	Heavy Mixed		$12.00

For March and April. 100% live delivery. Prepaid.
New circular free, giving full details of all breeds.
CLEAR SPRING HATCHERY,
F. B. Leister, Prop. Box A, McAlisterville, Pa.

BARRON and WYCKOFF STRAIN
S. C. White Leghorn chicks, 11c each. $100 per 1000. Prepaid and safe delivery guaranteed. Our 19th year. Circular free. $1.00 books order.
THE PENN'A HATCHERY, Liverpool, Pa.

Hampton's Black Leghorn DAY OLD CHICKS
The kind that lay. Circular free.
A. E. HAMPTON, Box F, Pittstown, N. J.

RIVERDALE CHICKS L. Brahmas, Wh. Wyan., Barred and White Rocks, S. & R. C. Reds, W. Legorns, Anconas, Buff Orpingtons. Write for price list.
Riverdale Poultry Farm, Riverdale, N. J.

CHICKS Tancred Strain, W. Leghorn, $11.00 per 100 from our own free range flock. Our breeders are selected for size, type and egg production. Will ship C. O. D. Circular.
Meadow View Poultry Farm, McAlisterville, Pa.

TIGHT BINDING TEXT CUT OFF

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from CERTIFIED HOGAN TESTED HEAVY LAYING FLOCKS



STILL LOWER PRICES
WHY PAY MORE?

SIEB'S "OVERSIZE" CHICKS are from PURE-BRED Flocks of THE WORLD'S FINEST BLOOD LINES. They are a new Sieb Development—an advanced step in scientific breeding to produce chicks that grow larger, stronger, mature quicker and lay more and larger eggs. All are quality only THE BEST.

WHY SIEB CHICKS PAY BETTER

Fortunes have been spent to produce a superior quality chick. It costs just as much to raise a chick that weighs 6 lbs. at 6 months old as it does a Sieb Chick that will weigh 8 lbs. or more at 6 months old. The best proof of this wonderful achievement is the testimonials from our customers. Think of young cockerels weighing 9 lbs. and pullets 8½ lbs. with remarkable egg laying records. If you want larger, stronger stock, more eggs, more meat, and more profits, buy Sieb's "OVERSIZE CHICKS". Our great capacity of over five million per year insures quick delivery, cuts down cost of production and enables us to give you THE BEST GRADE ONLY at prices even less than many hatcheries charge for second and third grade chicks. SEND FOR CATALOG or order from this ad., 100% live delivery guaranteed.

PRICES PREPAID	25	50	100	500	1000
Wh. Br. & Bf. Leghorns	$3.00	$5.75	$11	$52.50	$100.
Red, Wh., & Buff Rocks	3.00	5.75	11	52.50	100.
Wh. Blk. S. C. R. I. Reds	3.00	5.75	11	52.50	100.
R. C. R. I. Reds, Wh. Wyan.	3.75	7.25	14	67.50	130.
Wh. & Buff Orps. Bl. L. Wyan.	3.75	7.25	14	67.50	130.
Black Minorcas	3.50	6.50	12	57.50	110.
Anconas & Heavy Assorted	3.00	5.75	11	52.50	100.
Heavy & Light Assorted	2.75	5.25	10	47.50	90.
Light Assorted	2.50	4.75	9	42.50	80.

SIEB'S HATCHERY,
BOX 150 LINCOLN, ILL.
Members Int'l. Mid-West, Ill. & America B. C. P. Association

LABOOK JUST-RITE
Surety Chicks
GREAT WINTER LAYERS

OFFICIAL TRAPNEST PEDIGREED R. O. P. Male Exhibition Quality Matings in the world's finest bred-to-lay strains Great Winter Layers, from High Record blood lines. R. O. P. matings in S. C. White Leghorns, also Barron and Tancred strains; Pomahns, Owen, Mahood, R. I. Reds; R. O. P. Thompson and Holterman's Barred Rocks; Martin and Fishel White Wyandottes; Fishel White Rocks; Sharpneck Anconas. 40 Other popular and rare breeds including Doublings; Bostians, Baby Turkeys. Member International B. C. A. and American B. C. P. A. Postage paid. 100% live delivery guaranteed.

	25	50	100	500	1000
S. C. White, Buff, Black and R. C. Brown Leghorns	$3.75	$7.00	$13	$60	$120
Barred and White Rocks, R. I. Reds, S. C. Anconas	4.50	8.00	15	73	138
S. C. Blk. Minorcas, Wh. and Sil. Wyandottes, Bf. Orpingtons, R. I. Whites	4.75	8.50	16	77	144
R.C. Anconas, Col. Wyandottes, R.C.Wh., and Bf. Minorcas, Blk. Lanshans	5.50	10.00	18	90	175
Silver Sp. Hamburgs, Partridge Rocks, Blue Andalusians, Col. Rocks	5.50	10.00	18	90	175
Light Brahmas, Jersey Black Giants, White Faced Black Spanish	6.00	11.00	20	98	195

Mixed Assorted, $10 per 100. Heavy Assorted $13 per 100. All other breeds reasonably priced.

FREE Beautifully elaborate Color-plate Catalog. 56 pages, 70 illustrations. Stamps appreciated. Don't fail to get this big book and invest your money this season in the famous Nabob 18K strains, the most profitable investment you can make in the poultry field this year. References: PEOPLES BANK, Gambier, Ohio, and BRADSTREETS.

NABOB POULTRY FARMS, Dept. 42. GAMBIER, OHIO

Ohio Accredited Chicks
WHARTON CHICKS
Quality higher and prices lower. Breeders selected and leg banded by men trained by Ohio Poultry Improvement Association and authorized accredited inspectors. Leghorns 12c each. Rocks, Reds, Wyandottes 14c each. Light Brahmas 18c each. Write for catalogue and special prices on 500 or more. THE WHARTON HATCHERY CO. Box 108, Wharton, Ohio

PENN'A CHICKS
have vim and vigor—hatched by men with 18 years experience, from culled flocks. Prepaid and 100 per cent guaranteed. S. C. White and Brown Leghorns, Buff Rocks, 12c, Reds and Minorcas, 14c. Mixed Broilers, 9c each; $80 per 1,000. Circular free. Our slogan Service after Delivery. THE PENN'A. HATCHERY, Liverpool, Pa.

Look! DUCKLINGS
Postpaid. Live arrival guaranteed. White Pekins, Indian Runners, Rouen and Buff Orpington ducklings. Ducklings make the most profitable poultry known. $30 a 100. Catalog free. Stamps appreciated.
Nabob Poultry Farms, Dept. 82, Gambier, Ohio

CHICKS from leading strain; Postpaid.

	100	500	1,000
S. C. W. Leghorns	$11	$52.50	$100
S. C. Barred Rocks	12	57.50	110
Mixed Chicks	8	40.00	80

L. E. STRAWSER, Box 80, McAlisterville, Pa.

HERBSTER'S QUALITY CHICKS
Barred Rocks and R. I. Reds ... $12.00 per 100
White Leghorns and Mixed ..... 10.00 per 100
Good, strong, livable chicks. Can ship C. O. D.
Herbster's Poultry Farm, Box 171, McClure, Pa.

QUALITY S. C. Wh. Leghorns, $11.-100. S. C. CHICKS Barred Rocks, $13. Light Mixed, $9. Heavy $11. Special prices on larger lots. 100% live delivery, Postpaid. New circular free. EDGAR C. LEISTER, McAlisterville, Pa.

TANCRED WHITE LEGHORNS 12c each; Wyckoff White Leghorns $9.00—100; Anconas $11.00—100; R. I. Reds $15.00—100; R. Rocks $15.00—100; Minorcas $15.00—100; Heavy Mixed $11.00—100; Light Mixed $8.00—100. Sixteenth season.
Eclipse Hatchery, Port Treverton, Pa.

Barred Rock Chicks Hatches Weekly. Large, strong chicks from good layers (some bloodtested). Discount on large orders. $14 per 100. 10% books order. Smith's Vallonia Hatchery, New Berlin, Pa.

FAIRMONT'S BETTER PURE FLAKE BUTTERMILK
EASTERN DISTRIBUTORS. CARLOADS WEEKLY.
ALWAYS FRESH. WE QUOTE DELIVERED.
ONWAKE BROS., GREENCASTLE, PA.

Read the Advertisements
they help you get the most out of life and save you time and trouble doing it.

WINTER WONDER LAYERS
"Ohio Accredited Chicks"
At these Low Prices for April

Barred, White & Buff Rocks, S. C. & R. C. Reds, White Wyandottes, Silver Wyandottes, White & Buff Orpingtons	$14.00	$40.50	$65.00
White & Brown Leghorns	12.00	34.50	55.00
Heavy Assorted	11.00	33.00	55.00

Sunbeam Chicks are BIG Chicks—Weigh 11 to 12 lbs. per boxed 100. 100% Live Delivery Guaranteed. Prizes offered to Buyers. Big Discounts for Quantity orders. FREE Illustrated Catalog. We ship C. O. D.
SUNBEAM HATCHERY
Box 2758, Findlay, Ohio

DEL-MAR-VA HATCHERY
Formerly Sunshine Poultry Farm
offers this year to Farmers and Poultrymen certified and noncertified chicks in seven breeds from tried to lay free range flocks. Our new illustrated catalogue which tells why Del-Mar-Va Hatchery Chicks are better is now ready and will be mailed FREE on request.
DEL-MAR-VA HATCHERY
LLOYD E. HOLSINGER, Prop.
Box 7 Denton, Md.

NO BLUFF CHICKS. JUST REAL STANDARD QUALITY. Thousands of customers know, Order your first year. A satisfied customer is my best advertisement. Join the old reliable plant. 16 years' satisfactory service cuts down extensive advertising. My customer reaps the benefit by ordering from this small ad. S. C. WHITE and BROWN LEGHORN SPECIALIST. 200 to 300 Egg Strain CHICKS, $13 per 100; 500 or more, $11 per 100. 100 Assorted Chicks, $5 per 100. Free and 100% Live Delivery Guaranteed.
HOUSEWORTH'S LEGHORN FARMS
Port Treverton, Penn'a

BROILERS—RAISERS
SHIPPING CRATES LOANED FREE
SHIP YOUR LIVE BROILERS and other poultry to New York's Oldest Live Poultry House. Est. 1863. We are bonded commission merchants. Birds fed; returns made daily. Highest prices. Our outlet is unlimited. Inquire about us. Write for quotations, crates, tags, shipping instructions and Holiday Calendar. Folder F-2. KRAKAUR POULTRY CO., Inc., West Washington Market, New York City.

BROODER COAL
CLEAN CHESTNUT ANTHRACITE
ALEX BLACK COAL CO.,
3128 Liberty Ave., Pittsburgh, Penn'a

Poultry Problems

Best Equipment Cheapest

I have a home-made brooder which I am having trouble to heat. I am unable to raise the temperature higher than 70 degrees F. What do you think of the use of alcohol in place of kerosene? What is your opinion of such a brooder? Paul M. Rowe

IN the brooding of chickens, it is most important that the very best equipment possible be procured. It is not necessary to buy trills, but it is essential that a brooder stove capable of maintaining sufficient heat be provided for the young chicks.

If you cannot maintain a temperature of 100 degrees Fahrenheit under the hover with the equipment which you have available, purchase new equipment or else buy pullets in the fall.

Very satisfactory brooders are advertised in the Pennsylvania Farmer and I believe you would not go astray in the purchase of any of those whose advertisements appear in this paper.

Remember that fuel is always cheaper than chicks. Young chicks require a temperature of approximately 100 degrees at the edge of the hover. As the chicks become older, and the days become warmer, this temperature may be greatly reduced. I firmly believe that more chicks die each year because of lack of heat than for any other reason with the possible exception of disease. H. C. K.

Peat for Litter

In a former issue of Pennsylvania Farmer you commented on peat litter. I tried it in a pen of 40 pullets having a floor space of 100 square feet. It is satisfactory, being nice and dry and appears to be just as dry as when I put it in, but there is a strong ammonia odor. I am afraid it will have a bad effect on my pullets. Albert B. King.

WHILE I use peat moss litter in the brooder houses for chicks, I have not used it in the laying houses, as I have plenty of straw for litter. However, some commercial poultrymen do use it, and I visited a large plant some time ago where the peat moss was cleaned out only twice a year. However, I feel that such infrequent cleaning is hardly a sanitary practice. I clean out my own houses whenever necessary, which means about every two weeks in ordinary weather.

If you notice a strong odor of ammonia in your poultry house it is evident that dampness is causing the fumes to be given off. It is often hard to keep a house dry during damp weather, as the exhalations of the hens coupled with atmospheric moisture condense and cause dampness. Special ventilating systems sometimes control these conditions.

Very often a house not sufficiently ventilated becomes damp even in dry weather from the moisture condensing from the hens' breath. I do not know how you can dry your present litter if it has become damp, and probably you will want to replace it, using straw and cleaning more frequently, also making sure that the house is adequately ventilated without being drafty. Hens can stand dry cold air much better than dampness. R. L. S.

Feed May Be Mouldy

I have a number of R. I. Red pullets which have been laying fine up until the last few days when I noticed some of them have a yellowish green diarrhea and are losing weight rapidly. They are sluggish and a few refuse to eat. Egg production has been cut about 30 per cent.

These hens are well housed and well taken care of. Mash before them all the time and all the whole corn they will eat at night. I have been feeding a mash composed of equal parts of bran, middlings, corn meal, ground clipped oats and beef scrap. The last feed the dealer delivered he substituted hominy feed for corn meal.

I have some baby chicks about a week old which are dying like flies. They stand and peep a short time and die. Examined some and the yolk does not seem to be absorbed. What is the cause of this? W. T. E.

IN regard to your pullets I am inclined to think that some spoiled or mouldy feed is at the bottom of the trouble. I do not see any reason why hominy feed should be responsible, provided it is wholesome. The way to get at this is to do a little detective work on the various ingredients of your mash and grain and eliminate whatever seems to be responsible. Sometimes cabbage, if the outside is rotten or mouldy, will produce the same symptoms. A dose of Epsom salts at the rate of one pound to 100 birds given in the drinking water, will probably be of benefit.

It is hard to say what is the matter with the chicks. Chilling or overheating in the brooder, overheating in the incubator during the incubation period, feeding too soon, or bacterial white diarrhea may be responsible. I do not know of anything you can do except to remove the sick chicks and give the house a thorough cleaning, replacing the litter with fresh. R. L. S.

Friendly Talks

By Edgar L. Vincent

A MENDED strap helps to keep the pocketbook full.

A good many farmers have tools with which to make repairs of broken straps in the harness, or to do other odd jobs of this kind in the house or barn. And they save a good many dollars in the course of the year by getting themselves right about the work, before they are forced either to stop all business and mend the broken article or to drive away perhaps miles to get a new one.

Other farmers find it easier to toss the broken strap into the dump heap than to mend it; and these are the ones who keep themselves on the ragged edge financially. For nothing is truer than that a penny saved is a penny earned. But it is easy to whittle a little bit of a plug for the stopper and leave the bunghole running wide open!

And these castoff broken straps, the hopes that are broken and never mended, the resolutions made and not kept, the friendships lost through an unguarded word—these are the things which take the joy out of our lives far oftener than they ought to and bring shadows over what ought to be the fairest of days.

How we do hate to mend these broken things! So out they go to the scrap heap, until most every one of us has a pile of them half as big as the barn. But, oh how well it would pay to take up these shattered dreams, these friendships that have been ruthlessly broken! A few minutes would be enough to do it. We might step down to Sam's and make it right with him in no time, and how happy we would be when we come home! But so many times we shut our teeth hard and say, "I won't do it!" and the scrap heap gets another addition. But why should it be so? Life is short at the best. If it pays to mend a broken harness strap, a thousand times more so to get right with everybody with whom we have a grievance, no matter how slight. Don't you think so? Then, why not begin today?

¶ The principal railroads of the United States carried fewer passengers by one than in any year since 1905. The average inhabitant of the country traveled 350 miles by steam train in 1928, a great decline from the average of 446 miles per person in 1919.

In Schuylkill County

By R. U. BLASINGAME

I SPENT the week of February 25th in Schuylkill county, Pa., with County Agent Walter Bollinger, discussing farm operating equipment at a series of meetings. Even though that county is rather rolling yet many good farming valleys are scattered here and there and I found a splendid spirit of cooperation among the farmers. At Valley View there is a handsome new consolidated school worthy of a city of twenty thousand population. Two of the meetings were held in that school and a fine crowd of interested farmers turned out.



At Ringtown I found one of the finest churches I have ever seen in a rural district in the state. One day's meeting was held in the basement of this church and the ladies in the congregation prepared a dinner for the crowd which was "fit to set before a king."

Concrete

Mr. N. S. Grubbs, of the Portland Cement Association, Philadelphia, discussed the question, "Making Good Concrete." It has been discovered that when too much water is used in concrete it lowers the strength and reduces the density of the product. The Portland Cement Association is not a selling organization but rather an educational institution. Many of the manufacturers of cement belong to this association and they are interested only in teaching people how to get better concrete. Mr. Grubbs said that he would be glad to send any farmer in Pennsylvania literature, and even help in remodeling barns, construction of storage cellars, milk houses, poultry houses, etc.

Mr. McLeod, entomologist for the Agricultural Extension Department, discussed the control of insect pests on vegetable crops and fruit. He knows his business and in his travels over the state he has observed the "best practices" in the control of insects.

Two Facts Stand Out

Two facts stood out in this series of meetings. First, the farmers have a good market and they have found it more profitable to produce vegetables, fruits, milk, etc., to feed to a man than to grow timothy hay and oats to feed a horse. They are naturally interested in general-purpose tractors which they can depend on to do all of their field work. Those who are not interested now will likely have to come to mechanical power sooner or later in self-defense.

Second, in every farm operation from mixing concrete to dusting and spraying equipment and power to run that machinery stood out in bold relief. The first question is what to do, and then how to do it follows.

New developments in farm machinery, such as plows, milk coolers, weeders, planters, general-purpose tractors, dusters, sprayers, etc., are going so fast one has to step lively to keep up with one's competitors.

Seed Corn Grader

Could you give me some information on building a seed corn grader? I would like to grade it in three sizes for my planter. W. G. Hubbard.

I HAVE never had any experience in the construction of a seed corn grader. A successful grader of this kind involves considerable experimenting and expense, and I feel that you could purchase a machine which would be far more satisfactory than one which you would build yourself.

Sweetening—for 2 Million Farms



Model 8 New Idea With Lime Attachment

AUTHORITIES estimate that two million farms in the United States need *lime right now.* Only the few-est of these farms are actually "sour" (see quotations from U.S. Bulletin in panel below;) yet they are "calcium (lime) deficient." In the language of the same bulletin, they "*will respond in increased yields to applications of lime.*" Of course lime does not fertilize. Manure is the other requisite. And now the world's leading manure spreader can be converted by a simple attachment, into a perfect acting, easy handling, lime spreader.

Lime Spreading Attachment *for the* NEW IDEA Spreader



ATTACHED to any Model 8 NEW IDEA Spreader in thirty minutes. Fits it to spread lime, marl—anything finely pulverized. The low spreader sides make easy loading. To unload, set the feed and spread. No hand shoveling or dusty labor; no lime thrown up in the air or getting into bearings. Feed adjustable, 1½ to 5 tons per acre; spreads perfectly 15 to 20 feet wide. Simple, strong, low in cost. Furnished only for the New Idea Spreader.

"***soils of the East, South and portions of the Central West are deficient in lime." ***the great majority ** that respond to liming are not strong acid." "The conditions ***tend to recur again *** This makes it necessary to repeat the liming." ***liming should not be expected to build up such a soil unless organic matter is supplied ** manure or green crops plowed in."
U. S. Dept. of Agric. Farmers' Bulletin No. 921.

WHEN you buy a spreader, you certainly want the qualities of the NEW IDEA Model 8—light draft, short turn, easy loading, free ground clearance, perfect control, comfortable operation and flawless spreading. Tested for five years and never worn out. And now that you can get the new Liming Attachment, you will need the New Idea more than ever.

Manufacturers of Spreaders, Lime Spreading Attachments, Husker-Shredders, Transplanters and Two Row Corn Pickers. Ask for full descriptions on any of these machines.





Special Anti-Wrap Upper Cylinder
For use where unusually tough and stringy manure prevails. Completely overcomes wrapping and choking of cylinder. Furnished as an extra.

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	50	100	500	1,000
S. C. W. Leghorns	$6.50	$12.00	$57.50	$110
S. C. Brown Leghorns	$6.50	$12.00	$57.50	$110
S. C. Rocks & Reds	7.50	14.00	67.50	130
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Assorted Chicks	5.00	9.00	42.50	80

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From Free Range Selected Flocks

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Light Mixed	4.50	8.00	37.50	75
Heavy Mixed	6.00	11.00	52.50	100

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Fair View Poultry Farm, R. 3, Millerstown, Pa.

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$12.00 per 100 $57.50, 500 $110.00, 1,000
100% prepaid safe delivery guaranteed.
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White Leghorns, Tancred Barron English S.C. White Leghorns. 275 316 egg line matings. No light breds used, chicks are extra hardy and vigorous. These quality pure chicks shipped parcel post prepaid 100% live delivery guaranteed as $16 per 100, $47 per 300, $77 per 500, $150 per 1,000. 10% books order. Catalog free.
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100% live delivery guaranteed.
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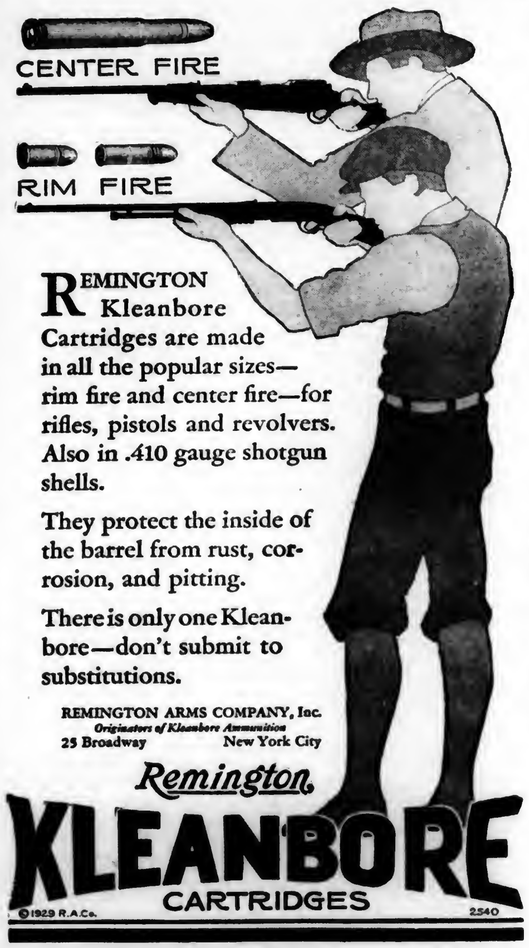
	25	50	100
S. C. W. Leghorns	$3.50	$6.50	$12.00
R. Rocks & R. I. Reds	4.00	7.50	14.00
Heavy Mixed	3.25	6.50	12.00
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500 lots 5c less. 1,000 lots 1c less. Free range. 100% live delivery guaranteed. Circular.
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BABY CHICKS Tancred Str., Wh. Leg'hns, $12 per 100; White Leghorns ..... 11 per 100; Barred Rocks ..... 14 per 100; R. C. Reds ..... 14 per 100; Heavy Mixed ..... 12 per 100; Light Mixed ..... 9 per 100. 500 lots 5c less—1,000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for free circular.
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Reduce your yearly fence costs

Most farmers realize—some of them as the result of costly experience—that their fence costs per year are much less when they use fence of superior quality.

Cambria Fence is made in the Cambria Plant of Bethlehem Steel Company, where superior field fence has been made for many years. Cambria Fence is made of the grade of steel selected by Bethlehem metallurgists as most suitable for the purpose. The wires have a heavy zinc coating that will not crack, flake or peel. Flexo Joints permit flexibility. Tension Curves keep it tight. It retains its strength and uniformity for years.

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For Tax Relief

I HAVE read so much about farm relief and tax reduction that it has become as sounding brass and a tinkling cymbal. When our lawmakers undertake that job they will have a more difficult problem than the farm question, as a farm relief measure will not suit all who are concerned. For instance, what will suit the East will not suit the West, what will suit the North will not suit the South, and what will suit the producer will not please the consumer.

I do not believe in crop reduction. Let the producer produce all he can. Let supply and demand rule the market. If any commodity is short Congress could stop the speculators from buying the product and speculating off the consumer.

We have to have men in mines and factories of various kinds who make their living by day labor. If our mines, railroads and factories would fail to get men to work they would be of no use to us. The men who work at these various occupations cannot farm, too, they have to depend on the ones who till the soil for their living. I cannot help feeling sympathetic toward the man who works by day work for his living. A young man by home economical and saving can bank a little to-day, but it is almost impossible for a man with a family to save money.

Need Business in Government

I not only sympathize with the day laborer but also with the taxpayers of West Virginia. I am one, myself. my tax receipt is large and my possessions are few as well as small. I own a small farm in the West Virginia hills and very little personal property. By strict economy and denying myself many of the comforts of life I have been able to store up a little for old age, but the way things are going they will take it all for taxes.

We cannot have any tax reduction as long as the lawmaking foolies increase the officers' salaries and make new laws for people to be fool at the public crib. If they get many more to feed I fear their rations will be mighty scarce.

As proof of this take the delinquent lists of the different counties and see for yourself how they have grown in the last two years. If the taxes continue to increase in the next five years like they have in the last two, thousands of poor men like myself will be sold out of house and home because of their being unable to pay their taxes.

If the state government was run as a business proposition like the good farmer runs his business our taxes could be reduced one-third or more, and also abolish some of our officers that we have no use for instead of boosting their pay, and reduce the salary of those left in proportion to other occupations. If somebody is going to raise a howl let them howl and see if I care!

Let the People Protest

I commend some of our representatives in the House and the Senate for the stand taken in favor of the overburdened taxpayer. Some of the candidates are very sympathetic while soliciting the votes of the over-burdened taxpayer, but after they get into office they straightway forget what manner of man they were. You would hardly recognize them as the same men. Some will say the taxpayers are calamity howlers. I wish there were ten thousand calamity howlers where there are none. Let the people raise their voices in protest to such high taxes!

I don't doubt the sincerity of our state executives. Mr. Conley's address was very good, he was in favor of economy and development of our natural resources. How can we induce capital in our state when its occupants are already overburdened with high taxes? Men who own coal that is under option are being returned delinquent.

Some of our factory men are talking of moving their factories out of the state. Our lawmakers must shoulder the responsibility.

You will excuse my awkwardness and grammar as I am in my eighty-first year, and this being my first attempt to write a few lines for the press.

John I. McVicker.

• • •

Another Angle

YOUR correspondent in a recent issue convinces us at the outset that he is an honest man in his profession that he knows nothing about the problem of taxation.

Quite true there is much room for improvement. It may be easy to criticise, but who has a right to criticise who has not something to offer. It seems difficult for some to see more than one side to the question. They talk only of the taxes with which they seem to be unjustly burdened, unmindful of the benefits they receive. They don't like to drive over an improved road that has been built by taxation, nor do they relish the assistance of our courts in the event they have been wronged, the protection of our state police when in danger. For two cents I expect the mad man to stop for a while or bring them one. They never take into consideration what the state or the nation have done for agriculture in general. The reason why the average farmers never benefit from such forms of help is because they think they know all about every phase of farming and just continue the same old way.

Not Worried about Taxes

The prices some farmers have been paying for farms the past decade do not indicate they are worried about paying the taxes. And yet in many cases paying easily double what the farm is actually worth makes it difficult to pay both cost and taxes. What the farm is actually worth may be hard to estimate. However the estimate should be based on the volume the farm is capable of producing. If it is capable of a production of $2,000 a year, an average twenty or thirty per cent profit after all expenses are paid, including our high taxes, how many years will be required in which to pay for the farm? This all depends on the price to be paid. The great trouble is that in many instances, due to the doubled or trebled prices paid, the twenty or thirty per cent profit hardly pays the interest on the investment, simply because that investment is entirely out of proportion to the value the farm produces.

Greener Pastures

Your correspondent would have us believe that our high taxes are due to all the money the farmer makes, that into any good farming community you will find some farmers who are making some money. There are those who have missed their calling, or possibly never been called. They probably never will make a success at farming. Were they suddenly exempt from their taxes they would sit down and estimate just how much they could ease up on their efforts during the year so as to just break even.

He also points out that the industrial and professional classes are enjoying so much better incomes. I hear people talking that way. In order to myself why they didn't put it in that light long ago and start canoes in that channel if it were much easier paddling, or better yet, go now into the shops or mills or factories become a mechanical genius; enter mercantile business, plenty of proprietors of such businesses have been waiting with their backs to the wall standing with their backs to the door waiting for a buyer. I would suggest that the highly taxed real estate

More Power Less Fuel With Pickering Governors

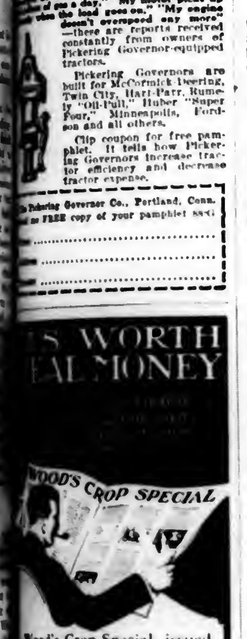
A. Lewis Baird of Canfield, Ohio, put a Pickering Governor on his Fedder Tractor. writes us that he now gets 1/3 more power and uses 1/3 less fuel. Mr. Baird's letter is the experience of thousands of farmers who have equipped their tractors with Pickering Governors.

"It's real steady power," "My tractor has from 20 to 25% more power," "I save 3 gallons of gas a day," "My motor picks up speed when the load goes on," "My engine doesn't overspeed any more"—these are reports received constantly from owners of Pickering Governor-equipped tractors.

Pickering Governors are built for McCormick Deering, Twin City, Hart-Parr, Rumely "Oil-Pull," Huber "Super Four," Minneapolis, Fordson and all others.

Clip coupon for free pamphlet. It tells how Pickering Governors increase tractor efficiency and decrease tractor expense.

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gether with several years of solitary confinement with books at hard mental labor and strain he traded for this easy non-competitive professional career. It reminds me of the familiar picture of two mules, one on each side of the fence, and each reaching over the fence eating in the other's pasture. The pasture often looks greener in the other field. If we were there it would taste different. In fact it might poison some of us.

Some Questions

Again we wonder why the farm land that is overtaxed is not disposed of and the money invested in some other business that is paying better. Everything is a better business and farming is the worst, according to our correspondent's ideas. Let the other fellow pay the high tax on the farm. Invest the money in with the big fellow, and perhaps you yourself may grow to be a big fish if a shark doesn't swallow you.

Why attack the public school system first? Education in one form or another has done more for the progress of mankind than any other one thing. He makes the statement that school superintendents receive salaries entirely out of all proportion to services rendered. This is just his opinion without any proof. He just thinks it isn't a paying proposition to pay so much for superintendents.

Do many things pay? Does an education or training of any kind pay? Does ignorance pay? A question of sociology. Does it pay to raise children? Not often answered in dollars and cents. Did it pay to fight the Civil or World wars? Recently the writer visited Stone Mountain near Atlanta where three and a half million dollars are being spent in chiseling out huge likenesses of heroes of the Confederacy. Our correspondent would say too much money to spend on these dead men. I asked myself the question, Could not this money be spent in a better cause. The "Daughters of the Confederacy" think not.

School Superintendents

So it is in our school system and road system. Some would say economize here, others in another place, with the result that our system would soon become a haphazard affair. Without system there would be no organization and thus no unity which would in turn result in a lack of standards causing ultimate deterioration.

The men at the head of our educational system know their business better than we. Otherwise we could soon work right into their places. Without any superintendents or supervisors just who would determine when a teacher was a good one. Who would rate them. Probably our correspondent could do this job under another name and we would still not be having superintendents. Our friend Ford's massive business is built on system to the last letter, with many experts, superintendents, bosses and inspectors, which accounts for his great production.

And again, General Motors which organization is based on system with plenty of money spent for "frills and idle show," cleared a net profit last year upwards of two and a half millions. How many men in this immense organization receive more than most of our superintendents of schools? We would be surprised if we knew. We all buy automobiles and on each one is added the tax necessary to pay all those superintendents. We tell our friends what a good car it is and how well we like it unmindful that we are paying these superintendents. Then our correspondent would complain that he is paying his county superintendent too much for his services rendered in an effort to mold and shape the characters of the boys and girls in his care. How many pennies would it reduce his tax if we were to cut his superintendent's salary twenty-five per cent? Most of us spend several times the amount for smokes.

D. L. E.

The Plow Alone Won't Make a Crop!



The GENERAL

THINGS *the* General Tractor will do

Check below the jobs this tractor will do on your farm and note how it gives you dependable power for everything a team of horses will do.

	Check here
Plows	
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Pulverizes	
Plants Corn	
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Cuts Corn	
Harvests Grain	
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Belt Power—Runs any machine requiring 12 horsepower or less.	

Steps in Where Others Leave Off

Carries Farm and Truck Crops Right on Thru to Harvest

The General Tractor can be used for all farm work—not just a part of it. The farmer, orchardist and truck grower operating from 5 to 160 acres will find this machine takes care of the jobs for which he has been using horses—gives him the advantages of tractor power not only in plowing and fitting, but also in seeding, planting, cultivating and harvest. For the larger farm it is a second tractor with all the easy handling features of a team in tending crops but with the dependability of tractor power.

The General Uses Regular Horse Drawn Implements

No large investment in new or special implements is required with the General. It has been designed to handle any standard implement that a team of horses can pull.

All the Famous Ohio Implements manufactured by the Ohio Cultivator Company of Bellevue, Ohio, have been equipped with a simple tractor hitch for use with this machine.

If you would like to have tractor power to cut the cost of growing crops, write today for a full description of this tractor. The General sells for $550.00, f. o. b. factory.

THE GENERAL TRACTOR COMPANY
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The GENERAL TRACTOR
Reg. U. S. Pat. Office
Makes the Crop from Plowing to Harvest

The General Tractor Co. *Sales Offices:* Bellevue, Ohio
Please send me complete description of the General Tractor and what it will do.
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TIGHT BINDING TEXT CUT OFF

THE YOUNG PEOPLE

April Fool Day

'Tisn't just the First of April
That they should call "April Fool"—
Why, in April sun keeps shining
When you have to sit in school.

But when lesson time is over
And it's time to go and play
Then the rain falls gray and misty—
"April Fool!" the showers say.

April may be good for gardens
Sprinkling all the seeds and flowers—
But in baseball time it shouldn't
"April Fool" you with its showers!

APRIL 1st is the day when practical jokes are supposed to be in order. The best explanation of the day is this: As March 25 used to be New Year's Day, April 1st was its last octave, when its festivities culminated and ended. Perhaps it is a good thing that one day in the year is set aside for us to release all the foolishness in us. Many a trick has been played on April First and some of them have become famous.



Even kings have been human enough to indulge in pranks on this day of foolishness. In 1774, Peter the Great directed that a vast fire of lumber and logs be started in front of his royal palace at St. Petersburg and then sent his messengers rushing through the city streets, crying, "The czar's palace is on fire!"

Imagine the excitement! The costliest building in the empire was on fire! Forth hurried the faithful citizens, shivering in the cold blackness of the far Northern night, carrying their buckets, tubs and casks. They saw the red flame in the distance and, shouting and shrieking, scurried to the rescue. But there in the great square before the palace stood the guards with swords and bayonets. "Sheepheads! Pigs! Donkeys!" yelled the soldiers between whoops of laughter. "Fall back. Don't you understand that the Little Father (the Czar) has fooled you? This is April First!" It is doubtful whether the terrified subjects appreciated the joke at that hour in the night.

Escape from Prison

AGAIN it was on April Fool's Day that Duke Francis of Lorraine and his wife escaped from their French prison—by a trick.

They had long been imprisoned by their emperor and it looked as though they would certainly die behind the barred windows, if they were not indeed executed by their angry king. But on April First they slipped out disguised as peasants, and were openly going down the public road when an old woman spied them. "The duke and duchess are escaping!" she shrieked with all her power to the guard on the prison wall. But he, remembering the day, laughingly shouted back, "April Fool!"

It seemed so funny to him that he went down to the office of the governor of the prison to tell him about the old woman's joke. He and the officials were having a hearty laugh over it when in rushed a soldier with the word that the royal prisoners had indeed escaped. The guard who thought it a joke was himself thrown into prison and doubtless had abundant time to conclude that the old woman was nobody's fool after all.

Policeman: Hey! where are you going with those nine buckets of water?
Boy: Hush: I'm going to drown a cat.

THE Young People's page is a good place to broadcast discoveries which might be of interest to others. There are three prizes on my desk awaiting the best letter THIS WEEK. You may write on any subject, or send poetry, riddles, photographs, freehand drawings, recipes or anything you think will be a winner.

The first prize is a book on "The Life of Colonel Lindbergh"; the second a fountain pen and the third a mystery prize.

All contributions must be in this office by April 6th. Address Young People's Editor, Pennsylvania Farmer, 7301 Penn Avenue, Pittsburgh, Pa.

Sweet Corn Club

A GROUP of boys in Fawn township, York county, Pennsylvania, are making plans for another year's contest in their acre sweet corn club. This club was organized last year by L. P. Colgan, canner, with the assistance of George G. Weber, county agricultural agent.

Last year Mr. Colgan called a group of boys together and explained his idea of having them cooperate with Mr. Weber in growing sweet corn for the cannery to produce high quality corn economically. To stimulate interest he offered $200 in prizes for the highest yields per acre and best record of production. Sixteen boys entered the contest which Mr. Weber supervised throughout the year.

Seed corn was furnished by the canner and each boy planted his acre of corn on May 17. The acre measurements were checked for each boy by a disinterested person in the community. The harvesting date was the same for all, August 24. At each acre, again a disinterested person witnessed the harvesting and certified that the corn was taken only from the acre in the contest. Weight records of each boy's corn were taken at the cannery.

At a banquet and meeting of the club on December 13 the prizes were awarded and records of the year's work discussed. The price received per ton of sweet corn was $18. The highest yield per acre was nearly five tons. This yield would have been much greater had it not been for a wind and rain storm shortly before the crop was harvested. In addition, the corn was harvested the very first day it was ready to insure the highest quality pack. If it had been harvested a little later the yield would have been greater, but the quality poor. The average yield per acre was 8,122 pounds.

This year the boys expect to excel last year's record in yield per acre and, at the same time, supply the cannery with only the highest quality corn. The indications are that the number enrolled will greatly exceed that of last year.

A Club Boy's World Record Cow

THE first calf club boy to breed and fest a world record cow of any breed is Eugene Buchanan of Lebanon, Indiana. His three-year-old Guernsey heifer, Betsy's Carnation 184676, was pronounced a world champion cow in the Guernsey breed when she produced 13,747.3 pounds of milk and 758.7 pounds of butterfat in 365 days in Class EE. Eugene started his 4-h work ten years ago when, as a lad of eleven, he joined the first Boone County, Indiana, Calf Club and purchased an imported heifer, Imp. Boone's Topsy 84016.

Eugene has been awarded a substantial scholarship at the College of Agriculture at Purdue and will in all probability continue his education at that institution. His plans are firmly fixed and he hopes to go on and develop the herd that he now owns into one of the greatest herds in America.

The Youthful Cook

Eggs In Spanish Cases

Six eggs, two cupfuls fine chopped and seasoned cooked spinach, salt, pepper, paprika, two tablespoonfuls butter, catsup.

Line bottom and side of buttered dish with hot chopped and seasoned spinach. Break eggs into deep indentions in spinach, sprinkle with salt, pepper and paprika and dot over with bits of butter. Set in a pan of hot water and bake at 400 degrees F. until the eggs are set. Remove and serve with catsup if desired. Especially nice cooked in individual baking dishes.

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Chili Con Carne

Six slices smoked bacon, one pound ground steak, one can red kidney beans, one can tomatoes strained, one onion chopped, one chili bean, salt, pepper and paprika. Dice bacon and render in frying pan. To this add meat and sear. Transfer all to a sauce pan and add kidney beans, steamed tomatoes and chopped onion. Season to taste. Add chili bean if obtainable but it is quite frequently made without. Summer about an hour.

A Special Prize

JUST one puzzle this week but the correct answers and neatest paper wins a prize. Write your answers in the blank space, cut it out and mail to Puzzle Editor, Young People's Page, Pennsylvania Farmer, 7301 Penn Avenue, Pittsburgh, Pa.

Do ships have eyes when they go to —?
Are there springs in the ocean's —?
Does Jolly Tar flow from a —?
Can a rivet lose its —?

Are fishes crazy when they go In Sense?
Can an old hen sing her —?
Can you bring relief to a window —?
Or mend a —— of day?

What kind of vegetable is a policeman's —?
Is a newspaper white when it's —?
Is a baker broke when he's making —?
Is an undertaker's business —?

Would a wall-paper store make a good hotel
Because of the —— there?



Edwin T. Baker of Maryland and [illegible] Holstein Calf He Is Raising

Would you paint a rabbit on a bald [illegible] head
Just to give him a little —?
If you ate a —— meal would the [illegible] ners hurt?
Can you dig with the ace of —?
Would you throw a rope to a [illegible] lemon
Just to give a —?

ANSWERS TO LAST WEEK'S PUZZLES

I

Lady's slipper, ivy (IV), [illegible] forget-me-not, sweet William, [illegible] primrose, ragged robin, sweet [illegible] jump-up.

II

Because he always brings Lo [illegible] him.
Because he shows an open [illegible] when taking you in.
An author, because his tail [illegible] out of his head.
The baby is a little Bigger.
Want of hair.
Because he wears a mask, [illegible] flies, and is always chasing fools.
They both run over sleepers.
A bedstead.

III

Opal, amethyst, agate, garnet, topaz, pearl, beryl, sapphire, [illegible] diamond, coral.

Little Folks Corner

A Narrow Escape

(Continued from last week.)

Big brother Charles and his father had walked to church and were not home yet.

Virginia was too stricken at the thought of the danger to them to worry about Dan just then. She knew what a dread thing it was to be bitten by a mad dog. Bob was in bed and knew nothing about the trouble.

In an agony of suspense they waited. It seemed hours although it was only twenty minutes, for father had had a



Rosalia and Alberta Morrison, Nine-Year-Old Twins, Butler County, Pennsylvania.

bit part of the way and Charles [illegible] was the prize basketball player [illegible] school, had run until they [illegible]

When they were near enough [illegible] seen from the house in the [illegible] Dan was walking close beside [illegible] as they came up the road.

"Well, he certainly didn't bite [illegible] mmmmie," cried Virginia, and she [illegible] ed for the door to call out to them.

Mother was right by her as she [illegible] ed the door, for maybe it was [illegible] kind of a peculiar case and it was [illegible] the little girl at whom he was [illegible]

"What's the matter with [illegible] screamed the child, not giving [illegible] time to get near the house. [illegible] mad? Charles! Charles! What [illegible] him have his mouth open? Is he [illegible]

"What's the matter with you," [illegible] ed Charles, with all a young [illegible] impatience for what he would call "fuss."

"He frightened Virginia [illegible] came in mother's soothing voice. [illegible] me too," she added honestly. [illegible] thought he was mad."

(To be continued.)

THESE FOLKS WON!

FIRST prize for our "mechanical" puzzle goes to Edith Raum, Lazette county, Pa. Here is her letter with the correct answers:

"I am ten years old. I had a hard time to work out this puzzle. If you put in very many hard ones like this the boys and girls will have to buy new dictionaries. This one looked very hard but I thought I would try anyway. Here are the answers:

"I have a chest, two eyelids, drums, nails, palms, soles, muscles, hairs, calves, veins, arms, lashes, eyes and nose, two lips, Adam's apple and waist."

Elizabeth Knotts, New Castle county, Delaware, eleven years old, had a very neat paper and the answers were correct. Each girl will receive a well-equipped pencil box.

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1.—World's highest skyscraper. Photo shows the final architect's design of the beautiful Chrysler Building, under construction at 42nd Street and Lexington Avenue, New York City. It will be the world's highest inhabitable building—809 feet high with 68 stories. It will cost about $15,000,000 to build.

The building, across from Grand Central Terminal, will house 11,000 persons, and will have a total floor space of 900,000 square feet. There will be 3750 windows to wash.

2.—Little Paulina Longworth, daughter of the Speaker of the House and Mrs. Nicholas Longworth, granddaughter of the late ex-president Theodore Roosevelt, photographed in the beautiful Indian beaded jacket presented her by Chief Spotted Cow, a friend of Vice-President Curtis at the Capitol in Washington.

This is the most recent photograph of little Miss Longworth, who is guarded more carefully from cameras than any other child in Washington.

3.—Snow storms hit Venice, Italy. Photo shows one of the many canals in Venice frozen solid by recent cold spells making navigation by canal impossible.

4.—Fireworks delight inaugural visitors. An interesting and unusual view of the Washington monument illuminated by the gorgeous fireworks display which delighted inaugural visitors and which was viewed by President and Mrs. Hoover from the south portico of the White House.

5.—A beautiful spot in Mexico City. Regardless of the battles that are now raging in Mexico, it will always have its wonderful scenic spots, and our photo shows the Plaza in Mexico City which covers an entire block.

6.—First photo of President Hoover and Cabinet. Immediately after the first Cabinet meeting in the executive offices at Washington, President Herbert Hoover and his advisors adjourned to the south grounds of the White House for their first photograph.

Left to right front row seated: Walter F. Brown, Postmaster General; James W. Good, Secretary of War; Frank B. Kellog, Secretary of State; President Hoover; Secretary of the Treasury, Andrew W. Mellon and William D. Mitchell, Attorney General. Back row, James J. Davis, Secretary of Labor; Arthur M. Hyde, Secretary of Agriculture; Vice-President Charles Curtis; Secretary of the Interior, Ray L. Wilbur, and Charles F. Adams, Secretary of the Navy.

TIGHT BINDING TEXT CUT OFF

Pickett's Gap

By HOMER GREENE

Copyright, 1902, The Perry Mason Company
Originally Published in The Youth's Companion

CHARLIE PICKETT, looking on his son's face, saw there the agony of indecision, and his heart melted. Tears sprang to his eyes and his voice choked with emothion.

"Father," he said, "I yield. He shall stay with you It is right, it is just. Some day, when I am old and alone and need him, as you do now, I will call and he will come to me. Go with him, Dannie. Be good to him as he has been to you. Good-by, good-by, my lad—good-by!"

He lifted the boy from the bench, clasped him to his breast, kissed him once and again, and then gently placed him at his grandfather's side. He turned to the door, opened it, and held it wide open, standing with bowed head and trembling lips and tear-dimmed eyes, while the old man and his grandson, hand in hand, passed out into the corridor.

At the head of the staircase Dannie stopped, turned, and ran swiftly back into the jury-room. He leaped sobbing into his father's arms.

"Father," he cried, "father, I'm going to bring you and grandpap together! I want you both. I need you both. I must have you both. I'm going to bring you together if it takes my life to do it. I will—I will!"

Again the strong man, with tears streaming down his face, strained the boy to his heart.

"Thank you, Dannie—thank you! And God speed the day of reconciliation. Good-by again, my boy—good-by!"

Once more he released him, and Dannie hurried back to where his grandfather stood on the steps, fearful lest the old man might think that, after all, he had chosen to desert him. But the grim smile of triumph on Abner Pickett's face as they passed down the staircase and out to the court-room porch told of the satisfaction and joy that reigned in his heart over the victory he had won.

He stopped to hutton Dannie's greatcoat and tie wraps about his throat and ears, and then they started out together into the snow-bound world, pushing their way through the drifts that blocked the path to the street, while Charlie Pickett, looking from an upper window with tear-blurred eyes, watched them out of sight.

Whenever a member of the Pickett family set his mind on the accomplishment of a certain object, he found no trouble too great, no task too arduous, no effort too severe to bring about the desired end.

Abner Pickett had set his mind on going home with Dannie. He knew that it would be impossible that day to drive back through the blockaded country roads, but that did not deter him. There was the railroad. It was possible that trains might be running on the Mooreville branch. By going on the cars twenty-five miles to Port Lenox, and thence down the river to Fisher's Eddy, he might still be able to reach home that night.

With this plan in view, he hurried along to the railroad-station, which, fortunately, was only a block from the court-house, and found that a train was scheduled to leave in twenty minutes. There was a lunch-room nearby, and remembering that Dannie had eaten nothing since his early morning meal, he took the boy in and saw that he had something to eat.

THE conductor on the branch train could not promise them that they would reach Port Lenox that night. Indeed, it seemed a dozen times as if the cars would be stalled in the huge drifts of snow that were piled across the rails. But the wind had gone down, and the farther the train went, the more clear track was found; and finally, at ten o'clock in the evening, they pulled triumphantly into Port Lenox. The train on the main line was four hours late, and they were just in time to catch it. It brought them to Fisher's Eddy an hour before midnight.

There, where Abner Pickett was known by every one, he had no trouble in procuring a team, and a driver who was willing to make the attempt to get them up through the drifted roads to Pickett's Gap.

It never once occurred to the persistent old man that it would be wiser, safer, and far more comfortable both for him and Dannie to remain at the village until morning. He had made up his mind to set his grandson down by the Pickett fireside that night, and no obstacle that had yet presented itself was sufficient to deter him from carrying out his purpose.

And, after all, the journey was not a hard one. It had ceased to snow or to blow. Through the gap there were no drifts; the horses could trot along easily, and within an hour after midnight the travelers were in their own home.

That Aunt Martha was rejoiced to see them goes without saying. She was spending the night as she had spent the day, moving about the house in an agony of fear, censuring herself constantly for permitting her dear boy to leave home that morning in the face of the impending storm, awaiting news of him which she felt she must have, and yet dreaded to hear.

And here at last he was, unexpectedly home, safe and sound—ah, no, not quite safe and sound! His haggard face, his lusterless eyes, his pinched lips, his weak voice, all told a story of exhaustion, the cause of which Aunt Martha was not long in learning.

She made ready with all haste some nourishing food and hot drink. Then Dannie dragged his tired feet up the old staircase to his own bed, and he knelt to thank God—not to the hard cot behind the grated door of a dreadful cell in the county jail.

But he could not sleep. It was not the joy of being in his own home that drove slumber from his eyes, or the memory of that awful journey through the drifting snow, or even his hard experience as a witness on the stand; it was the joyful, bewildering thought that in one brief hour he had found a father and in the same brief hour had lost him, perhaps forever.

In all the journey from Mooreville to the door of the Pickett homestead Abner Pickett had never once spoken of his son, of the scene in the jury-room, or of his triumphant possession of his grandson; and Dannie knew that these things must remain forbidden subjects, as all things pertaining to his father had been from his earliest recollection.

But when Aunt Martha came in to bid him good night the swelling tide of emotion that he had repressed for many hours forced its way to his lips, and he put his arms around her neck and amid many sobs told the story of the afternoon.

"I must have him, Aunt Martha," he said, at last. "I must have 'em both! Some way we must get grandpap to make up with him. I don't know how it's to be done, but some way we must do it. Why won't he forgive him, Aunt Martha? Why won't he?"

"I don't know, deary. It's his way. His father was so before him. It's in the blood. All we can do, you and I, all we can do is to hope and to pray. Your grandfather will never yield to argument or to pleading. But I still have faith to believe that some time, in some way, the good God will bring about a reconciliation."

"Thank you, Aunt Martha! I shall hope for it, and pray for it, and work for it, too, every day and all day until it comes."

The next morning Dannie slept late, yet he was not refreshed by his sleep. He was still tired, and his limbs dragged heavily as he moved about the house. And try as he might to forget it, that scene in the jury-room the day before was ever present in his mind, a vivid picture of what he had found—and lost.

Little by little the members of the household gathered from his lips the complete story of his journey through the storm. And while Abner Pickett smiled grimly at the boy's pluck and mighty determination, since it proved him to be every inch a Pickett, Aunt Martha, moved by the lad's tale of physical suffering, and touched by the moral energy that led him to endure it, turned her head away more than once to hide the tears that kept welling to her eyes.

In the afternoon Gabriel came home. Of the equity trial he could give no news except that the evidence had been completed and a day fixed for the arguments of counsel. But of Dannie's journey through the storm, of his appearance in the court-room, of his testimony on the witness-stand, he never ceased to talk. For days and weeks it formed the sole topic of his discourse.

"It was wuth a year's wages," he declared many a time, "it was with a year's wages not to have missed it! As ol' Isra'l Pulgin used to say, 'Truth is jest as mighty an' pervailin' when it comes f'om the lips of a child as when it comes f'om the mouth of an archangel!'"

That night, when Dannie went to bed, his pulse was beating rapidly, his face was flushed, his head was very hot and heavy, and he was troubled with a hacking cough. Aunt Martha saw that, beyond the mere fact of physical fatigue, the boy was ill, and she insisted on putting him to bed in the large guest-chamber adjoining her own sleeping-room on the ground floor, where a fire could be kept burning on the hearth and she could give him constant attention by night and day.

He demurred to this arrangement at first, but through sheer weariness he yielded, and soon after his head touched the pillow he was fast asleep. Later in the night he appeared to be troubled and restless and turned constantly in his bed, asking frequently for water. Aunt Martha tried to allay his fever with some simple remedies, but she feared that her efforts were in vain. He grew constantly worse. Early in the morning she awoke Abner Pickett and told him that Dannie was ill. He dressed himself, came in and looked at the boy, and saw at the first glance that the services of a physician were needed.

Before daylight Gabriel was on his way to Port Lenox to summon Doctor Chubbuck, and at nine o'clock the doctor came. He was short and stout and red in the face, and carried with him always an air of joviality. But when he came out from the sick-room he looked grave.

"What is it, doctor?" inquired Abner Pickett anxiously.

THE doctor sat down by the table and unbuckled his medicine-chest before replying. He was deliberate with his answers.

"I'm afraid it's pneumonia," he said, finally. "The lung seems to be pretty badly involved. I guess we'll pull him through, though."

He weighed out his medicine and divided the powder into separate doses. "Give him one every three hours." Then he added, "Martha's been telling me what he did Tuesday. What under the sun possessed him to paddle through that storm from Mooreville I can't see. Why, he might have died of exhaustion! As it is, he—well, we'll do what we can for him."

He turned his attention to the compounding of a liquid prescription.

When he came the next morning he found Dannie no better. The fever was still high, and the congestion was still spreading in the affected lung. The next day both lungs were affected. Then Doctor Chubbuck realized that the case was becoming critical. He gave to his task all the energy, all the skill, all the best thought and judgment at his command. He was fond of the boy; he had been fond of the boy's father before him.

He had known Abner Pickett intimately in childhood, and although he respected him for many good and sterling qualities, he did not hesitate to condemn his faults to his face. And, strange as it may seem, Doctor Chubbuck was the only man in the world under whose condemnation Abner Pickett would sit quietly. The old man believed in him, and trusted him in everything. There was only one topic that he would not permit the doctor to mention, and that was the estrangement from his son.

Notwithstanding the doctor's skillful nursing and Aunt Martha's tender nursing, Dannie grew steadily worse. He did not suffer great pain, but he was growing constantly weaker, and there was no abatement of the fever.

He often wandered in his mind. He thought he was again battling with the storm. He would cry out that it was impossible for him to go on through those dreadful drifts; that he was dying; to his death in the deep snow; and he would piteously for some one to come and rescue him.

"There are no drifts, Dannie," Aunt Martha would say to him. "You are not out in the storm now; you are at home in bed; and I am sitting beside you, and grandpap is standing there by the foot-board. You were dreaming, that is all."

But by the time Dannie could turn his eyes toward the foot of the bed, his grandfather would not be there. He would be in the next room, wiping from his face the tears that Dannie must not see. Hour after hour he would pace up and down the carpeted floor, or sit silent by the fire, waiting in an agony of dread for what the next moment might bring forth.

It distressed him greatly to hear the sick child constant call for water. They were obliged to give it to him in small quantities, inasmuch as his stomach, yielding to the general weakness, was affected by the disease.

"Can't he have something, doctor," exclaimed the old man, impatiently, "something that he can drink down—something that'll satisfy him if it is for but five minutes? I can't stand it to hear him begging that way all the time for water!"

The doctor explained why liquids taken in large quantities might in Dannie's case be disastrous, and then mentioned a certain carbonated water, put up in siphon bottles, which he thought might be taken more freely and with good effect.

"I can't get it in Port Lenox," he added, "but Chamberlain at Mooreville has it. You might send by the stage tomorrow morning and get some to try it."

"Write down the name of it, doctor."

The doctor did so. Without another word Abner Pickett took the slip of paper and left the room. Going to the barn, he summoned Gabriel.

"Here," he said, "help me hitch up, quick! Take Dan and the light cutter. You go to Mooreville for Chamberlain's as fast as the two horses'll draw you, and back again. Get three dozen bottles of the stuff that's written down on this paper, and don't lose a minute, as you hope for heaven!"

Gabriel obeyed the order to the letter. He saved the horses nor himself. At dinner-time he was back with the effervescent water. Abner Pickett was so pleased with the haste made that he took it as an especial favor that Gabriel might go to see Dannie.

"It's Gabriel," said Aunt Martha. "He brought something from Mooreville, something to drink. See it is in the glass. See how it sparkles."

She raised the boy's head gently from the pillow and held the tumbler to his lips. When he had drained the liquid he turned his grateful eyes on her and said,

"Thank you!" he said. "Thank you very much. You was so good—you were always—doing nice things for me, Gabriel."

Old Gabriel, not daring to trust himself to reply, turned and left the room. When he was able to control his voice he said to Abner Pickett

"They tell me he thinks he's in the drifts, a-goin' to the poorhouse to Mooreville, an' that the snow's a-smotherin' him. You tell him the road's all clear now. Tell him I went by there a-flyin'. Tell him a child could walk through them drifts now without any help. Maybe it'll sort of relieve his mind on that p'int."

The old man looked up at him grimly. "Gabriel, you're a—God bless you, Gabriel! Get to your supper."

But Dannie's dreams were not all of his journey through the storm. He often thought he was with his father. And some one always came between them and forced them apart and compelled him to go away. It was pitiful at these times to look upon the distress.

It required all Aunt Martha's power of persuasion to induce him to believe that his imaginings were not realities. And if, at last, he was made to realize that his father was not with him, he would turn his head wearily on his pillow and sigh with disappointment. One morning Aunt Martha called the doctor aside and spoke to him very earnestly.

"Yes," he replied, "yes, certainly. He must do it."

He went out into the sitting-room, where Abner Pickett was pacing up and down the floor.

"Abner," he said, "I've been used to expressing my mind to you pretty freely, and I'm going to do it now. I don't know much about the quarrel between you and Charlie, and I don't want to know. But I'm sure that the fault is all Charlie's, he has, nevertheless, some rights as a father, which you, as a man, are bound to respect. And one of them is to know that his child is desperately ill, and to have the opportunity to come, if he wants to, and look into the boy's face while there's life in it. Now that's all. If you don't know where to find him, Martha does."

Abner Pickett stopped in his monotonous walk and looked at the doctor for a full minute from out his haggard eyes. In that minute he went over the entire past, he considered the terrible present, he looked into the dark future. Then he said, simply:

"Tell Martha to send for him."

At midnight Charlie Pickett came. He entered by the kitchen door, as in the old days, and passed on into the sitting-room. His father was there, seated by the fire, gazing steadfastly on the burning coals.

"Father, I've come."

The old man did not answer. He did not even lift his eyes from the blazing logs. But whether his silence was due to the old feud and stubbornness, or whether he dared not trust himself to reply, Charlie did not know.

"Father," he said again, "I've come—to see Dannie."

Still the old man did not answer, but he motioned with his head toward the inner room, and then turned again to the fire. So Charlie entered the room where his sick child lay. Aunt Martha met him at the threshold and kissed the cheek he bent down to her. Dannie was talking softly in his delirium in the broken sentences that tell of rapid respiration. He thought he was walking up through the gap in the moonlight with his father, the conference.

"It's 'most morning now," he murmured. "I—must hurry home. Grandpap—don't know—I'm sure. Yes, it is; it's a—beautiful curve, beautiful.

New Story Next Week

"The circus is coming to town" in the new story which will start in Pennsylvania Farmer next week. "Old Rhiney", the hero, will amuse the young folks and bring pleasant recollections to those not so young in years but still youthful in spirit. Do not fail to read "Old Rhiney", by Charles Adams, starting in the April 6th issue.

That's my—mother's grave there—you know, Grandpap wouldn't—have a stake there—for worlds—and worlds. You're so good—to go—around it. That's because—you're my father? Are you my father? I'm so glad! Don't hold me—quite so tight, father; it hurts me—here in my side—so. That's better. Who's that—pulling you away? Don't go, father—don't go! Oh, don't go!"

"No, Dannie, I'll not go. I'm here now to stay until you get well."

Dannie opened his eyes wearily and saw his father's face bent over him. He did not seem surprised, only gratified. He reached out both his hot hands and grasped the strong, cool hand of his father.

"I'm so glad—you're going—to stay!" he said. "I want you—all the time. I lost you—last night—in the snow. I called—and called—but you didn't hear me. I'm so glad—you're here again—so glad—so glad!"

With his father's hand in his, he fell asleep, and on his face, for the first time during his illness, there was an expression of supreme content.

When Doctor Chubbuck left the sick-room the next morning, no one asked him how his patient was; the look on his face forestalled that question. He sent his team and driver back to Port Lenox.

"I shall not leave here today," he said. "The boy needs me."

So he watched hour after hour at Dannie's bedside, fighting with every resource of skill and experience against what seemed to all to be the inevitable end. At midnight the crisis came.

No one in the house went to bed. Gabriel, in the kitchen hallway, stood ready for instant service, as he had stood for days—and nights. Even Max, lying by the sitting-room fire, never took his sleepless eyes from the door that led into Dannie's room. The hush that tells of the near approach of man's last enemy lay heavy on the house and all its inmates.

There came a time when even those who were nearest and dearest to the sick boy could no longer bear the strain of watching at his bedside. The sudden fall of temperature, predicted by the doctor, had come, bringing its ghastly pallor, its relaxed muscles, its vivid signs of physical collapse; and Abner Pickett and his son, both unable to continue looking on the unequal struggle, had left the room.

Since Charlie's arrival, the night before, no word had passed between them. The old man had maintained a studied silence that said as plainly as words could have expressed it that he did not intend to permit Dannie's desperate illness to be made the occasion for a reconciliation. And Charlie, looking now and again at the haggard and anxious yet determined face of his father, knew that even Dannie's death would not suffice to bridge the awful gulf of estrangement.



The Cheerful Plowman

WRONG SPIRIT IN SPANKING

JOHN JEFFRIES spanked his little boy; the spanks were due, I guess, because the child said, "No'", alas, when proper speech was, "Yes!" He needed it, there is no doubt, I favor spanks at times; I'm sure that early laxity must lead to later crimes. Dad used to spank and so did ma, and look how well they did. I never yet have been in jail, and shan't be, Lord forbid!

But, though I feel that spanking's right, in keeping with the laws, there is a type of spanks, take note, that has too many flaws. For instance when John Jeffries spanked that little boy today his face grew semi-purplish red then turned to leaden gray. His voice grew harsh as twenty rasps and loud as steamboat calls, his anger shook the furniture and ratified on the walls.

The child had terror in his heart, the maddest terror there, as he was laid reverse side up across his father's chair. I know that child felt dad was error; he thought dad took delight in beating him in maddened way, he read his wretched plight. I feel he said down in his heart, "When I am big, by gee, I'll beat up dad, I swear I will, as he has beat on me! Then I shall march away from home and never once return. My, how he loves to strap my skin and make me sting and burn."

The way to spank is not with bile and not in vicious style, such spankings make the spankee worse, more angry all the while. Such spankings cannot but defeat their purpose, I am sure, they function like an irritant and never do a cure!

J. E. T.

They sat there now, in the outer room, the old man with his chin in his hands, staring into the fire, and Charlie, resting his head on the table and waiting for the end; and the unhappy, the unholy power of stubborn pride and self-will and resentment held them aloof from each other, while under their very eyes death was grappling for a life that either would have given his own to save.

IN the midst of their reverie they became suddenly aware that Doctor Chubbuck was standing in the doorway of the sick-room, ready to speak to them. Both men felt that the end was approaching, or had already come, and they rose reverently, to their feet. The doctor advanced a few steps into the room and spoke low but distinctly:

"Gentlemen, the crisis has passed. The temperature has risen to normal and the patient has just fallen into a restful sleep. I believe he will live."

Then he turned and went back into Dannie's room. For a moment both men stood as if stunned. Instinctively they gazed into each other's faces. Then Abner Pickett, with great strides, crossed the room to where Charlie stood. He put a trembling hand on each of his son's stalwart shoulders, and looked straight into his clear blue eyes.

"My son," he said, "I have been to blame."

And Charlie, putting his arm caressingly about the old man's neck, replied:

"Father, for all that I have done against your wish and will, forgive me!"

That was all. The reconciliation was complete. That which even Dannie's death could not have brought about was accomplished in one instant by the announcement that he would live. Joy will sometimes move the heart that sorrow cannot touch.

A minute later, when Aunt Martha was about to cross the room hurriedly on some errand of mercy, she stopped suddenly, astounded at the sight that greeted her. But she grasped at once the beautiful meaning of it all, and raising her eyes devoutly toward heaven she gently murmured, "'Thanks be to God, who giveth us the victory.'"

When Gabriel learned that Dannie would live, his joy knew no bounds; and when, in addition to that, he was told that Abner Pickett had become reconciled to his son, he could find but one mode of expressing his deep exultation. He plunged through the trackless fields, and up the steep, snow-covered side of the ridge till he reached the topmost peak above the glen and there, where no sound that he could make would disturb the sufferer, facing alternately the bright east and the clear west, he blew blast after blast on his faithful horn, blast after blast, with bulging cheeks and reddened face and pounding heart, till it seemed as if the echoes of the hill and glen would tire of answering.

But Dannie was not wholly out of danger. His convalescence was very slow. There were still days of disappointment and nights of anxiety. He never seemed to wonder at his father's presence, although it was plain that he rejoiced in it.

It was thought best not to tell him at once of the reconciliation. It was necessary to avoid every occasion for undue excitement, and the two men were never in his room together after that terrible night when the crisis was passed; never until they were sure he would be able to bear the news.

It was one day when he was sitting propped up in bed, looking out over the snow-clad hills, that they came in quietly and stood together at his side before he was aware of their presence. He looked wonderingly from one to the other; but there was a smile on the face of each, and then Charlie laid his arm gently about the old man's shoulders.

"Is it true?" asked Dannie, flushing with joy and pride as he looked.

"It is true," said Abner Pickett.

"And please God it will stay true," added Charlie.

Swift tears sprang into Dannie's eyes, and he put a thin, weak arm around each of their necks, and drew their faces down to his and kissed them.

In the doorway Gabriel stood with a newspaper in his hand, endeavoring to attract attention. When at last the two men turned toward him, he exclaimed, in a loud and exultant whisper:

"We've won it!"

"Won what?" asked Charlie.

"The lawsuit. It's all here in the paper." He held up the page so that they could read the headlines:

"Judge Moore continues the injunction against the Delaware Valley & Eastern and makes it permanent. Holds that the adoption of the Pickett's Gap route by the board of directors of the Tide-water & Western was best in point of time. Declares that the deed of right of way through Pickett's graveyard is invalid, having been obtained through a misunderstanding of facts. Concludes that The Delaware Valley & Eastern Company has no right to lay its tracks in the gap or the graveyard."

"I'm so glad!" exclaimed Dannie.

"I knowed we'd knock 'em out," said Gabriel. "As ol' Isra'l Pulgin used to say, 'It ain't ev'ry—'"

"Gabriel," interrupted the old man, with a smile on his face that told of the joy in his heart even though he gave voice to the old, familiar words, "Gabriel, you're an idiot!"

The end.

TIGHT BINDING TEXT CUT OFF

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Compounded with the Bag Balm medicated ointment is an antiseptic penetrating oil of great efficiency—a product made exclusively by our own process. The result is *unusual* penetration. Bag Balm results are positive and prompt.

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More Milk Increased milk yield per cow, according to reliable authorities, results in larger profits. Holsteins produce the most milk and butterfat. That's why the majority of dairymen milk Holsteins. *Extension Service*

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The HOLSTEIN-FRIESIAN ASSOCIATION OF AMERICA
230 East Ohio Street, Chicago, Illinois 3



This fine old Jersey cow, owned by Highland Farms of Westmoreland county, was Pennsylvania junior champion four-year-old in Class AA in 1928. She is Santa's Blue Belle of A. R. 447750. At six years she produced 736.32 pounds of butterfat in 12 months, carrying a calf 221 days of that period. One of her daughters made a record of 13,494 pounds of milk and 632 pounds of butterfat as a three-year-old.

Farm and Dairy

By L. W. LIGHTY

"DOES it pay to grind the grain or should I feed it whole?" is the way an inquirer puts it. That is an inclusive question, as the inquirer does not say if he feeds chickens or cows, pigs or horses and even fails to tell the kind of grain he is feeding. In feeding cows it surely pays to feed the grain ground. So long as the corn is green and may not be shelled it may be fed in the ear or the ear crushed and the loss will not be very great, but if we feed shelled corn whole we lose from 25 to as much as 35 per cent passing through the animal undigested. Oats should always be crushed or ground for the cows. All experiment station work indicates that it is quite profitable to grind the grain for cows.



In swine feeding it has not been found profitable to grind the corn. In my own work I found the hogs did not eat enough ground corn unless it was put into a slop and fermented, and that is too much work. Many practical pork producers compel the hogs to harvest the corn until the season becomes too inclement, and that seems the most profitable in many situations.

Sudan Grass

When this forage plant was first introduced I was rather disgusted with the looks of it as a green feed or hay, but when I tried it I discovered the cow does not go on looks so much, as every one ate it and to my surprise they even cleaned up the rough-looking stems. I had earlier compared it to broom corn, but the way the animals ate it made me revise my entire estimate of it.

I got another surprise lately. The Indiana Experiment Station reported they compared Sudan grass pasture and bluegrass pasture. The gain per head on the bluegrass was .18 pound per day while on the Sudan grass it was .59 pound, or more than three times as much daily gain.

There is something about Sudan grass that cattle like. I have watched them root over the whole mass of soy beans and Sudan grass fed as a green forage crop and they eat the Sudan before they eat the soys. I like this combination of soys and Sudan because they thrive well together. If the season is unfavorable for the soys, and that happens rather often, the Sudan will stool out and give a great crop, but if the conditions are favorable to the soys the broad leaves will retard the growth of the Sudan and we have what we think is a nicely balanced forage crop and often a heavy mass of material. Then without doubt the soil is improved by growing the soys and that should not be overlooked.

If you have not tried this combination for a late summer forage crop it will pay you to do so if you need the feed. The seed should not be sown until the soil is really warm, say late corn-planting time or a little later.

Laziness and Crime

Wm. J. Millard, a former U. S. assistant attorney before the New York chamber of Commerce, said that seventy-five per cent of the crime of the country can be traced to ordinary laziness. This man hit the nail square on the head. Almost every criminal I ever knew was too lazy to work to earn a living, consequently stole and associated with thieves and kept our courts busy.

Right now we have a few loud-speaking maudlin sympathizers with criminals importuning the legislators of the Commonwealth to build a number of prison palaces to beautifully and delightfully house our criminals. As it is the major portion of thieves, forgers, swindlers and murderers have more genuine "home comforts" than nineteen-twentieths of the taxpayers. The honest taxpayers work daily and the prisoners loaf in steam-heated, electrically-lighted rooms with modern sanitary arrangements.

If our self-styled penology reformers would have good common sense and try to apply it they would use their efforts to put every able-bodied prisoner to honest hard work with no exception. We have thousands of miles of almost impassable roads and our politicians are struggling and worrying how to wring more taxes out of us who already are beyond our depth in paying taxes while thousands of able-bodied exceedingly lazy men continue to loaf and we pay their rent and keep.

Nothing under the sun will so completely deter a criminal than the full assurance that if caught he will have to do an honest day's work daily. Get every convicted criminal out making public roads and there would be restitution instead of their keeping us daily robbing the taxpayer while they loaf in luxury.

Farm and Dairy

I hear some one say, "What has laziness and penology and good roads to do with the farm and dairy?" Why, in a year two cows and several calves, a number of hogs and sometimes a few horses were stolen from the farms in this section of our state. Within six weeks at least eight automobiles were stolen from our farmers and one truck reasonably to carry away loot from several farms. Gasoline was stolen out of the automobiles and tanks on the farms and dozens of good tires were taken from the machines. Last night at a school entertainment the spark plugs were stolen from the school children's car and replaced with worthless ones. Last autumn we had a farmers' picnic and before the exhibits could be removed (because our people respect the Sabbath) about eight hundred dollars worth of exhibits were stolen from the grounds.

We, the taxpayers, make long stretches of fine hard road so these criminals can transport their stolen goods a great distance before daylight comes to show them up. They can safely dispose of the stolen goods and come back for more before the legal machinery gets into motion. The criminals never lift a hand at this road building nor contribute a penny toward it, but the good roads are liable to become a menace because of the ease with which the thief can escape.

Civilization must have the roads. Compel the criminal to build them and there will be a mighty decrease of criminals.

This is a matter every farmer and dairyman is vitally interested in and he should insist that instead of building palace prisons for the criminals adequate law and provision should be made to compel the criminals to build our public roads.

Our Enemies and Their Enemies

For more than half a century I watched the pests that prey on the farmer's crops come and go, not as a disinterested witness but as one vitally interested from a bread-and-butter point of view. Some fifteen years ago an epidemic of dodder appeared wherever clover or alfalfa was grown. It disappeared and for several years I neither observed nor heard of any damage of dodder. Did an enemy claim it? I remember the coming of the Colorado potato beetle and cannot forget the pose he led us if we wanted any potato plants. For some years I have seen very few specimens and other folks tell me the same. What drove this pest away?

Two score years ago the common grasshopper multiplied until they ate up everything in field and garden that was green. After a few years of such destructive work they dwindled and now there are hardly enough grasshoppers in a ten-acre field to provide a good lunch for a hungry turkey. What overtook the hoppers? A few years after the grasshoppers left us the army worm came mowing swaths across our fields and denuding many acres. They have run their course and I have not seen a specimen for years. Who knows why the army worm came and left as he did?

I could continue to name scores of weeds and insect pests that did just the same way—threatened general devastation and were gone. The San Jose scale is possibly the most typical. My trees were covered and fifty or more killed but the rest are alive today and not a sign of a scale.

Because of these scores of ocular demonstration lessons I no longer become frightened when told some new pest will turn our land into a desert. I realize there is a balance in nature or that God takes care of his own.

What Can I Sow for Hay or Pasture?

That question has started coming and will continue until in the summer. We can plow a field and till it well and fertilize it and grow a crop of corn, oats, buckwheat and some other crops this summer, but to grow a good crop of hay we have to begin our thinking, questions and actions earlier.

True there are crops that will make as hay substitutes, but as a rule the farm and the farmer are poorer for growing these. On occasion I have succeeded in growing a good crop of cowpeas, soy beans, sorghum, etc. On other occasions these were next to a failure. At best they did not by any means take the place of the regular hay crop made up of red and alsike clover and timothy. The quickly-grown crop took more work, was more expensive, was not as satisfactory a feed, was often very hard to cure and above all was a soil destroyer rather than a soil builder. You say the soys and cowpeas are builders, but our great enemy is erosion; sod stops it while all summer crops encourage it.

Concrete Silo

I enclose a pamphlet of concrete silos. I understand you have some of these at the College. Would you advise building one? Do you think they are a permanent silo? I have in mind a six-inch tile silo. R. B. Baker.

WE do not have a cement stave silo here at the College, but I have talked with quite a number of dairymen who have them and without a single exception they all speak in the highest terms concerning this type of silo. I, therefore, think you would make no mistake in purchasing one of them. A. A. Borland.

Oilmeal in Ration

In feeding oilmeal to milk cows in about what proportions should same be mixed in a mixture of wheat bran, ground oats and corn? E. E. S.

WITH clover hay and silage as roughage I would suggest a mixture of 100 pounds of corn meal or corn-and-cob meal, 50 pounds of ground oats, 50 pounds of wheat bran, 100 pounds of linseed oilmeal and 100 pounds of cottonseed meal. A. A. B.

Soy Beans in Corn Silage

What is your opinion of planting soy beans with corn for silage? Will they be a hindrance to the corn? Will they improve the silage? Have heard they would spoil the corn when ensiled with it. J. H. R.

PLANTING soy beans with silage corn will not be a hindrance to the corn. We have repeatedly ensiled soy beans with corn and the silage kept well.

Feeding trials with corn-soy bean silage versus corn silage indicated in the first trial that there was only a very slight advantage in feeding corn-soy bean silage as compared with corn silage.

This experiment was repeated and it was found that silage composed of one-third soy beans and two-thirds corn by green weight has a slightly higher feeding value for milk production than corn silage. This slight margin is not enough to insure adequate returns for the extra trouble and expense of producing corn-soy bean silage as compared with silage from corn alone. A. A. B.

Silage for Bulls

I would like to know about feeding silage to a bull. I have heard it will affect his breeding fertility. I have a young Holstein bull and he is very fond of silage. Frank Justice.

WE HAVE fed moderate quantities of corn silage to the five bulls that head the respective dairy breeds at the Pennsylvania State College for many years without any injurious effects. We feed up to twenty pounds of silage daily in two feeds to our mature bulls. A somewhat less allowance of ten to fifteen pounds daily would be the proper allowance for a bull one to two years of age.
A. A. BORLAND.

No Stretching

Chicagoan (incredulously)—"And you mean to say that in California you have 365 days of sunshine a year?"

Los Angeles Man—"Exactly so, sir, and that's a mighty conservative estimate."

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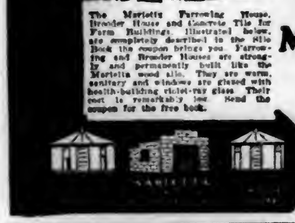
Here's the most remarkable silo offer ever made to farmers. We will erect for you NOW a beautiful, everlasting concrete Marietta Silo, and you needn't pay a penny till your corn crop is in it first Fall. Meanwhile, go ahead with your corn planting. Get ready for the profits of better feeding next Winter, more beef, milk and butter. Be prepared early to get full value out of your crop, whether it's a good or a poor one, for as ensilage you get every dollar of value there is in it. If you have the corn-borer on your farm, the Marietta Silo is the one sure way to get rid of it. Farm authorities are agreed that when you ensile the borer with the green corn, he dies without maturing.

Valuable Silo Book Sent FREE

Send for this valuable book at once. It tells you how to defeat the corn-borer. It shows you how a Marietta Silo will pay for itself while adding to the profits from your farm. It takes good management to make money on a farm these days, and this book gives you a lot of good management points. Also it illustrates and describes Marietta Silos, Brooder Houses, Farrowing Houses and low-cost Marietta Concrete Tile for farm buildings. With it we will send you full details of this unusual offer—so put up your silo now—allow you to pay for it in the Fall of 1929. You can't afford to be without this book. Clip the coupon and send for it right now while you're thinking about it.



The Marietta Farrowing House, Brooder House and Concrete Tile for Farm Buildings illustrated below, are completely described in the Silo Book the coupon brings you. Farrowing and Brooder Houses are strong by and permanently built like the Marietta wood silo. They are warm, sanitary and windows are glazed with health-building violet-ray glass. Their cost is remarkably low. Send the coupon for the free book.



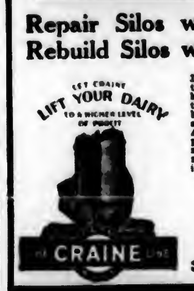
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Summary of Cow-Testing Ass'n Records for 1928

Compiled by I. O. SIDELMANN

THE cow-testing association work in Pennsylvania continued to make material progress during the calendar year 1928. There were 27,438 cows on test during all or part of the year, a gain of 7,058 over the previous year.

The following tables contain data compiled by 67 associations completing a full year's work. There was an average of 20,212.11 cows on the entire year basis. The average production per cow was 7,776 pounds of milk and 303.7 pounds of butterfat, an increase of 81 pounds of milk and 1.4 pounds of butterfat over last year. There was an increase of 18 associations over the previous year.

This is the second year in the history of Pennsylvania cow-testing associations that the average for all associations in the state was more than 300 pounds of butterfat.

Name of Association	Ave. No. of Cows	Ave. Lbs. of Milk	Ave. Lbs. Butterfat	County
Buffalo Valley	272.76	10313	363.2	Union
Allegheny	333.99	10023	358.4	Allegheny
Bedford	392.57	7268	351.1	Bedford
Cumberland Div. 1	289.59	9917	343.8	Cumberland
Centre Co. No. 1	291.60	9529	340.7	Centre
Wayne	416.30	7253	339.8	Wayne
Venango	304.69	8296	338.7	Venango
Garden Spot	85.70	10154	337.6	Lancaster
Carbon	156.08	9567	335.7	Carbon
Mifflin	251.49	9302	332.0	Mifflin
First Jefferson	235.69	7272	329.0	Jefferson
White Deer Valley	312.76	9103	324.8	Lycoming
Jackson	395.33	7781	324.8	Tioga
Grove City	351.17	6431	323.1	Mercer
Wellsboro	321.52	8789	321.4	Tioga
Centre Co. No. 2	101.78	7967	319.5	Centre
Juniata	266.51	9580	319.0	Juniata
Schuylkill	375.90	8327	318.3	Schuylkill
Warren	526.26	8229	318.0	Warren
Laurel Hill	326.08	7384	317.4	Bradford
Northern York	303.66	7453	317.3	York
Butler	278.90	7733	316.5	Butler
Southern York	252.31	8167	315.1	York
Ulysses	315.17	8169	314.5	Potter
Middle Bucks	356.56	7879	313.8	Bucks
Coventry	461.43	8107	313.6	Chester
Chester Valley	464.07	6482	313.6	Chester
Washington	270.07	7989	312.9	Washington
Canton	343.33	7435	309.4	Bradford
Montgomery No. 1	391.24	8138	309.2	Montgomery
West Chester	368.27	8287	305.9	Chester
Central Pa. Gy. Bdrs.	525.86	7099	300.3	Central Penn'a
Lehigh	189.62	8708	302.8	Lehigh
Clarion	264.45	7092	301.6	Clarion
Westmoreland No. 3	228.83	7098	301.5	Westmoreland
Mercer No. 2	253.01	7274	300.9	Mercer
Clearfield	201.58	6929	300.9	Clearfield
Titusville	242.47	7557	300.4	Crawford
Perry	145.83	8291	298.9	Perry
Westfield	283.08	6601	298.4	Lawrence
Sullivan	280.26	8316	296.5	Sullivan
Mercer No. 3	397.83	6912	295.8	Mercer
Westmoreland No. 1	384.07	7413	293.9	Westmoreland
Huntingdon	351.93	7618	293.2	Huntingdon
Brothers Valley	280.59	7105	292.1	Somerset
Oxford	220.75	7088	289.6	Chester
Adams	253.07	8387	289.4	Adams
Indiana	374.72	7143	287.7	Indiana
Wyalusing	328.06	8229	287.4	Bradford
Western Crawford	379.83	7032	287.1	Crawford
Cumberland Div. 2	221.75	8314	285.7	Cumberland
Cowanesque Valley	142.50	8080	283.5	Tioga
West Susquehanna No. 1	406.75	7477	283.2	Susquehanna
Montgomery No. 2	412.24	7157	282.9	Montgomery
Saegertown	240.18	6893	281.4	Crawford
Gelatt-South Gibson	314.86	7899	279.0	Susquehanna
Mercer No. 4	349.38	7594	278.0	Mercer
Washington-Quincy	246.81	6847	276.3	Franklin
First McKean	372.01	7137	275.4	McKean
Westmoreland No. 2	280.33	7398	274.5	Westmoreland
Western Sullivan	264.60	6836	273.9	Sullivan
Troy	266.68	6631	268.9	Bradford
LeRaysville	295.16	7532	265.2	Bradford
Waterford	331.42	7641	264.9	Erie
Eastern Crawford	171.76	7538	263.2	Crawford
Wattsburg	403.94	7226	263.0	Erie
Western Frankklin	174.00	6050	250.0	Franklin

Comparative Statistical Data for Five Years

	1924	1925	1926	1927	1928
Ave. number of cows	8223.84	11003.99	12903.47	15084.37	20212.11
Ave. pounds of milk per cow	7309	7343	7585	7695	7776
Ave. pounds butterfat per cow	286.9	283.0	294.4	302.3	303.7
Value of product per cow	$217.59	$226.35	$241.05	$249.86	$246.87
Cost of feed per cow	99.02	100.54	98.63	100.51	102.30
Value of product above feed cost	118.57	125.81	142.42	149.35	144.57
Ave. returns for $1 spent for feed	2.20	2.25	2.44	2.49	2.41

The Ten High Herds in Butterfat Production

Owner	Breed	Average No. Cows	Pounds Milk	Pounds Butterfat	County
Roy S. Bowen	R.H.	7.73	20400	656.5	Tioga
H. H. Cooper	R.J.	8.00	9720	534.6	Potter
H. A. Snyder	R.H.	14.41	14283	526.4	Lycoming
C. E. Hoyt	R.J.	11.17	10018	507.2	Clearfield
L. O. Hetrick	R.G.:G.G.:R.H.	6.71	9608	478.0	Clarion
H. L. Forbes	R.:G.H.	13.73	12849	476.9	Mercer
L. A. Zimmerman	R.H.	22.33	13655	467.5	Carbon
Allen Harter	R.H.:G.G.	7.50	12297	459.1	Centre
A. C. Slifer	R.H.	5.83	12946	459.0	Union
Dan Bly	R.G.:G.H.	9.75	9028	458.3	Tioga

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Clark CUTAWAY One Horse Disk Harrows

Market gardeners, truckmen, florists and others will obtain greater yields and bigger profits from the use of these light draft 1-horse harrows.

In several styles and types; one at least, just what you need. Disks are forged sharp—and pressed on soaked hardwood bearings.

Send for book "The Soil and Its Tillage"—and our new catalogue; also names of nearest dealers.

The Cutaway Harrow Company



Clark "Cutaway" Disk Harrows and Plows are distributed by Deering Implement & Supply Co., N. 23rd St., Philadelphia, Pa., and I. P. Bell, 500 Liberty Ave., Pittsburgh, Pa.

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A Plowman's Philosophy

By FELIX ZERNIN

WHEN I went to school in all our copy books maxims in praise of hard work. It gave one nerves, a good appetite, sound sleep and in the end, if it did not make us rich, would at least leave you comfortable and contented.

Of the new psychological books are of the opinion that most of this is food for... Nobody, they say, ever became rich by any such methods. Unless you get other people to do the work for you, you will never amount to much, or if you really by strict economy and hard labor scrape a competence together, you will have worked hard and denied yourself so much that when old age comes to you will not know how to rest and enjoy. Now that play is such a difficult thing that you can learn it unless be is taught by instructors who are quite expert. And as for hard work, it is opposed to our finer feelings. Nobody likes to work and if he does he is a hypocrite who tells others or worse even himself. How they have of course the advantage over old-fashioned people, who have not been instructed in the intricacies of the new thought. They have learned all our secret inclinations and can prove the most wonderful things by statistics. Did not one of them tell me the other day that it was far more dangerous to be elected President of the United States than to catch the typhoid fever? And when I doubted the statement, he pulled out his statistical tablets, that all Presidents who took typhoid fever died full 100 per cent of them. But that people who caught typhoid fever died more than 60 per cent had completely escaped.

> "Among the hills I trace the path that I must wend
> I watch not bidding him farewell the sun descend
> Calm and of their noble worth are the days I spend
> Quiet as a plow left at the furrow's end."

My feeble remonstrances he bore down by shaking his finger at me and "figures can't lie, sir, figures can't lie." He left me so completely crushed that he was quite out of earshot before I had tried to answer him by "Wall, figures can't lie—but meblie liars can figure."

That's always the way. I ain't so slick as you might think by looking at me, but it takes time—it takes time. There are some real smart answers I could have made many a time, it looks like, but only wait till I could think 'em out.

Let them say what they please, there is a joy in labor which you have personally with your hands, that the best machine-made product cannot give. Even when you have worked till your clothes are soaked with honest sweat, you have a feeling free and fresh as no turkish bath can give you. There is real pleasure in the work well done, too, that is quite different from that of a job well performed. Take the old-fashioned walking plow and the work we did with it "from sun to sun" before we knew anything of daylight saving. On a spring morning, when the air is crisp and cool, the thermometer near the freezing point and a light frost on the ground. How the slanting rays of the rising sun were struggling through the fog, that covered the lowlands, when the earth commenced to tumble over the mould-board, and the coulter made a slight cracking noise in cutting the top soil.

Look straight ahead at the red sun and your horses. At first the frosty air will feel so chilly that your hands are stiff, but if the furrow is a long one, the blood will soon begin to course faster through the veins.

Now comes the first turn—easy, guide your horses well, but up the plow, take both hands, lean well back and keep the traces tight—now is your time, put it in the exact place, where the new furrow starts. There, that is right, you don't have to stop the team for it. Off you go on the new furrow.

Now your shadow falls right on the beam. The sun is on your back, it will not be long till you feel it. At first perhaps the fingers ache where the blood has not circulated well. Soon there is a prickling on your scalp, another turn and you have to wipe the sweat out. The eyes while the fingers are burning hot. The coulter cuts a clear streak and the sweet smell of the soil comes to your nostrils. Is there anything like it.

Sweet is heliotrope, fine smell roses in June, but what can compare with the aroma of newly turned soil from the earth we were made to it we shall return. Strange thoughts come to a plowman as he steps sedately behind his team.

Here comes the turn again. Swing your plow around while the off horse steps in his place in the furrow. Be ready without stopping him. It takes judgment a good eye and a quick grip but you can do it every time. Your horses will like it, they are always willing to give you a good steady pull, but they hate to be delayed at the turn. A good plowman ought always to know what his horses are thinking and nothing gives them more than fussing and backing at the turn. If you want to let them blow or stop for any other reason, go a few steps in your new furrow then pull the lines, go around, but the collars and look at their shoulders.

Who says plowing is monotonous work? Not so! There is real pleasure as you take strip after strip from the sod that makes you forget the passing of the time. Were it not that by your shadow you can see how the sun is creeping higher and higher.

I was reading in an automobile paper where a man describes his feelings in a long distance race. He has a clock and a speedometer fixed in front of him, so that he can compare the distance he has covered with what is ahead of him, and sometimes one dial gains and then again the other. He says he gets a fine thrill out of it. As for me give me a piece of sod to turn under against the setting of the sun. Of course I don't risk my neck as he does. But I can assure you there is quite a sporty feeling in it too when the red ball gets lower and you are uncertain of you can turn the last strip before he will get away from you and darkness shuts down. I know I am not the only one who feels it, for the horses too catch the spirit and walk faster. Yes, and I have noticed that the old sun is sporty too and slithers down faster every time I plow a furrow with my back toward him.



Be careful when your land gets narrower and you must calculate with almost mathematical exactitude to bring in the clean-up furrow of the same width with the others without leaving anything unturned. And is any satisfaction greater than looking back when your field is finished and to see that your work is done and well done?

Saving for You
The Price of Hardware



THE dollars and cents that you pay for an article of hardware — a tool, a cooking utensil, a fishing pole or a washing machine—are of secondary importance to the value which you receive for your money. If the article does not give satisfactory service for a sufficient period of time it is too high priced. If it does not fit your own personal requirements in size, shape or color it is too high priced. Value cannot be compared by price and the best is always the cheapest.

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TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

RECEIPTS of sheep and lambs swing up and down these days, in accord with the number sent in by Colorado feeders. Chicago receipts this week were only 54,700 head, against 77,500 last week; Colorado contributed only 14,000 this week against 45,000 last. This does not mean that the Colorado lambs are about in; it does mean that the western men are "feeding" the market, avoiding gluts, and playing the game to maintain prices. So far they have succeeded admirably this season as they did last. They have two advantages—feeding is in relatively few hands, and the bulk of supplies at this season comes from Colorado and Nebraska feed-lots. On March 16, there were 850,000 lambs in northern Colorado, Arkansas Valley and the Scotts Bluff sections of western Nebraska. On March 2, there were 1,090,000; on February 21, 1,350,000; on February 7, 1,500,000.

The first of the spring lambs started to come this week, river markets having some at $20 and $21. It is generally May before the California springers start moving in numbers. All early Californias come direct to packers for the Easter trade. During March, 1928, Chicago handled 4,420 California spring lambs, all directs. In April 20,640 arrived, including only 3,300 on the market. In May 167,472 were here, including 40,343 on the market. Last year established a new record for California spring lambs at Chicago, although the total was less than 200 greater than in 1927. Chicago during the season handled 263,105, against 203,058 in 1927 and 72,100 in 1926.

Lambs averaged $16.95 here this week, a dime under last week; the top at $17.75 was also a dime lower.

Hogs High and Scarce

The hog market showed a dip at midweek, but recovered later, and price average for the week at $11.70 gained a dime over last week. The average is now $3.65 over the same time last year. Receipts, at 145,000, included 31,000 direct to packers, and were much larger than last week when only 97,852 hogs were received. A year ago this week receipts were 201,902. Eleven markets had 565,000 hogs this week, against 404,000 last week, 678,000 the same week last year and 503,000 two years ago.

The claim is made, and evidently with some justification, that the past two years have seen a marked shortening of the winter packing season, resulting in heavy supplies for a brief period and consequent price depression, all to the advantage of packers. They have thus been able to put their pork up cheap, and higher markets later on have made possible big profits as product has moved. Direct marketing, it is claimed, has made this possible, adding to the ordinary runs purchases made direct, all of which has been a part of the plan of the big packers in their country buying. Farmers who have sold to them have meekly played into their hand. Statistics support the argument.

Hogs are now held very strongly, packer offers of $12 in the country this week failing, in at least some instances, to pry them loose.

Cattle Gain a Little

This week has seen a further spread between heavy and light cattle. The former are weak to a quarter lower, and the latter have shown a price gain of 25 to 40 cents over a week ago. Receipts for the week, at 43,800, showed a slight gain over last week, and the same week a year ago, but were 7,000 under the same week two years ago. As an indication of the gain in the market during the past two weeks are sales at $14.25 or better—about 350 head this week, 275 last week and 125 two weeks ago. Top yearlings sold at $14.50 this week, with the weekly average price of steers at $12.95, a gain of a dime over last week. So far this year Chicago has received 519,000 cattle, against 543,000 last year. Calf receipts here Thursday totaled 7,161 and cattle 7,134; 27 more calves than cattle. This is the largest calf total since April 12, 1928, when the total was 7,387, the only larger receipts since April, 1925. Top veals this week brought $18.50. Stockers and feeders were a little higher this week, with supply light and demand fairly good.

A little more optimism in cattle trade is evident.

Grain Trade

Wheat traders looking for bearish factors find plenty of them. Statistically the position of wheat is weak, and some have been surprised that the market has held up as well as it has. Absence of crop injury reports weakened the market this week, prices showing a net loss of two to three cents, and corn was off as much or a little more, in sympathy with wheat and as the result of some decrease in shipping orders as compared to recent weeks. Oats unchanged. Grain trade in general is featureless.

An increase in the tariff on corn is asked by midwest producers. Direct and indirect proposals put forward at Washington include the following:

1. Doubling of duties on corn, corn grits, meal, flour and similar products.

2. Imposition of duties on commodities which compete with various corn products, such as cornstarch, corn syrup, corn sugar and corn oil.

3. Stimulation of the use of corn in the manufacture of industrial alcohol by boosting the duty on black strap molasses, now used extensively in alcohol production.

4. Protection of an increasing market for corn in the manufacture of butyl alcohol, a raw material for lacquers and duco paint, by imposing a higher duty on a competitive German product.

The American Farm Bureau Federation and other farm organizations have asked for an increase in the duty on corn and cracked corn from 15 to 30 or 35 cents per bushel, as a means of providing protection against Argentine imports. They have asked an increase from 30 to 60 cents per 100 pounds in the duty on corn grits, meal, flour and similar products.

Farm Trade

In some sections it is evident that land prices are at the low point since the war. This has been pointed to as an indication that we are still in the most severe period of the depression, but accounts of farm trade do not bear out this conclusion. Reporting on conditions in his community an Illinois man says:

"Farm implements sold high all winter, and anything good and not used over a year brought the price of new. About 20 per cent of the sales this year were for cash. When these sales were first announced many people thought that the omission of the time feature would hurt the sales, both by keeping bidders away and by substantially lower bids being made. But a local auctioneer reports that his cash sales were among the best and that they were the most satisfactory to all concerned.

"Implement dealers are confirming the good demand the farm sales showed for farm machinery. The local elevator company reports they have already sold twice the amount of farm machinery they had at this time last year; also that other lines are active and that they have just finished unloading and selling the first carload of commercial fertilizers ever sold there. The implement dealer has had a remarkably good spring, and reports that he has sold 14 new tractors since January 1. During the same period last year he sold only one. As a supplement to these good tractor sales he has sold power hog-row corn planters, power binders and power cultivators, the latter of which he has sold five. Another good feature of his implement sales is that a larger percentage of them have been for cash than have been for some years."

Evidently, Corn Belt farming is still a going business.

Implement manufacturers report good business. J. I. Case T. M. Company had the most profitable year in its history in 1928, according to a statement issued this week. The report showed a net income after all charges of $4,230,880, representing the fourth consecutive year in which profits exceeded those of the preceding year. Last year's earnings were the equivalent after preferred dividends to $26.93 a share on the 130,000 shares of common stock and compare with earnings in the preceding year of $4,112,869, or $27.28 a share on the common stock. These earnings were after provisions for inventory reserves amounting to $750,000 and $1,000,000, respectively.

Brood Sows

An Illinois report says that brood sows that were selling at $18 to $20 early in January sold early in March in the neighborhood of $40.

Stock Speculation

The president of a defunct Indiana bank says that advice to citizens of the community to buy oil stock as a safe investment caused them to risk too much and resulted in the subsequent wrecking of several banks in southwestern Indiana.

Illinois Gas Tax

The Illinois legislature has passed a bill levying a three-cent tax on gasoline. It is the last state west of New York to provide such a tax. Watson.

Chicago, Ill., March 23, 1929.

Produce Market Review

SHIPMENTS of potatoes increased during the week both from the new potato producing areas and from the old crop states. Prices of new potatoes averaged lower than a week ago but old potatoes showed but little change. Prices of Pennsylvania potatoes averaged lower in Philadelphia, but this was due largely to poorer quality and pack. There were fewer lots of fancy well-graded stock offered. Most sales ranged from $1.25 to $1.40 per 120-pound sack, although there were occasional sales higher. In Pittsburgh, most Pennsylvania stock sold around $1.75 per 150-pound sack and in Baltimore prices ranged from 90c to $1.25 per 100-pound sack. Practically all markets reported a moderate supply of old potatoes but trading was slow and it was difficult to move any large quantities.

The new potato season is opening earlier than last year and this should favor growers in New Jersey and in the Eastern Shore sections. The price of new potatoes, however, is averaging considerably lower than last year. The crop in Texas and Florida is lighter than last year and below the five-year average. The intention of Southern growers to reduce the acreage of commercial early potatoes continues to be pronounced in the reports recently furnished to the Department of Agriculture by growers and dealers in the Second Early areas. The intended cut in acreage in this Second Early group of eight states amounts to 18 per cent, which is considerably less extensive than the 32 per cent reduction which was the reported intention of growers in the ten extreme southern and earlier potato states.

Apples

The apple market in Philadelphia and New York was slow during the week and the demand was limited. The warmer weather was partly responsible for this falling off in the demand and the fact that there was considerable poor stock offered also had an influence. In Philadelphia truck receipts of nearby Stayman and Romes sold at $1.25@2 per bushel. Yorks at $1@1.60 and Paragon at $1.25@1.75.

Cold storage supplies of apples are decreasing. It is estimated that holdings of apples in cold storage on March 1st, 1929, were 1,125,000 barrels, 7,973,000 boxes and 2,175,000 bushel baskets. The combined holdings were about 22 per cent heavier than a year ago but about 5 per cent below the average supply. A recent survey by the Department of Agriculture indicates that the washing of apples and pears with acidulated water as practiced in the Northwest, to remove spray residue, apparently does not injure their storage quality.

In this survey, which was made in the latter part of January and the first part of February, this year, 184 cars of western apples which were in storage in five principal markets were inspected. Of these lots 113 or 73.3 per cent showed no evidence of decay whatever and 3 lots, less than 2 per cent, showed injury that might be attributed to washing.

Spring Greens

The receipts of spring greens from the Eastern Shore sections in Philadelphia were very heavy during the early part of the week and prices of turnip and broccoli greens dropped sharply. While receipts were lighter later in the week the market continued weak with some stock selling below the cost of transportation. At the close of the week turnip and broccoli greens sold at 25@50c per bushel with a few fancy lots selling at 75c. Some poorer carried-over stock sold at low as 10c.

The sweet potato market was unsettled. Fancy sweets held steady but ordinary stock sold very slowly at low prices. New Jersey yellows brought $1@1.25 per ⅝ basket in Philadelphia and reds $1.15@1.40. Yellows ranged from $1.50 to $3 per bushel in New York depending on quality and pack.

Egg Markets

The Philadelphia egg market was in fairly good shape at the close of the week. Prices dropped slightly due to increased receipts from western sections. The supply of nearby eggs was moderate. The demand for eggs showed some improvement. Dealers attribute this to the comparatively low retail price encouraging consumption. Chain stores were selling around 32@35c per dozen. The offering price at the close of the week was 29c per dozen for extra firsts, and 25c for firsts.

The quality of the eggs offered was generally good although some stock showed blood spots. A few of the nearby eggs were quite dirty and producers were urged that a little care in that direction will mean a cleaner litter and clean nests will help keep the eggs clean and attractive.

Dealers are anticipating a normal increase in receipts from the Central States but with the Easter demand they believe that prices will hold up fairly well, assuming unusual develops. Reports of fewer laying hens on Western farms may have some influence on the receipts. Operators are considering the storing of eggs but most of them are inclined to be conservative on account of their heavy losses last year. Most of them are not in store at a price below 27c but it is a question as to whether this price will prove

Butter and Poultry

The butter market displayed sharply declining the week. Dealers were unable to avoid accumulations and with heavy receipts and a light demand prices broke 1½c. Prices advanced about ½ cent at the close of the week, but the market was far from satisfactory.

Arrivals of butter at most markets were fairly liberal, and the quality was good for this season of the year. The bulk of the receipts were of medium to high grade, but lots arrived it was the accumulation of these lots and it was the accumulation of these lots and it was the latter that was largely responsible for the decline. The prices of lower grades declined in sympathy with the top grades but the reductions were not as sharp as in top scores.

The New York live poultry market was steady. There was a shortage of fowls during the early part of the week and prices advanced, but later supplies increased and prices dropped. Broilers were in fair demand and prices were higher than last week. Leghorn fowl were quoted at 35@34c per pound and broilers at 45@48c. Pullets sold at 32@35c and nearby fowls at 28@30c. The dressed poultry market was steady. Fowl brought 26@28c per pound, broilers 45@52c and roasting chickens 30@43c. W. R.

BOSTON WOOL MARKET

Boston, March 22.—Demand for wool has been lighter than during the previous week, says the U. S. Department of Agriculture Market News Service. Interest centered largely on the 64s and finer quality domestic wools. Prices on fine wools were quite irregular. On 58s, 60s and finer grades demand was very slow and prices, as noted on a number of sales, were in favor of buyers.

Fleece wools showed a general weakening tendency. Ohio 64s and finer delaine wools sold at 43@44c in the grease and fine wools of a similar description sold at 41@42c in the grease, the scoured basis prices ranging from $1.03 to $1.05 per pound. Ohio 58s, 60s were sold generally in the range 40@53c, in the grease. Fine clothing and French combing wools and finer grades were quoted slightly firmer with few sales reported. Demand was very slow on 56s, 48s, 50s and 46s, strictly combing wools, with quotations easier. Fine 56s clothing has been sold at a rather sharp decline.

Of the western grown wools, the fine combing class received the bulk of the demand. Graded territory 64s and finer combing wools were slightly stronger in spots tending to the higher side of prices ranging from the lower to the higher range $1.02@1.05, scoured basis. Graded fine prices were a little firmer on the bright bag wools, most sales having been made at $1.02@1.05, scoured basis, for fine bright and Montana wools of 58s, 60s and finer grades.

Most lines of foreign wools were rather quiet. A few sales of Montevideo 64s of 56s grade were closed at fairly steady prices.

Domestic Wool Quotations

Grease Basis Ohio and Similar

64s, 70s, 80s, (fine) strictly combing 43@44c
64s, 70s, 80s, (fine) French combing 41@42c
64s, 70, 80s, (fine) clothing 43@44c
58s, 60s, (½-blood) strictly combing 40@41c
58s, 60s, (½-blood) French combing 38@39c
58s, 60s, (½-blood) clothing 40@41c
56s, (¾-blood) strictly combing 38@39c
56s, (¾-blood) clothing 38@39c
48s, 50s, (¾-blood) strictly combing 36@37c
48s, 50s, (¾-blood) clothing 36@37c
46s, (low ¾-blood) strictly combing 34@35c
36s, 40s, 44s (common and braid) 30@31c

March 30, 1929

LIVESTOCK

PITTSBURGH

Cattle

CATTLE supply was around 40 carloads and was about sufficient to meet the demand, except light butcher steers, which continue to sell out of line with other cattle. Majority of steers sold closer to last week's figures, but buyers got a shade better cattle in some cases. A few loads too high by their owners early in the week failed to sell rather cheap at the close. Best steers here, good thick handyweights, brought $13.50 and were better than those which sold at the same figure last week. Good fat steers of all weights went largely at $13@13.25 with choice butcher kind at $12.50@12.75 and others got $12@12.25. Very few steers are left below $12. No stockers and feeders were available. Heifers looked as strong as ever, the medium kind selling at $11 and good ones easier. Fat cows and bulls showed little change. Bulls are generally steady.

Good to prime steers, 1,200 lbs. up $13.50@13.75
Fair to good 13.25@13.50
Choice to prime 12.50@13.15
Good to choice, do. 12.00@13.00
Handyweight steers 13.25@13.50
Light butcher steers, 1,000 to 1,200 lbs. 13.00@13.25
Choice to prime, do. 12.50@13.00
Good to choice, do. 12.00@12.50
Fair to good, do. 11.00@11.75
Choice to prime light butcher steers 12.75@13.00
Good to choice light steers 12.25@12.75
Fair to good to medium, do. 11.00@12.00
Choice to prime light steers 10.00@11.00
Fair to good light steers Nominal
Choice to prime heavy bulls 10.00@10.25
Good to choice handy butcher bulls 10.25@10.50
Fair to good handy bulls 9.75@10.25
Choice to prime good bulls 9.25@9.75
Fair to good bulls 8.00@9.25
Choice to prime fair bulls 8.00@8.50
Good to choice heifers 11.50@12.00
Fair to choice heifers 10.75@11.50
Good to choice fair heifers 10.00@10.75
Fair to good heifers 8.50@9.50
Choice to prime fat cows 9.75@10.00
Good to choice fat cows 9.25@9.75
Fair to good cows 8.50@9.25
Choice to prime fair cows 6.50@8.00
Canners and cutters 5.50@6.50
Fresh cows, calf at side 50.00@150.00

Today's Representative Sales

Steers

No.	Wt.	Pr.	No.	Wt.	Pr.
23	1350	13.50	14	1185	13.50
25	1325	20	1194	13.25	9
26	1325	20	1041	13.25	4
10	1325	12	822	13.25	18
19	1300	20	1108	13.00	14
10	1300	6	1081	12.85	25
10	1275	11	1050	12.75	7
10	1250	20	1160	12.50	10
19	1250	7	1080	12.50	18
12	1225	5	816	12.25	4

Cows and Heifers

23	1100	28	867	11.00	1
10	1030	1	1080	10.00	1
10	975	1	980	9.75	2
10	950	1	1120	9.00	1
10	900	1	1080	8.75	1
10	850	1	830	8.50	1
10	725	1	894	6.00	2

Bulls

1	1620	10.60	1	1390	10.35
10	1000	1	1030	10.00	1
10	950	1	1080	9.00	1

Hogs

Including a few loads held over from last week the total supply was around 40 double-deck carloads. Buyers had the advantage here and at other points and forced a decline of about 40c per cwt., all sellers at the new price level. Best sorted handyweight hogs could be had at $12 per cwt., all good logs of over 190 lbs. down to 200 lbs. going in. Mixed lots brought $11.60@11.75, largely and heavy sows $11.50@11.60. Light Yorkers, below 190 lbs., sold at $11@11.25 and pigs at $10@10.25. Demand for sows continues good and they were relatively high at the close. Bulk of stags changed owners at $9.

Heavy wts., 250 lbs. or over	$11.50@11.60
Heavy mixed	11.60@11.75
Medium wts., 180-200 lbs.	11.60@12.00
Heavy Yorkers, 165-180 lbs.	11.50@12.00
Light Yorkers, 125-150 lbs.	11.00@11.25
Pigs, 100-110 lbs.	10.00@10.25
Roughs	10.00@10.50
Stags	6.00@8.00

Sheep and Lambs

Monday's supply was about 20 carloads, including about five carloads of sheep, and sheep and lambs were practically all sold. Best clipped sheep brought $10.50, several lots going at this figure, culls at $7. Wooled sheep were nominally on a $11.50 basis but few appeared. Clipped lambs were steady to strong at $15.50@16.75 for good fat kind. The supply of good lambs was insufficient, several orders going unfilled for lack of lambs of the right kind. Medium class brought $14.50 to 15.25 largely, culls $10@13.50. The supply of spring lambs was light and they sold well, tops going at $25 per cwt. A lot of 51 Indiana spring lambs sold straight at this price, the heaviest end averaging 64 lbs. and the others 60 lbs., both a little heavier than buyers wanted them but very good.

Good to best wethers	$10.00@10.50
Fair to good wethers	9.50@10.00
Good mixed	9.75@10.00
Fair to good, do.	8.50@9.50
Common to fair	6.00@8.50
Wooled sheep	7.00@11.50
Interior sheep	4.00@6.00
Good to best spring lambs	15.50@15.75
Medium lambs	14.00@15.25
Culls and thinnouts	10.00@13.00
Wooled lambs	11.00@17.75
Early lambs	20.00@25.00

Calves

Monday's supply was about 800 head. Best veal calves brought $18.50, second cut $14@15 largely and culls on down to $10@12.

LANCASTER

Cattle

Lancaster, March 25. The cattle market was draggy on most kinds of stock. Beef steers were slow with top at $12.75 for 1,100 lb. cattle and the bulk selling at $11.50@12.50. Bulls and she stock were unchanged. No action in stockers and feeders.

Good steers	$12.00@13.00
Medium to good	10.50@12.00
Common to medium	8.50@10.50
Good to choice heifers	10.00@11.75
Medium and common	7.50@10.00
Good to choice cows	7.00@9.50
Common and medium	6.00@7.00
Low cutter and cutter	3.75@6.00
Good to choice beef bulls	9.75@11.00
Cutter, common and medium	7.50@9.75
Feeder and stocker cattle	7.25@11.50
Good to choice calves	16.00@18.00
Medium	14.25@16.00
Culls and common	7.50@14.25

Hogs

Market firm with top at $13.25 for hogs weighing 190-240 lbs.

Heavy weights, 250-350 lbs.	$12.00@13.25
Medium weights, 200-250 lbs.	12.25@13.25
Light weights, 160-200 lbs.	12.25@13.25
Packing sows (rough and smooth)	8.25@12.00

CHICAGO

Cattle

Chicago, March 25. Cattle receipts amounted to 19,000. Market steady to 25c lower. Best steers here sold at $14.

Common to fair yearlings	$10.75@12.25
Fair to good yearlings	12.25@13.00
Good to choice yearlings	13.00@14.00
Choice to prime yearlings	14.00@14.75
Common to fair steers	10.75@11.75
Fair to good corn-feds	11.75@12.50
Good to choice corn-feds	12.50@13.50
Choice to prime corn-feds	13.50@14.25
Common to good cows	7.50@ 9.50
Good to prime cows	9.50@11.50
Heifers, common to good	8.50@11.25
Heifers, good to prime	11.25@14.10
Canners and cutters	5.50@ 7.25
Interior light bulls	8.25@ 8.75
Bologna bulls	8.75@ 9.65
Fair to choice butcher bulls	9.00@11.00
Stockers, common to fair	9.50@10.75
Stockers, fair to good	10.75@11.75
Stockers, good to choice	11.75@12.50
Fancy yearling stockers	12.50@13.00
Stockers and feeder heifers, common to choice	8.50@10.25
Stocker and feeder cows	7.75@ 9.75
Feeders, common to fair	9.75@11.25
Feeders, fair to good	10.75@11.75
Feeders, good to choice	11.75@12.75
Fancy selected feeders	12.75@13.25
Milkers and springers	90.00@175.00
Common to best vealers	13.00@17.00

Hogs

Sixty-five thousand hogs were offered. Market 15@25c lower.

Heavy butchers, 270 lbs. up	$11.30@11.45
Mediums, 225 to 265 lbs.	11.25@11.50
Lights, 190 to 225 lbs.	11.40@11.65
Selected, 160 to 190 lbs.	11.40@11.65
Mixed packing, 270 to 350 lbs.	10.50@10.75
Heavy packing, 350 to 500 lbs.	10.30@10.60
Roughs, 300 to 500 lbs.	10.25@10.40

EASTER LILIES

Our cover this week shows a field of lilies growing in Bermuda. These flowers are packed and shipped to this country for the Easter trade.

Stags, subjects 70 lbs. dockage 9.50@10.75
Pigs, best grades 9.75@11.00

Sheep

With 17,000 sheep and lambs on sale the market was steady, best lambs selling at $17.75.

Wethers, all ages	9.25@13.00
Yearlings	12.00@15.25
Western ewes	7.00@11.00
Breeding ewes	7.00@11.00
Fed western lambs	16.00@17.75
Native lambs	12.50@17.75
Feeding and shearing lambs	15.50@16.50

Shorn stock $1 to $2.50 below above quotations.

Stock Movement

	Cattle	Hogs	Sheep
Receipts for week	43,976	146,505	54,700
For previous week	41,568	97,852	77,404
Same week last year	41,017	201,902	59,330
Shipments for week	12,367	39,549	21,117
For previous week	12,981	37,402	21,422
Same week last year	11,719	74,050	18,467

CASH GRAIN

Chicago, March 25.—The following cash prices ruled here today: No. 1 hard wheat, $1.12¾@1.17; No. 2 yellow corn, 91½@92½c; No. 3 mixed corn, 90¾@91c; No. 3 white oats, 46½@48¾c.

Experiment Station Lambs

Don. S. Bell of the Ohio Experiment Station was on Monday's market with three lots of clipped lambs, about half of those fed by the Station this year. The others are being held for the benefit of feeders who attend the several livestock days at Wooster and elsewhere in Ohio. These lambs were marketed for the sake of the slaughter test and further information for feeders who see their mates next month.

Fifty Montana white-face lambs averaging 89 lbs. brought $16.25 per cwt. They cost $15.21 laid down at the Station and sheared an average of 5.3 lbs.

Fifty native mutton-bred lambs averaging 93 lbs. brought $16.20 per cwt. They cost $13.12 laid down at the Station, including cost of treatment for parasites. They sheared an average of 5.7 lbs.

Fifty native Merino lambs averaging 79 lbs. brought $15.85 per cwt. They cost $14.15 at the Station, including cost of treatment for parasites. They sheared an average of 7.0 lbs.

All the lambs were fed 112 days and all sold above the top, which was $15.75 for such lambs as usually top this market.

Miscellaneous Produce

Philadelphia

Eggs. Firsts, 30c; seconds, 28c.

Butter. Creamery, tubs, 92 score, 48c; 88-89 score, 46@46½c.

Poultry. Fowls, 33@34c; Leghorns, 30c; young chickens, 35@38c; broilers, 45@48c; old roosters, 25@25c; rabbits, pr., 20@22c; Guineas, per pair, $1.30@1.50.

Apples. U. S. No. 1 per bu., Maryland Black Twigs, $1.50@1.75; Pennsylvania, $1.50; Staymans, $2.15@2.25; New York Delicious, $1.60; nearby ⅝ bskts., Staymans 75@85c; Delicious, $1@1.25; Romes, 75@85c.

Strawberries. Fla., 32-qt. crate, best, various varieties, 48@56c.

Beets. Nearby, ⅝ bskt., 75@85c.

Cabbage. Fla., ⅝ bbl. hpr., $1@1.40; Tex., 100 lbs. crt., $2.75@3.

Lettuce. Calif. iceberg, crates, 4 to 5 doz. $3.50@4.50; Carolina ⅝ bbl. hmpr., Pig Boston, $1@2.

Onions. Mich., Ind. and Ohio, 50-lb. sacks, U. S. No. 1, yellow, $3@3.50.

Potatoes. Pa. round whites, per 120 lbs., $1.25@1.40; Maine Green Mts., $1.45; Fla., new stock, per bbl., Spaulding Rose, No. 1, $7.50, hu. crates Bliss Triumphs $1.50@2.

Sweet potatoes. Va. and Eastern Shore bu. hamper, No. 1 yellow, $1@1.25, N. J., ⅝ bskts., yellow $1@1.25; Md. and Delaware No. 1 $1.40@1.50.

Parsnips. Nearby, ⅝ bskt., $1@1.50.

Rhubarb. Mich. 5-lb. boxes, fancy, 80@$1.10.

Radishes. S. Car. bu. hamps, $2@2.25, Texas long red, $2@2.25.

New York

Butter. Creamery higher than extras, 47@47½c; extras, 46½c; firsts, 45¾@46c.

Eggs. White eggs, current receipts average extras, 33c; extra firsts, 32@32½c; mediums, 32c.

Poultry. Live, by express, fowls, 36c; chickens, 32@33c; broilers, 42c; old roosters, 28c; ducks, 28c.

Apples. Eastern and Southern, bu. bskts., Romes, $1@2; Wealthy, $1@2.25; Delicious, $1@2.25; McIntosh, $1.50@3.75; barrelled stock, No. Spy, $3.25@9.75; York Imperial, $3@6.25; Grevening, $3@7, mixed varieties, $2.75@5.50.

Potatoes. L. I., 150-lb. sack, $1@2.25; Maine, $1.75@2; Fla., new stock, Spaulding Rose, No. 1 bbl., $7.50@7.75; Bermudas, $8@9.50.

Sweet potatoes.—Jersey, best bskt., $2.65@2.90.

York

Butter. Country, 50c; separator, 55@60c.

Eggs. Fresh, per doz., 30@32c.

Poultry. Hens, per lb., 28@32c; Leghorns, dressed, $1.30@1.65 each; heavy $1.50@2.

Vegetables. Potatoes, 65@70c per bu.; cabbage 3@3½ per head; lettuce, 10@20c; bu.; spinach, 15@20c, ½ pk.; carrots, 8@10c bch.; turnips, 15c ½ pk.; celery, 8@15c stalk.

Apples. Per bushel, $1.25@2.

Baltimore

Butter. Creamery, fancy, 51@52c; rolls and dairy prints, 30@32c; packing stock, 30@31c; butterfat, lb., 49@50c.

Eggs. Md.-Pa. nearby firsts close off, 27½@28c; western firsts, 27½@28c; southern, 26½c.

Live poultry. Hens, old, 4½ lbs. and over, 31@32c, small to medium, 23c; Leghorns, 30@32c; young chickens, 38@40c; broilers, small, 43@45c; Guineas, young, 18 lbs. or over, each, 90c@$1; roosters, 17@20c; ducks, 26@32c; pigeons, pair, 30@35c; squabs, 30@50c; turkeys, 28@28c.

Apples. Fancy pack, bu., $1.50@2; per bbl., $3@6.75.

Potatoes. Per 150 lb. sack, $1.60@2.10.

Sweet potatoes. No. 1 hamper, $1.25@1.75; Yams, per bbl., $4@4.50.

Pittsburgh

Butter. Creamery, prints, 92 score, 52½c, tubs, 52½c; local tubs, 49c.

Eggs. Fresh, select white, 29@31c; brown, 28@30c; current receipts, 26@28c.

Poultry. Heavy hens, 32@33c; Leghorns, 30@32c; springers, 31@33c; roosters, 20c; ducks, 30@32c; geese, 22@23c; pigeons, 40@50c per pair.

Potatoes. Per 150 lb. sack, N. Y. whites, $1.75; Maine Green Mts., $1.80@2; Mich. Burals, $1.50@1.65.

Apples. Bbl. Baldwin, $5@5.50; bu. basket Baldwin, $1.75@1.90; Stark, $1.75; Spitzenberg, $1.65.

Lettuce. Ohio hothouse, 10-lb. basket, 65@75c.

Onions. 100-lb. sack No. 1 yellow, Mich. & Ohio, $3.75@4.

Mushrooms. Pa., 3-lb. basket, 90c@$1.

Turnips. Bu. bskt., N. Y., 50@60c.



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HEREFORD BULLS, Yearling bulls, the pick of our herd. Ready for service and priced to sell. GEO. G. COCHRAN, Dawson, Pa.

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Angus Cattle at reasonable prices. Write BAYARD BROS., Waynesburg, Pa.

MILKING SHORTHORNS.—Cows, heifers, and bulls. Real breeding, accredited herd. C. M. Kennedy & Sons, Ulster, Bradford Co., Pa.

TIGHT BINDING TEXT CUT OFF

INSURANCE PAYS

Here's The Proof

Twenty days after Chas. M. Martin of Dillsburg, Pa., sent in his application for one of our Travel Accident Policies he met with a fatal accident. His beneficiary received a check for $2.000.00.

Six days after Miss Ethel Knorr and two other girls were instantly killed in a grade crossing accident, her father, Jacob Knorr, Monroeville, N. J., R. 1, received a check for $2,000.000.. Miss Knorr was insured with the Federal Life Ins. Co. through Pennsylvania Farmer.

When Raymond Horton, R. 4, Towanda, was returning home after taking a can of cream to the creamery his automobile overturned, due to a defective steering gear, and he suffered a compound fracture of the forearm. Later gas gangerene developed making amputation necessary. He received a check from the Federal Life Insurance Co. for $1,000.00 for the loss of an arm.

Over $18,000.00 Paid
Pennsylvania Farmer Readers

The following is a partial list of claims paid

Wm. H. Wilson, R. 3, Bedford, Pa.	$2,000.00	Clarence S. Kates, Glenloch, Pa.	38.57
Chas. M. Martin, Dillsburg, Pa.	2,000.00	John A. Perkins, R. 3, Dubois, Pa.	20.00
Regory Lawrence, R. 1, Bridgeton, N. J.	2,000.00	Anna R. Harris, R. 3, Salem, N. J.	20.00
Jacob L. Knorr, R. 1, Monroeville, N. J.	2,000.00	Clarence D. Carey, R. 5, Coatesville, Pa.	15.00
Roxy Lorish, R. 1, Macungie, Pa.	2,000.00	Wm. H. Johnson, R. 1, Erie, Pa.	14.28
Robert John, Mayfield, N. J.	2,000.00	Peter Smith, R. 4, Salem, N. J.	15.71
David P. Fogg, Shiloh, N. J.	1,000.00	Warren Sherwood, Otego, N. Y.	8.57
Raymond Horton, R. 4, Troy, Pa.	1,000.00	Edward P. Wells, 101 Bound Ave. Riverhead, N. Y.	52.85
A. R. Miller, R. 5, Towanda, Pa.	150.00	Gilbert W. Smith, Bellefonte, Pa.	37.14
Mrs. Eliz. Chambers R. 7, West Chester, Pa.	150.00	Peter E. Fick, Elverson, Pa.	20.00
Wilbert Fawell, Fredericktown, N.J.	88.88	D. E. Wright, R. 1, Guy Mills, Pa.	25.71
Sam'l E. Weaver, New Holland, Pa.	88.86	Edith A. Maist, R. 2, Johnston City, N. Y.	50.00
Chas. R. Kahres, Kohnch, Pa.	88.57	Wm. S. Lovelace, Milnaville, Pa.	50.00
Frank Molle, Southport, Pa.	88.57	Earl L. Pensyl, Nashua, Minn.	10.00
Wm. H. Turner, R. 6, Salem, N.J.	50.00	Gillett Martin, Rome, Pa.	10.00
Lloyd C. Leister, R. 3, Lewistown, Pa.	50.00	James F. Mosack, Hicktown, Pa.	8.33
Chas. P. Bostwick, Atglen, Pa.	20.00	K. B. Deemer, Reynoldsville, Pa.	20.00
Kendrick Van Cleef, Cliffwood, N.J.	11.43	Walter Alger, R. 1, Rome, Pa.	50.00
Foster Brown, R. 4, Towanda, Pa.	10.00	Frederick E. Brooks, Harbor Creek, Pa.	21.43
Blanch Brown, R. 4, Towanda, Pa.	10.00	John M. Stanley, R. 3, Delta, Pa.	91.43
Raymond E. Barnes, R. 3, Westminster, Md.	20.00	D. C. Miller, R. 6, Gettysburg, Pa.	150.00
Wayne Fawell, R. 1, Coatesville, Pa.	11.43	Peter Lombardi, Landisville, N. J.	10.00
Mrs. Eliz. Deeds, R. 1, Norristown, Pa.	15.00	Erin Bingham, R. 2, Volant, Pa.	13.72
M. W. Emerson, R. 2, Kidley, Pa.	20.00	Harlan Baldwin, Exton, Pa.	48.29
Wm. J. Clark, Cendersport, Pa.	20.00	Peter Gotti, R. 4, Vineland, N. J.	20.00
Jack Furguson, Sharpsville, Pa.	11.43	David F. Greer, Smyrna, Del.	23.72
E. E. Dosser, Reynolds, Pa.	70.00	Geo. Langler, Delmont, N. J.	20.00
John F. Shoe, 1102 Westwood Ave. Columbus, Ohio	60.00	Steaven Lewis, R. 3, Gillett, Pa.	20.00
James F. Feltan, 2707 W. 8th St., Phila., Pa.	60.00	Harry E. Yeager, Royersford, Pa.	48.58
Walter E. Koontz, R. 1, Konig, Pa.	60.00	Gleason Lewis, Hillsgrove, Pa.	60.00
Wm. R. Galley, Finleyville, Pa.	43.71	Herbert D. Fell, West Grove, Pa.	20.00
John Wilson, R. 1, Sewell, N. J.	40.00	Wm. Franzen, Monroeville, N. J.	14.29
Clark B. Johnson, R. 6, Towanda, Pa.	40.00	John E. Hafe, Littlestown, Pa.	20.00
		Adelia J. Woodruff, R. 6, Bridgeton, N. J.	30.00
		J. S. Knight, Theradale, Pa.	100.00
		James H. Eyrich, Elverson, Pa.	60.00

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Application

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PENNSYLVANIA FARMER
Insurance Department, Pittsburgh, Pa.

I am a reader of PENNSYLVANIA FARMER, more than 10 years of age and less than 70 years, not deaf or blind or crippled to the extent that I cannot travel safely in public places, and hereby apply for a $10,000.00 Farmers' Special Automobile, Travel and Pedestrian Accident Policy in the Federal Life Insurance Company issued through PENNSYLVANIA FARMER. Enclosed is $2.00 (two dollars).

Full name ..... Age.....
Print plainly and carefully

Postoffice ..... State.....

R. F. D. .....Occupation .....

Postoffice .....State..... Relationship of Beneficiary .....

Full name of beneficiary .....



Mr. C. B. Snyder, one of Lancaster county's Master Farmers never fails to [illegible] for the Ton Litter Club when he enters a litter. This is Mr. Snyder's [illegible] 1928 litter, a Hampshire-Poland-China cross, weighing 2,304 pounds at the [illegible] of six months.

What's Time to a Hog?

TIME is a commodity which is frittered away with the same abandon that fault finding is indulged in. A guy who before marriage will break his neck to reach the domicile of his dulcinea on time will make an ox cart look like a speed wagon when wifey sends him after a spool of number 40 white cotton thread. On the other hand, the object of a young man's affections, who keeps him waiting only a wee hour while she arranges the scanty attire dictated by the present age, preparatory to accompanying him to an entertainment, will, after she has hooked the poor fish, take a week to replace a button missing from his shirt.

Neither the location of the hands on the clock nor the date on the calendar is of much interest to the denizens of the swine world. However, the saving of time in preparing hogs for market or the pork barrel is a dollar and cents proposition with the owners of the animals.

Feed and Shelter

Undoubtedly more money is lost, especially in Maryland, through improper feeding and management of swine than through hog cholera. Pigs cannot make hogs out of themselves in record, or even in reasonable time, unless they are supplied with proper feed and shelter. Moreover, practically all outbreaks of hog cholera, especially in the eastern states, are caused directly or indirectly by infected pork which reaches the hogs in garbage, table scraps, kitchen swill, etc. Thus, the losses in the hog lots must be recognized as largely due to improper methods of swine management.

Thousands of dollars are expended annually in endeavoring to protect hogs from cholera so that the disease may be flirted with, while practically no effort is being made to apply common sense methods of sanitation to rid the country of the dreaded malady. The result is that adding machines are annually wrecked computing losses rather than profits that would accrue from proper methods of swine management.

If the hog raisers in Maryland will take precautions to prevent infected hogs from reaching their place and see that their swine do not receive any garbage, table scraps, kitchen swill that might contain bones, rinds or scraps of infected pork they need not worry about their animals being in danger from hog cholera.—I. K. Atherton, Inspector in Charge of Hog Cholera Work.

Stale Bread for Hogs

Will you kindly let [illegible] stale bread to hogs? Would also like to know something about forage crops for swine. E. J.

THE most satisfactory way of feeding stale bread to hogs is to soak it for a short time before feeding, but do not let it become sour.

It is not necessary to feed sour slop to hogs. Unless the souring is properly done it may be a greater detriment than good.

Under most conditions it is best to provide pasture for pigs rather [illegible] to sow something that can be cut [illegible] feed green.

Rape makes an excellent pasture [illegible] pigs. The Dwarf Essex variety [illegible] best results, seeded at the rate of [illegible] eight to ten pounds per acre. [illegible] ground should be prepared in about [illegible] same way as for corn and the [illegible] broadcast and covered by harrowing lightly.

There are a great variety of [illegible] that can be used as pasture crops [illegible] swine. Alfalfa or clover pasture [illegible] among the best, and where either [illegible] these can be grown you will get excellent results. F. I. [illegible]

Milking Ewes Need Feed

LIBERAL rations are necessary for the ewe after lambing, and [illegible] until grass comes on, to insure a [illegible] flow of milk which is essential to [illegible] proper growth of the lamb, says [illegible] Wilson, sheep specialist of the W[illegible] College of Agriculture.

It is of especial importance that ewes and ewes with twin lambs be given extra feed after the lambs have been dropped. The thin ewes and ewes having twins should be separated from the rest of the flock if possible to make sure that they obtain an adequate amount of feed. Those ewes which are noted to have a large milk flow should also receive additional feed.

Until grass arrives, a good ration for the ewe with lamb is one pound of the following mixture: One part corn, two parts oats, one part bran and one part linseed meal. She should also have two pounds of the best hay available (clover or soy bean) and two pounds of silage (if available) each day.

Sheep Pull Wool

Can you tell us why our sheep pull their wool at this time of year? We are in the barn most of the time [illegible]

THERE are a number of causes that will make sheep pull wool. Small lice will cause the pull. These lice are rather pale in color and almost microscopic in size. A sudden change in feed such as turning your grain ration rather warm will loosen the fleece also. Housing sheep in too warm quarters during winter time will also cause them to pull wool. I notice you say you keep your sheep in the barn most of the time. They would thrive much better if you could arrange to have them run outdoors during the day, particularly when the weather is pleasant. Some of the better shepherds scatter fodder or feed on the ground so that these ewes will take the proper amount of exercise.

I have no doubt that probably the reason for them pulling their wool is because they are infested with ticks or small lice. If I were you I would plan on shearing these ewes early in the spring as the weather will permit and then dip them in any good stock dip. This will clean them of lice and ticks for the next year. I know of nothing that is more practical for you to do at this time of year to get rid of these kinds of lice. If you will part the fleece and examine one of these ewes that is pulling her wool, I believe you will find that I am right in regard to the small lice.

W. B. Connell.

Cuts and Bruises on colt, horse, stifle or knee, should be treated promptly with Absorbine. Does not blister or remove the hair. At druggists, or $2.50 postpaid. Describe your case for special instructions. Horse book 3-H free.

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Protects from the Wire Worms and Cut Worms and very greatly invigorates the germinating seed, producing luxuriant root growth. The Results are quick and most vigorous growing Plants. Highly effective for Cucumbers, Watermelons and Muskmelons. Mr. Farmer just send us your name and we will bring you most valuable information by return mail.

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KETCHUM CLINCHER EAR TAG

The only self-piercing and self-clinching bright metal ear tag made. For Cattle, Sheep and Hogs. Stamped Numbered and Lettered to suit. Write for samples and prices. Liberal sale terms!

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HORSES

BELGIAN DRAFT HORSES are unexcelled for beauty of color, shape and ruggedness. Right now is the time for some one in your community to purchase a purebred registered Belgian Stallion. He will bring profits to the owner and improve the grade of horses. The Belgian grade is the best. A ready sale at good prices can be had for these grade colts. For information as to where to purchase a pure-bred registered Belgian nearest you, or if you can need a team of mares, or a mare and for any other information about the Belgian horse, write the American Association of Importers and Breeders of Belgian Draft Horses, Wabash, Ind.

Registered Belgians—Young stallions also a good four-year-old Percheron mare. Write what you wants or better come and see. SYLMEDE FARM. Beaver, Pa.

REGISTERED PERCHERON STALLIONS and Mares. Imported and Heatlthon blood. R. S. DOTTERER. Mill Hall, Pa.

POULTRY

AYLESBURY and ROUEN DUCKS. Embden geese. Buff Orpington Cockerels from winning stock. HALLENBERGER FARMS, Amanda, Ohio

Reid's Turkey Farm No Blackhead for 15 years. 700 Bronze Birds. FREEHOLD, N. J., Star Route.

Special Fall Prices on high-class breeding Turkeys, Geese, Ducks and Guineas, write your wants and for mating list. Pioneer Stock Farm, Telford, Pa.

SWINE

REG. BIG TYPE POLAND-CHINA FALL BOARS Big Type Poultry. Easy feeders. Prices right. A. A. Reader & Sons, R. 2, West Alexander, Pa.

O.I.C's Sept. and Oct. saw pigs. Original type, prolific, quick maturing. Satisfaction guaranteed. C. B. BELL, Millersburg, Ohio

Three Carloads

TWO hundred and fifty-one pigs in 17 litters were farrowed by a pure-bred Poland China sow owned by Lonnie Storm of Illinois, according to a report in the Drovers' Journal, which states that the sow was recently marketed at the age of eleven years. The combined weight of the 251 pigs amounted to 55,220 pounds, an average of 220 pounds, and if they had all been loaded at one time they would have filled three railroad stock cars.

Advises Docking

"FOR the financial benefit of sheep raisers and dealers, we as packers suggest that all ram lambs except those retained for breeding should be made into wethers when they are about two weeks old, and that all lambs have their tails docked," states Lewis F. Swift, president of Swift & Company.

This statement should answer the question which has been in the minds of many sheepmen as to the value of docking and castrating market lambs, says Benj. F. Creech, extension animal husbandman, College of Agriculture, West Virginia University.

"The Master Shepherd's Method of Docking and Castrating" can be obtained from the Agricultural Extension Division at Morgantown. This leaflet gives details and illustrations on performing both of these operations.

All sheepmen are urged to attend the field meetings and demonstrations which are held in their respective counties as a part of the lamb improvement campaign. Meetings will be held in Greenbrier, Harrison, Ritchie, Wood and Jackson counties during the week of April 1 to 6.

Livestock Interests Unite

WITH the recent formation of the Maryland Stockmen's Association all of the livestock interests of the state are now merged in one organization. The new association which has absorbed the beef cattle, sheep and swine organizations already existing in the state, will work for the betterment of Maryland horse, beef cattle, sheep and swine interests.

Officers of the new association selected for the current year include president, W. R. Harvey, Corbett, Baltimore county, vice-president, H. D. Wolfe, Glenwood, Howard county; secretary-treasurer, B. F. Carmichael, College Park, and assistant secretary-treasurer, K. A. Clark, College Park.

Members of the executive committee, including the above named officers, include J. W. Jones, Olney, Montgomery county; Edgar L. Thomas, Frederick, Frederick county, D. B. McDowell, Nottingham, Cecil county and G. B. Fenwick, Glyndon, Baltimore county.

With the purpose of promoting the livestock interests of the state the activities of the new association will be carried on along the following lines:

Encourage the general use of breeding stock, both male and female, of good breeding and individuality; advocate the general adoption of better feeding methods; encourage the use of suitable equipment for livestock; give careful consideration to methods of reducing the heavy losses caused by parasites and disease; advise the more efficient utilization of farm grown meat on the farm and the more advantageous marketing of Maryland livestock and livestock products. Another purpose of the Association is to function in a general way as a club for Maryland's forward-looking stockmen.

Thomas H. Bartilson.

Bell Mine
Rotary Kiln, Pulverized
LIME
makes bigger crops



An Experiment Station Orchard being sprayed with Bell-Mine Lime

Used in your spray formula, Bell Mine *Rotary Kiln* Pulverized Lime will help you turn your fruit and vegetable losses into profits. Bell Mine is a pure Lime with calcium-oxide content of from 94% to 96%. Covers well, sticks close, is easy to use and will not clog. The air-tight steel barrel keeps it in perfect condition. Use the handy coupon to get your FREE book of sensible spray formulas.

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AMERICAN LIME & STONE COMPANY
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Please send me your new booklet on:
"Spraying and Dusting for Orchard and Farm"
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CLIP AND MAIL TODAY!
PF-320

DISPERSAL SALE
115 REGISTERED HOLSTEIN CATTLE
1 mi. east of Attica, N. Y., which is 30 mi. east of Buffalo, 10 mi. So. of Batavia. Good roads.
April 3–4, 1929
Entire herd of F. D. Van Buskirk, goes for the high dollar. A genuine breeder's herd since 1908. **Herd fully accredited** 6 years 60-day retest privilege. 19 daughters of 30-lb. cows to be sold. Many fresh cows, close springers, others bred to freshen in fall. **High class offering** of bred and open heifers. Buy them now, the pasture season is just ahead. 30-lb. herd sire to be sold, with many of his daughters; a few other well-bred bulls. Sale starts at 10 A. M. each day, held in comfortable quarters. Dinner served. 50 maternal descendants of the 32.98-lb. cow, Columbia Jewel Mercedes, who with her 4 30-lb. daughters were all developed here.
Write for Catalog Now, to R. AUSTIN BACKUS, Sales Manager, Mexico, N. Y.
F. D. VAN BUSKIRK, Owner, Attica, N. Y.
Col. Glenn R. Mead, East Aurora, N. Y., Auctioneer.

SWINE

Durocs Bred yearling gilts, March and April farrow. Champion blood. Immuned and T. B. tested. F. F. HELLER, R. 6, Easton, Pa.

BEST GRADE CHESTER, Berkshire and Poland-China pigs, 6-8 weeks old, $10 each. Three months old, $12 each. Express paid. Bred sows and boars. C. E. Rosserman, York Springs, Pa.

SPOTTED POLAND-CHINAS. Spring pigs. Reg Guernsey bull calves. Write your wants. A. M. KENNEL, R. 5, Honey Brook, Pa.

REGISTERED SPOTTED POLAND-CHINA boars for sale at all times. Write Middletown, Va. BROOKSIDE FARM.

Reg. Berkshires Superior breeding stock. All ages. Both sexes. Choice immune. WOLF CREEK FARM, R. 2, Slippery Rock, Pa.

Large Modern Berkshires. Correct type and fashionable breeding. Dilts & Gorman, Roseville, Ohio

REGISTERED BERKSHIRE BOAR PIGS 10 weeks old. Money makers. W. F. McSPARRAN. Furnace, Pa.

REGISTERED BERKSHIRE PIGS From prize winning stock, $12.50 each. FRED HILNER, R. 1, Millville, Pa.

CHESTER WHITES. Pedigreed big type Chum, about all ages. 15 sows farrowed 151 pigs; prolific mast please. C. E. Cassel, Hershey, Pa.

Registered Berkshire Pigs Superior Stock. Write for prices. J. P. HINDERLITER, R. 4, Mayport, Pa.

O.I.C. Pigs Pedigreed, big type, and from large litters. Seven weeks old, $7.50. Orlo Barkman, Rockwood, Pa.

—REGISTERED HAMPSHIRE PIGS— Spring pigs, either sex, not akin. J. J. RAILING, R. 2, Shippensburg, Pa.

REG. SPOTTED POLAND-CHINAS. Choice fall pigs and boars guaranteed to please. Write. WM. H. JACKSON, Darlington, Pa.

DAIRY CATTLE

FOR SALE. Jersey Bull Calf, dropped Dec. 11, 1928, by Reg. of Merit Sire Meridale Merry Prince, Grand Champion West Va. State Fair. Dam also show winner with R.M. record 7,500 lbs. milk, 5.62% fat. Imported in dam from Isle of Jersey and daughter of long Golden Fern's Noble. This calf has large, long deep body and straight back, a show prospect and blood tested. First check for $100 takes him. Fed. Acer, Herd No. 47377. Highland Farms, Greensburg, Pa.

FOR SALE
Our stables are overflowing, so we can spare six or eight two-year-old heifers. Some fresh—others due soon. Registered Holsteins. Entire herd negative to blood test for infectious abortion. Tuberculin tested. WINTERTHUR FARMS. Winterthur, Del.

Just JERSEYS
Indiana County, Pa., Jersey Cattle Club offers good Jersey cattle for sale. Most of our herds abortion tested. Send for sale list. J. M. BISINGER, Pres., Homer City, Pa. W. S. Wetsel, Sec'y., Marion Center, Pa.

PURE-BRED OR HIGH-GRADE HOLSTEINS Heifers, Springers. Tuberculin tested Springers on hand at all times. Carload or less than carload lots. STRUBLE & MARTIN, Milford, Pa. Newton, N. J.

GUERNSEY BULLS, one to eighteen months, from A. R. dams 538 to 646 lbs. fat. Heifers and cows priced to sell. from Langwater Bulls. A. J. Fell, R. 1, Lansdale, Pa.

GUERNSEY BULLS, registered, 5 years old, 1 year old, three bull calves. Also two heifers. Border Raider" breeding. Accredited Herd. Roselea Farms, R. 2, Box 43, Coraopolis, Pa.

REG. JERSEY BULLS ready for service. Also younger bulls. Accredited herd. C. F. & M. W. BIGHAM, Gettysburg, Pa.

PURE-BRED JERSEY HEIFERS 6 to 8 months old. Write or call. E. J. HARSHBARGER, Mattawana, Pa.

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TIGHT BINDING TEXT CUT OFF

SEEDS AND NURSERIES

EARLY VEGETABLE PLANTS.—Frostproof Cabbage: Wakefields, Copenhagen, Golden Acre, Flat Dutch, Bermuda Onions, Leeks, Lettuce. Postpaid: 100, 40c; 500, $1.25; 1,000, $2.25. Collect: 1,000, $1.00; 5,000, $4.50. Tomato Plants: Earliana, Bonny Best, Baltimore. Postpaid: 100, 50c; 500, $1.50; 1,000, $2.50. Collect: 1,000, $1.75; 5,000, $7.50. Write for prices on Peppers and Egg Plants. Carefully Packed, Varieties Labeled. Delivery Guaranteed. Piedmont Plant Co., Albany, Ga.

CABBAGE PLANTS, NOW READY.—My frostproof Cabbage plants will head three weeks earlier than home-grown plants. Varieties: Jersey and Charleston Wakefield, Succession, Flat Dutch, Golden Acre and Copenhagen Market. Prices by parcel post postpaid: 500, $1.25; 1,000, $2.25. Express: 1,000, $1.00; 5,000, $4.50; 10,000, $7.50. Bermuda Onion plants same prices as Cabbage plants. Roots wrapped in moss and shipped promptly. Satisfaction Guaranteed. P. D. Folwell, Tifton, Ga.

FROSTPROOF CABBAGE PLANTS. The kind that will stand a freeze. Six leading varieties. Prices: 500, $1.25; 1,000, $2.25 postpaid. By express: 1,000 to 5,000, $1.00 per thousand; 10,000 and over at 75c. Bermuda Onion Plants same prices. Write for prices on Tomato, Pepper, Egg Plant, Cauliflower and Lettuce plants. Blue Ridge Plant Company, P. O. Box 583, Greenville, S. C.

TIFTON'S RELIABLE PLANTS.—Frostproof Cabbage, Bermuda Onion Plants, Wakefields, Dutch, Ballhead, Copenhagen, Golden Acre. Postpaid, 500, $1.50; 1,000 $2.50. Express paid, 500, $1.25; 1,000, $2.15; 5,000, $9.40. Early Tomato, Pepper, Cauliflower, Egg Plant later, write. Tifton Plant Co., Tifton, Ga.

BUY GRIMM ALFALFA SEED NOW! Lanson's Seed traces to original Grimm stock. Hardiest of alfalfas and highest in feeding value. Yields for years without replanting. Seed scarified to increase germination. Also sweet clover and red clover. Order early! A. B. Lyman, Introducer, Excelsior, Minn.

NUT CROPS. The north's future soil production. Progressive farmers are planting groves of improved grafted nut trees. Learn what they are doing. "Save America's Nut Heritage," and "Nut Grower." John W. Hershey, Nut Trees, Downingtown, Pa.

SET OUR "FROSTPROOF" CABBAGE and onion plants, and mature crop three weeks earlier. 300, $1.00; 500, $1.75; 1,000, $2.75; 10,000, $20.00. All delivered prepaid. Prompt shipments, good plants delivered or money refunded. J. F. Councill Company, Franklin, Virginia.

"FROSTPROOF" CABBAGE and Onion Plants—Special Wholesale Prices: 500, $1.25; 1,000, $2.00; 5,000, $9.00; 10,000, $17.50 all charges prepaid. Fine plants, good delivery guaranteed or money refunded. Wholesale Plant Company, Thomasville, Georgia.

PRIVET, BARBERRY, PERENNNIALS, ROCK Plants, Concrete Vases and Flower Boxes. Flowering plants 10c up. Hedge plants 2c up. Very lowest prices. Send for list. John Grubb, Box 172, Churchville, Pa.

FROSTPROOF CABBAGE, onion plants, best leading early varieties. Seeds, plants, treated for disease, insuring greater crop yield. Collect express $1.25, 1,000; over 5,000, $1.00, 1,000 cash. J. T. Councill & Son, Franklin, Va.

WILSON BLACK SOY BEANS.—$2.60 bushel; Virginia Brown Soy Beans, $2.40 bushel. Bags, 12c each, f. o. b. Milford, Delaware. New crop and recleaned. Joseph E. Holland, Milford, Delaware.

CERTIFIED SEED POTATOES.—Irish Cobblers and original strain Carman No. 3. Buy direct from grower. Write today for prices. N. A. Baker & Sons, Fairport, New York.

C. O. D FROST PROOF CABBAGE PLANTS. Leading varieties now ready. 500, 65c; 1,000, $1.00; 5,000, $4.50. Farmers' Plant Co., Tifton, Ga.

FROSTPROOF CABBAGE and Bermuda Onion Plants. Strictly first class, large size and well rooted. $1.00 per thousand f.o.b., here. Mention variety wanted. Guarantee Plant Co., Ty Ty, Ga.

SEND NO MONEY.—C. O. D. Frost Proof Cabbage and Onion plants. All varieties now ready. 500, 65c; 1,000, $1.00; 5,000, $4.50. Standard Plant Co., Tifton, Ga.

FROSTPROOF CABBAGE and ONION PLANTS $1.00 thousand. Prompt shipments, good delivery guaranteed, old Dominion Plant Company, Franklin, Virginia.

VICTORY OATS.—Small quantity from seed imported last year. Yielded over 90 bushels without fertilizer, $1.50 bushel. Holliday Farms, North Springfield, Pa.

MILLIONS CABBAGE ONION and TOMATO Plants, $1. 1,000. Pepper and Potato Plants, $1.75, 1,000. Clark Plant Company, Thomasville, Ga.

HARDY ALFALFA SEED, 99% pure, $10.00 bushel; sweet clover, 95% pure, $4.00. Return seed if not satisfied. Geo. Bowman, Concordia, Kansas.

PAY THE POSTMAN.—Send No Money. Frostproof Cabbage and Onion plants. Leading Varieties. 500, 65c; 1,000, $1.00. Albany Plant Co., Albany, Ga.

FOR SALE.—Lancaster County Sure Crop graded seed corn, germination 95, $3.00 at farm, $3.25 F. O. B. Gap. $1.75 half bushel box, cured in wire crib. Wholesale prices on request. S. J. Stoltzfus, R. 1, Gap, Pa.

BERMUDA ONION PLANTS.—Grow Bigger and Better Onions. Frostproof. Postpaid: 200, 50c; 500, $1.00; 1,000, $1.75. Transplanted Cabbage Plants: Three dozen, 40c; 1,000, $7.50. Port Mellinger, North Lima, Ohio.

TOMATOES, FROSTPROOF CABBAGE and Onions. Large strong plants. Leading varieties. Satisfaction guaranteed. 200, 40c; 500, $1.10; 1,000, $1.85, prepaid. Express: $1.00, 1,000. Modern Plant Farms, Ponta, Texas.

PLANT PLANTS, the kind that will please you. Frostproof Cabbage, Onion and Tomato plants. Leading varieties. 1,000, $2.00; 500, $1.25; 100, 40c, prepaid. Heath Bros., Ponta, Texas.

CERTIFIED SEED POTATOES.—Two years testing by Pennsylvania State College proved these among the very best. Paul R. Smith, Ulysses, Pa.

FROST PROOF CABBAGE PLANTS. $1.00 thousand; Porto Rican Potato Plants, $2.00 thousand. Shipped parcel post. Cash with order. Bullard Brothers Plant Farms, Bayley, Ga.

FROSTPROOF WAKEFIELD CABBAGE Plants, 200, 35c; 300, 45c; 500, $1.25; 1,000, $1.90. Tomato plants same price. All prepaid. Holly wood Plant Farms, Franklin, Va.

STRAWBERRY PLANTS, $3.00, 1,000 UP, twelve leading varieties (Mastodons). Raspberries, blackberries, grapes, asparagus, shrubbery. Wholesale prices. Cloverleaf Nursery, Three Oaks, Michigan.

RUSSET "CERTIFIED" SEED POTATOES, passed four state inspections. No. 1 grade and quality guaranteed. $2.10 per 120-lb. sack, cash with order and shipped as directed. William S. Brown, Marion Center, Pa.

Sweet Clover Pasture

(Continued from page 9.)

superphosphate were applied. In February, 1928, a seeding of about eight pounds per acre of scarified sweet clover was made broadcast without cultivation on this sod. Mr. Sumption reports a good growth of sweet clover which produced more pasture than had ever been grown on the field.

Mr. George L. Benedict of Jewett, Harrison county, Ohio, reports a similar experience. In the spring of 1923 he applied two tons per acre of fine ground limestone to a steep pasture hillside. In the fall of the same year he top-dressed this same area with 250 pounds per acre of 16 per cent superphosphate. Scarified sweet clover was then seeded without cultivation in February, 1924. Before treatment this hill pasture supported a growth of nothing but poverty grass, moss, briars and vinequefoil. The sweet clover came on in a good thick stand and produced seed the second year, from which a second stand was started. In the unlimed part of this pasture no sweet clover came even though it was seeded the same as on the limed part.

Mr. Benedict noticed that in a year or two the bluegrass and white clover began to thinken up in the sod where the sweet clover grew. By 1926 the sweet clover stand had begun to thin out a little and by 1928 it had entirely disappeared. The area where it grew, however, was almost a solid mat of bluegrass and white clover.

Apparently sweet clover builds up the soil in a few years so that bluegrass crowds it out. In this particular it does not differ from alfalfa. It has long been the complaint of alfalfa growers that bluegrass crowded the alfalfa. Bluegrass and white clover coming into a pasture should not, however, be the cause of much complaint.

Sweet clover makes a quick growth and probably produces more pasture than any other crop grown in Ohio. After cattle once learn the taste of it they eat it readily and since it is high in protein it makes very desirable feed. Lime is one of the requirements and attention to the application of lime is imperative if the crop is to succeed. If the soil is naturally high in lime the addition of more lime may not be necessary. It is true though that most of the soils in the dairy section of the eastern United States need some lime for this legume.

If sweet clover is to be sown without cultivation it is undoubtedly advisable to apply lime a year or so before seeding. This permits some of the lime to dissolve and thereby neutralize the acid. Such action is slow when lime is merely spread on top of sod without cultivation. A lime application this spring or summer would take care of a field for seeding next winter or early spring.

M. V. Bailey.

How to Handle and Utilize Fire Wood

The firewood on most farms is about exhausted. And it is no wonder. In the past on most places almost half of the wood chopped down has been discarded and burned as brush. This is how it happened. After a tree had been brought down, all branches running somewhat less than an inch were rejected. Now most trees growing along fence rows and even some in the woodlots have very wide spreading tops. This means piles of thin branches which ought to be used in the kitchen stove but which are not because of the difficulty in handling.

Try my way which my father used before me. The saw, ax and hatchet or hand-ax should be as sharp as a razor. Then at the most convenient spot to the felled tree place your chopping block or whatever answers for a black at a height of three feet from the ground. As the limbs are sliced off by the sharp ax drag them to your chopping block and with the lighter ax trim all twigs off to their last terminal bush—all branches have such a bush which is the point where from several to half a dozen or more limbs shoot out at the same place clear around.

As each piece of wood is cleaned of twigs, place it on a pile. There ought to be a half dozen such piles because there are different lengths and thicknesses of pieces. Then when a proper weight has been reached at any pile, tie it up like a bundle of fodder with twine, light rope or wire. By the time the job of cleaning up is finished there is a pile of wood in bundles which can be thrown upon the wagon or truck in a few minutes and unloaded in less time.

If wood is not tied into bundles hours of time are taken to haul it home. Even bundling the wood has its advantages when it has reached the wood shed. Being compact it can be stored inside out of the weather where it belongs without taking up much room.

Utilizing all of the wood has its advantages. It means more money in your purse, it means that mother has the finest and best material with which to start her fire and often, as it happens, to get a meal in a hurry. And last but not least it is practicing thrift.

Robert I. Wengley.

Lebanon county, Pa.

Veterinary

By Dr. J. F. SHIGLEY

HYSTERIA OR FITS

I have a beagle hound which will run rabbits for about two hours and then she will fall over like she is dead. She will lie there about five or ten minutes before she tries to get up. She also acts crazy after she does get up.

J. H. B.

It is probable that worms are the cause of the trouble. Some worm capsules from your veterinarian or take the dog to the office for treatment. Starchy foods should be omitted from the diet as the bulk of the food should be meat and milk.

• • •

HORSE HAS COUGH

I have a horse that has a cough and have been unable to stop it. Can you give me some formula that would stop the trouble?

C. O. H.

Have your druggist prepare the following mixture: Powdered licorice root five ounces, ammonium chloride two ounces, fluid extract belladonna one ounce, sufficient syrup to make a thick paste. Give a level tablespoonful of the mixture three times a day. Smear the dose on the teeth, gums or tongue. Use a wooden paddle or a large spoon for this purpose. Let me hear how the horse comes along.

• • •

CATS ARE SICK

We have several cats on our farm that are not only pets but are invaluable in ridding the place from rodents. In the last three months we have lost a number of them in a peculiar way. They suddenly refuse to eat anything, won't even drink milk, but seem to crave water. They become very gaunt and have a dry feverish look about the eyes, ears and nose. They run down rapidly and die in two to four days.

D. A. R.

It is possible that these cats have been suffering from a condition transmitted to them by mice and rats. It would be well to control these cats for a time, allowing only the regular milk and meat diet as a means of determining the cause of the condition. It is also possible that distemper may have made its appearance. Would it be possible for you to take an affected cat to your veterinarian for examination before death and perhaps for post-mortem examination?

• • •

PIG IS LAME

I have a pig about three months old which became crippled when a few days old. All of its legs seem to be affected. There are knots on its ... and it can hardly walk. It eats well but does not grow.

H. C. Haught.

The lameness may have been due to an infection invading the tissues early. It is also possible that this condition was the result of feeding a ration low in certain vitamins. Tankage or fish meal furnishes a food factor valuable in preventing lameness traceable to dietary deficiencies. Try adding a teaspoonful of cod-liver oil per day to the daily ration. Include tankage or fish meal and alfalfa hay in the ration.



Kill R... Without P...
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Dogs, Cats, or even Baby ...
K-R-O can be used about the house, ... yard with absolute safety as... poison. K-R-O is made of Barium ... mended by U. S. Dept. of Agricult... the Cornell... process which insures ... strength. Two cans killed 176 rats a... State Farm. Hundreds of other ...
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Insist upon K-R-O, the original ... rinator. All druggists, 75c. Larger ... as much! $2.00. Direct if dealer can... you. K-R-O Co., Springfield, O.
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The "E-Z" SHOCK ABSORBING SEA...
will make the farm machines, trucks, etc., ... ride easier. Write for ... Agents wanted ... E-Z SEAT CO.

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PEAFOWLS, Pheasants, Bantams, Pigeons, Rabbits. Free Circular. John Bain, Red Lion, Iowa.

TURKEYS, DUCKS, GEESE, GUINEAS, Rabbits, Pets. Free price list. Meigs, Versailles, Pa.

GOATS

PUREBRED TOGGENBURGS, Nubians, best milkers for invalids. Goldenbrook Goat Mohnton, Pa.

FARM LAND

PENNSYLVANIA

STROUT'S FARM CATALOG, 1,... Good Pictures. Farms with fine ... fodder and crops included. Country ... sale businesses. 521 Arms ... Dept. ... Diver, conservative country estate ... producing farm, two houses, 88 acres ... on farm, 300 clean hay crop, pasture ... tile, cut, 8,000 cords stone wood; ... (town residence, new modern 10-r. ... basement barn, autos, etc., also ... price $15,000; only $-3 cash. Trade ... equipment, crops included. Details and ... house and barn pic. 26. "31,200 Full ... Farm when sold after owning 1 ... years." Also "Gloves" page catalog for ... Dept. 1929, Ayres), 1,422 S.S. ... Phila-delphia, Pa.

FOR SALE. Fine Garden and Fruit ... 29 1/10 Acres close to City of ... Pa., ... cultivation, with 1,000 fruit trees, ... 340 young apple trees beginning to ... peach trees, 100 cherry trees, a ... 300 bearing grape vines, all choice ... asparagus, 2 acres strawberries, ... raspberries, gooseberries, currants, ... to house. Property must be sold to ... R. L. McCracken, City, for ... Date. 24 East St., New Castle, Pa.

$1,000 SECURES 251 ACRES—Grain ... machinery, including tractor and ... saw, lime-spreader, grain drill, hay ... planter and drags, wagons, cows, ... furniture, all hay, poultry, potatoes, ... near free town, excellent buildings, ... with bath, basement barns, silo; 22 ... age, 100 ton hay crop, 30 cow pasture, ... land, fruit. Only $7,000 cash; $1,000 ... Don't miss it. Free Wonderful Spring ... Opp. Court House, E. 2nd St., ...

CATTLE RANCH. 3236 acres, ... West Virginia. ... bargain. C. C. ... Harrisburg, Pa.

FOR RENT—Fertile farm, 90 acres, ... port, Pa. $25 month. Address Box ... Farmer, Pittsburgh.

SEEDS AND NURSERIES

WAKEFIELD FROSTPROOF CABBAGE ... 100, 35c; 300, 85c; 500, $1.25; 1,000, ... paid. Tomatoes same price. W. C. ... San, Franklin, Va.

CHOICE DAHLIAS.—Circular ... fields free. Pease's Floral Garden, ... dale, Pa.

PENNSYLVANIA CERTIFIED ... Potatoes. Write for prices. R. L. ... Clymer, Pa.

SPECIAL PRICES.—Dollar ... ants, Cobblers. Catalog. Ray ... New York.

CERTIFIED SEED POTATOES.—... type. High yielding strain. Grown by ... Bros., Canonsburg, New York.

COOK'S CERTIFIED POTATOES.—... Rewards better the seed. Attractive ... pay freight. Irving E. Cook, ...

SEED POTATOES.—Cambria County ... eets, eighty cents bushel. J. A. Pringle, ... Manager, Bradley Junction, Pa.

GLADIOLUS 60, ... mixed, $1.25; ... $1.25; evergreen trees ... Dahlia Farms, Chicopee Falls, ...

10,000 DISEASE-FREE BLACK ... Raspberry Plants. $2.00 ... Plants. $2.00 ... and. E. Dennis Corrick, ...

IRIS.—The world's most beautiful flower. ... L. W. Lighty, East Berlin, Pa.

CERTIFIED SEED POTATOES ... Lynch, Coral, Monticello ...

FREE SAMPLES Ohio ... Corn. High yielding ... Bros., Williamsport, Ohio.

SEED CORN.—Cuffee, also ... Seller. Second to none. ... Ohio.

BABY CHICKS

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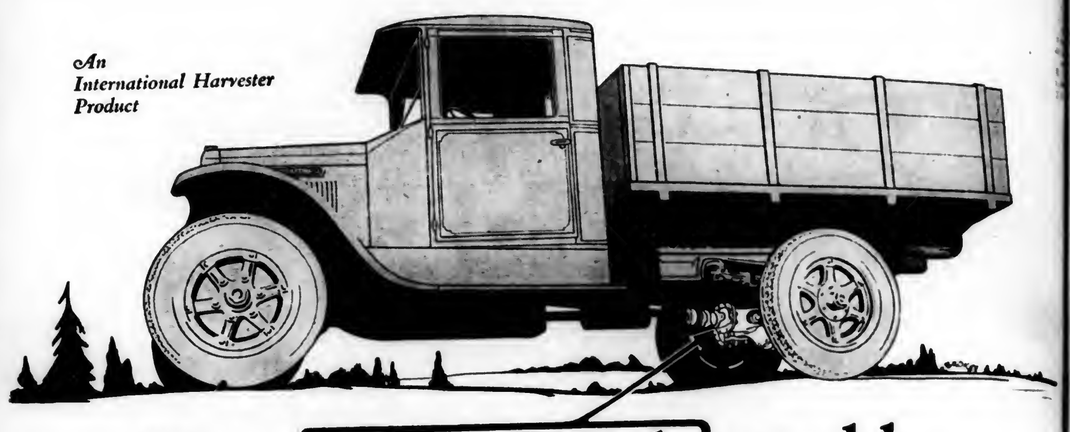
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Farm Facts and Fancies

By ALVA AGEE

A SUBSCRIBER who believes thoroughly in this paper writes that she is on a visit to some up in Southern California. She says: "I have been shown lots of real development that seem very desirable. It seems good. A lot with trees that will bring income with small monthly payments and a chance to sell within a year at a substantial profit before paying in over three hundred dollars. The project seems to have big business men behind it and a lot of money has been spent on streets, shade trees, etc., and they advertise widely. Have till April 7 to pay ninety dollars, and then to begin monthly payments."



Of course I have written her to drop the matter, though she probably has made a small cash deposit, and I am mentioning it because thousands of eastern visitors are induced to buy lots when they cannot have any accurate knowledge of values.

High-Pressure Methods

There are hundreds of these new born developments. The more ambitious ones, each with hundreds of thousands of dollars invested in land, paved streets, lights etc., take prospective buyers to them in automobiles and buses. There are hundreds of salesmen on sidewalks and vacant lots offering free transportation for a trip into the country. These salesmen beg people to take the free ride regardless of the least intention to invest.

Dependence is placed on crowds after reaching the development. When a salesman gets an individual cornered in his tent, very often he gets a signature on the dotted line when the befuddled fellow can produce only ten dollars to bind the deal. All too much is ten dollars to the good guy way, as the promoters receive these small sums from people who are persuaded to buy, and are usually a source of considerable revenue.

This particular instance is more promising than many and I suppose even know that some people are making a home in a new town and are satisfied with their venture as soon as the boom begins to slow up as do so many boom towns during adverse conditions. In most cases years and has an air of permanency.

The presence of paved streets, electric lights and all that sort of thing that is necessary to the comfort of life there. What I am arguing is against the reader buying a square foot of land in the coast until he has been here several months and only then provided he can afford to buy his own home. Matter of fact, I should say I have heard several leading realtors here who knew that many of their customers were new to the country, warn them earnestly to pay no attention to salesmen until they had had dependable counsel. I know of many instances where people who had means and came to the coast have bought property and sunk their savings. Pay no attention to representations about property values; keep your money in sight.

Taxing Money and Securities

Every state has a right to its own system of taxation. That is a right it did not surrender to the United States. We would not have it otherwise, and yet matters would be better, in some respects, under a uniform rule. The biggest puzzle is to obtain a fair return from property that is not in sight. In some states the rate on money and securities is so high that probably a majority of their owners do not list them.

California is making a new venture this year in an effort to induce its resident wealthy residents to declare citizenship in the state. After adopting an amendment to the constitution limiting the rate on intangibles to four mills on the dollar, it made the rate on securities two mills and on liquid assets, such as moneys in bank one mill. This cuts under Florida's low rate to attract rich men. I wonder what the farmers and ranchers think about that.

The people in the cities and towns and people from the East to come and stay, and are seemingly ready to offer any sort of inducement, but fundamentally the question is about the limit.

A State of Mind

It appears that legal residence is largely a state of mind. If a man is willing to swear that he regards one state as his home having never given up his citizenship in it, it is pretty hard to prove to a court that he is not retaining it. More and more the greater part of our nation's wealth is in the stocks and bonds of our great industrial enterprises, public utilities, financial institutions, etc. Millions of our people are the real owners of these enterprises.

When a man's holdings are large, it is a vital matter to him whether he is a resident of a state that taxes his property at two mills on the dollar or thirty to forty mills. And so one state can make the rate too securities so absurdly low to induce wealthy men to declare citizenship in it, and another state that tries to give the landowner a square deal by having the same rate for all property fails to get much of it assessed at all. It is a bad mess, and real proposals to cure the situation are utterly impracticable.

Farm Colonies

Now and then one has a right to recall a check or cash in certain projects. Years ago we were given bulletins describing successful work in western state ways doing to establishing soldier colonies. I do not know who wanted to be experimented with, but I do know that I never thought much good to those schemes and did not buy.

I have just received a letter from a friend of mine and asks me to recommend the glowing reports made in several days and the results have continued. That state is planning to establish two colonies of soldiers on land of nearly two thousand acres each. The State Director of Public Welfare describes the colonies as a "terrible mess." More than this loss to the state is the fact that the experiment has brought financial disaster to more than half of the soldiers in the enterprise."

Hedge for Lane

Do not trust hedge along no lane. Many gladiolus corms have branches matched and stuck in the ground and it will grow. Cut a cedar limb as soon as sap starts in the spring to plant and will have a hedge in no time.

M. B. W.

PLEASE MARY this refers to the most common hedge plant, California privet. This is readily propagated by cuttings 8 to 12 inches long, of one year old wood (shoots that grew last season). These are preferably made in the fall, tied in bundles and buried during the winter. Earlier success, however, may be secured by taking them now. In spring the cuttings are set in rows four to six inches apart, with only about two inches projecting above ground.

S. W. F.

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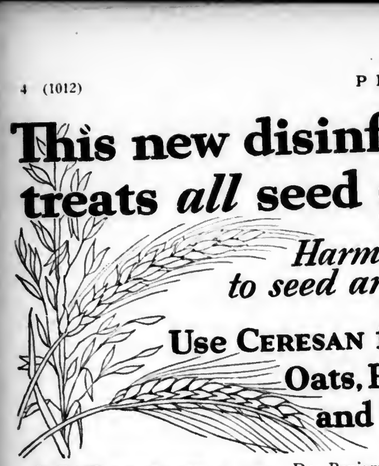


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AT YOUR SERVICE is the attitude of every advertiser in this paper. Write them about your needs. Mention Pennsylvania Farmer.

NESHAMINY GARDENS

By R. P. KESTER

THIS section in eastern Pennsylvania has made out well with sweet corn the last two years, chiefly because of the depredations of the Japanese beetle in many other sweet corn growing localities. Last year the estimates showed that more than a normal acreage was planted in eastern Pennsylvania, New Jersey and Delaware, but in many places little good corn was harvested. The Japanese beetles cause damage by eating off the silk as soon as it appears, thus preventing proper pollination of the forming ear.



• • •

We have had plenty of beetles in this section also, but so far they have not attacked corn to any extent. At Neshaminy Gardens we have had a sufficient quantity of smart weed,—a feed which the beetles prefer to anything else. Just how long we can keep a sufficient supply of the weed remains to be seen. Before the beetles appeared, I referred frequently to smart weed as an unmitigated nuisance, but during the past three years I have learned that it is a blessing in disguise. That is the way with a good many things in life. Much of our running and fretting is because we see and understand only a small part of any given subject.

• • •

Last year we made a mistake in not tying the grape vines to the wire as soon as pruning was done. As soon as growth began the tendrils did not reach for the wood but grew in the opposite direction and clung about the vines. Consequently when we started to tie them up, putting it down as a job for the rainy days to keep them indoors, care must be taken not to tie the twine too tight around the vine else it will strangle them when the vines grow larger.

• • •

Last year I had a heap of correspondence relative to so-called frost proof cabbage and cauliflower plants. The term is a misnomer. What is really meant is hardened plants—plants which have been started under protection, and then gradually made more or less immune to the effects of cold by gradually exposing them to colder air. After several stages of increasing exposure have been secured by leaving the cover off for increasing periods, the plants at last reach a point where they will stand considerable frost without injury. But a lot of disappointment will be avoided if buyers will remember this: You can't produce frost proof cabbage plants by growing them where there is no frost.

• • •

A little plowing has been done in this section as this is written, March 23rd, but only where the soil is favorably located. I have noticed that not every farmer is concerned to have his soil in just the right condition before he begins to plow. To me plowing seems to be one of the most important acts in the whole work of cultivating. Soil plowed when it is either too wet or too dry cannot be put into best condition that season. Theoretically, and as far as possible practically, every particle in the plow slice should move independent of its neighbors as the moldboard turns it over. If the slice turns over in cakes from being too moist or too dry, the particles stay cemented together to a greater or less extent, thus preventing root penetration and plant food movement. It is well to remember that plant rootlets can make no more use of a big air space or a hard clod than they can make of a stone.

• • •

What was once known as general farming has become a thing of the past, at least in the thickly settled districts where land is relatively high in price. A farmer cannot hope to make a profit from selling only surplus hay, corn, oats and a few animals each year. The overhead costs are too great, to say nothing of the greatly increased cost of maintaining a home in these times. Only the farmer who specializes in a money-making product can keep his head above water in these days.

This forced change in farm operation is partly to blame for the present "farm problem" and the attendant unrest. Many farmers are loath to change their system, and many more lack the knowledge for specialized farming. But the market demands have forced the situation, and the sooner those fortunately located and equipped find the line or lines which will bring in the required cash the sooner will farms cease to be deserted. Eastern farmers may just as well accept the fact that expert specialization is the only thing that will bring prosperity, and that must be done intelligently and efficiently.

Friendly Talks

By Edgar L. Vincent

I AM going to whistle, as I work, a hymn to whistle, as I work, a hymn to cheerfulness, and I hope always to keep right on offering strong [illegible] said about his [illegible] pretty slick to [illegible]

[illegible] the other day when I was [illegible] one of my morning [illegible] source came an echo [illegible] Looking around to see where [illegible] from, I found that a long cross-cut saw [illegible] not far away and that it had caught the notes of my song and was reflecting them for many feet around.

I tried many different tones and every time I changed, the note from the steel hanging there changed too. Low notes brought back subdued tones, higher notes those that were shrill, with never a failure to follow the lead of the whistler.

Well, I thought how like that is to other things in life. Speak harshly to the home and quickly back comes the response in words that cut and sting. When we are good and kind, the world we speak bring back smiles and friendly replies. It is so out in the world. If you want to get a regular "peeling down" start out to "peel down" everybody in the neighborhood. And it never fails. We can make ourselves a blight or a perfect nuisance just by our attitude toward men about us.

And it is so with nations. Let one nation growl and back will come the answering growl. Finding fault is just as catching as the measles and a hundred times worse, for while measles may strike us once in a while [illegible]

Not many of us on the farm [illegible] call to preach, but there is a [illegible] ously hand call for men and [illegible] who can and will practice—practice [illegible] little kindly courtesies which warm [illegible] heart and help folks to love us; practice [illegible] doing all the good things we can, [illegible] best of all practice being the best [illegible] we can in every spot and place. [illegible] you heard such a call as that? Listen a minute and you surely will. Then quick to rise up and obey the [illegible] to higher and better living.

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Important Trends in Wheat Production

By GEORGE F. JOHNSON

A STUDY of the available crop statistics for wheat—Federal census figures back to 1840—shows that during the past 80 or more years drastic changes have occurred in the geography of wheat production in Pennsylvania.

Eighty years ago the wheat map of Pennsylvania looked very different from the wheat map of today. Washington and Westmoreland counties, for example, were two of the leading wheat growing areas of the state, ranking third and fourth respectively. Today Washington is outranked by 28 other counties and Westmoreland by 18.

Eighty years ago Lancaster and Franklin counties ranked first and second respectively among all the counties, and still rank in leading positions today but they produced less than half as much wheat then as they do at the present time.

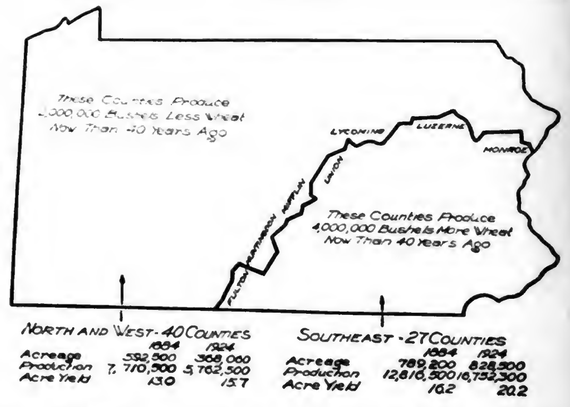
A complete check shows that Allegheny, Armstrong, Beaver, Blair, Bradford, Clinton, Delaware, Erie, Fayette, Greene, Huntingdon, Luzerne, Mifflin, McKean, Philadelphia, Pike, Potter, Sullivan, Susquehanna, Tioga, Venango, Warren, Washington, Wayne, Westmoreland and Wyoming counties each produced on the average more wheat during the period centering around 1884 than they have produced annually during recent years. Likewise these counties produced more wheat 40 years ago than they did 40 years ago, while it is safe to say that the trend downward in wheat production in these northern and western counties started even more than 40 years ago and perhaps before the great expansion of the present wheat belt of the West.

The most significant changes, from the present day standpoint, are those which have taken place during the past four decades. Fortunately, acreage as well as production figures are available by counties from 1880 to the present day (acreage figures not available before 1880), so that pronounced trends are easily revealed.

In order to get a picture of the changes, the writer has taken an average of the 1880 and 1890 Federal census figures for an estimate to be used as of "1884" and an average of the 1923, 1924 and 1925 state estimates for a figure to be used as of "1924." By comparing these two sets of figures, some idea of the trend in the wheat industry is secured.

During the period centering around 1884 Pennsylvania farmers produced [illegible] bushels of wheat on 1,381,700 acres of land, an average of 14.9 bushels per acre, scattering around 1924—just 40 years later—approximately 22,514,800 bushels were produced annually on 1,196,600 acres of land, an average of 18.8 bushels per acre. This increase of four bushels in acre yield has enabled the farmers to increase their total production of wheat approximately 2,000,000 bushels, with an actual decrease of 185,000 acres in amount of land growing the crop.

State-wide averages, however, do not tell the most significant feature of the trend in wheat growing. By taking the statistics for the 40 counties which comprise the northeastern quarter and western half of the state as one district, and the remaining 27 counties as the other district (see accompanying map and table), almost unbelievable changes are revealed. For example, the acreage of wheat in the 40 northeastern and western counties decreased 224,440 acres, almost 40 per cent, during the 40-year period, while the acre yield increased 2.7 bushels, making a net decrease of almost 2,000,000 bushels in the wheat crop. On the other hand, the acreage increased 39,300 and the acre yield jumped four bushels in the 27 southeastern counties during the same period, resulting in an increased total production of almost 4,000,000 bushels. These 27 counties now produce more wheat than the entire state produced 80 years ago.



There are probably many reasons for the decrease in wheat production in the northeastern and western counties. Undoubtedly, more profitable crops can be grown on many of the rocky hillsides than wheat, especially during seasons of unfavorable weather conditions. Abandonment of marginal lands, and the difficulty of using certain modern machinery on stony hillsides and on small irregular fields have probably all played a part. Still other reasons will come to the mind of readers, especially to those who live or have lived in the district under discussion.

Table: Estimated Acreage, Acre Yield and Production of Winter Wheat in Pennsylvania, for Periods Centering around 1884 and 1924

Entire State	Acreage	Acre Yield bushels	Total Production bushels
1884	1,381,700	14.9	20,527,900
1924	1,196,600	18.8	22,514,800
North and West 40 counties			
1884	532,500	13.0	7,710,500
1924	308,060	15.7	5,762,500
Southeast 27 counties			
1884	789,200	16.2	12,810,500
1924	828,200	20.2	16,752,300

A significant fact is that farmers in the northeastern and western counties are producing on the average 2.6 bushels more wheat per acre now than 40 years ago. This has come about probably through improved varieties, better cultural methods and the elimination of much of the poor wheat land. If it were not for this increase in acre yield, these counties would be producing [illegible] bushels less wheat per year than in the [illegible]

The southeastern counties as a group are making "wheat history" in this state. To increase the total wheat production 4,000,000 bushels with an increase of only 39,300 acres in area harvested, is a rare accomplishment, and probably has no equal in the entire history of the Commonwealth. The wide use of improved varieties of wheat and better cultural methods have been undoubtedly important factors in this increased efficiency. Lancaster county, for example, is producing over 500,000 more bushels of wheat now than 40 years ago with an actual reduction of 3,600 in acres harvested. Bucks county farmers have reduced their wheat acreage approximately 5,000 and still they produce 65,000 more bushels of wheat now than four decades ago.

With few exceptions, it is only in the northern section of the so-called wheat belt of Pennsylvania, namely the area comprising Carbon, Columbia, Lehigh, Luzerne, Monroe, Montour, Northampton, Schuylkill, Snyder and Union counties, that any noticeable increase in wheat acreage has taken place. These counties along with Berks, Franklin and York account for the increase in acreage in the southeastern section during the 40-year period.

With the various trends for different areas in mind, it appears that future profits in wheat in Pennsylvania will depend more than ever on the success of the farmer in marketing a high quality product which in turn will depend quite largely on his success in controlling excessive moisture, moth damage, smut and garlic, some of which cause discounts as high as 12 cents per bushel at the terminal elevator.

Crop Standards Attract Farmers

GREATER interest in production and marketing of high quality products has been shown by the farmers of Pennsylvania during the past two years than ever before, George A. Stuart, director of the Bureau of Markets, Pennsylvania Department of Agriculture, said in his biennial report to [illegible] Jordan, Secretary of Agriculture.

Demand for services of marketing specialists has increased two and even three fold in several lines of work conducted by the bureau during recent years, [illegible] to seed. Shipping-point inspections of [illegible] potatoes, for example, increased 57 per [illegible] inspections 33 per cent during [illegible] more than four [illegible] Grading [illegible] eggs [illegible] of [illegible] and four [illegible] included [illegible] the poultry [illegible] [illegible] improvement [illegible] certification and inspection [illegible] high quality [illegible] chicks, hatching eggs and market [illegible] A new line of work, an official record of [illegible] inspection and certification of breeding birds, was established during the past biennium.

Although only six new agricultural cooperative associations were incorporated during the biennium, the total business transacted by farmers' organizations increased 35 per cent over that of 1925-1926, according to the report which also states that the financial condition of the cooperative associations was more sound during the past two years than in the previous biennium.

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OLD HORSES

DURING the past month several farmers have asked us where they could find some work horses. Two of these wanted a carload apiece. Farm horses are getting old and replacements are neither so easy to find nor so cheap as they were a few years ago.

UNCERTAINTIES

NATURALLY those who store eggs for future sale are interested in the coming year's production. They figure that there are fewer hens than last year and that eggs are therefore not likely to be so abundant. But that is not a very safe thing to bet on. Nobody knows exactly how many hens are going to figure in this year's egg production. And, hens being feminine critters, nobody knows much about what they are going to do.

COSTLY CATTLE

DURING the week ending March 22 the average price of 8,917 stocker and feeder cattle taken to the country from the Kansas City stockyards was $12.43 per cwt. This is the highest average cost of such cattle on record in time of peace. It is also dangerously high; when we count the additional cost of transportation to and from market, the cost of capital invested and the risk of loss. Such prices may indicate several things, such as scarcity of cattle and confidence in future markets. Let us hope that they do not indicate also such a loss as followed the high prices of last fall.

WHERE DID THEY GO?

ACCORDING to the Bureau of Agricultural Economics 1,960,000 persons left the farms last year and 1,362,000 left the cities. The difference between these two totals is supposed to represent the net loss of farm population in 1928. This movement from the farms has been going on for many years now, and the total loss of farm population must be several millions. Where did they go? Statistics of the Department of Commerce show that they could not have gone into mills and factories, for the number of such employes is declining instead of increasing. And we all know that a tremendous saving of human labor has been effected by industries in recent years. Those who left the farm must have gone somewhere, but we leave it for the experts to tell us where, in the broad zone between the idle rich and the idle poor.

INTENTIONS TO PLANT

INTENTIONS to plant, as indicated by reports of 50,000 farmers to the U. S. Department of Agriculture, point to an expansion in aggregate acreage of about two per cent, with several shifts between crops. Grain acreages will be about the same as last year, while potato acreage is expected to be reduced 10.6 per cent. If the hay area, as expected, is some 3 per cent more than a year ago plenty of feed for livestock should be available. This, the Department believes, is a "well-balanced acreage of most crops," but qualifies the admission by a warning that "certain farmers, however, may do well to reconsider their present plans." Such advice is always in order, for somebody is certain to make mistakes, but would any body composed of a few men, no matter how well informed, be able to improve on the composite plan of all farmers whose profits or losses depend on their judgment in this matter?

A CHANCE FOR CAPITAL

THERE has been so much talk about corporation farming and so little outcome of it, in this region at least, that we hesitate to say anything more about it. But it does seem that there is now an opportunity for some corporation to do something for agriculture that may not be done by individuals. That is to buy farms, combine them or divide them into economical operating units, improve them in various ways and sell them on some easy-payment plan to men who want to establish a farm home and business. Perhaps the term "easy-payment" may be misunderstood, 'long-term" may be better. Apparently there is right now, in several states, a great opportunity for capital in this field. Thus far the trouble has been to get the capital and the required agricultural ability together, but with the development of the science of farm management this should not be so in the future. Maybe, when the craze for quick riches by way of the stock market has run its inevitable course, capital may see this opportunity and enlist farm management in such development.

MAYBE

THE Senate Committee on Agriculture evidently expected the President to submit some farm relief measure, or the basis for one. He politely reminded the legislators that legislation is their function, not his. Big business men were appealed to, but they with one accord made excuse. Sundry men with ideas, some good and some otherwise, have been heard; but nobody has propounded any definite measure that is not certain of a veto if enacted or certain to fizzle if approved. Maybe the Committee will conclude to provide for a Federal Farm Board and leave in its hands the formation of some definite plan. That scheme has several advantages from the standpoint of legislators who don't know what to do. It provides good salaries for the voluble relievers and reduces their agitation. It relieves the legislators of a job they don't understand and it postpones the day when they can be called to account for voting yea or nay on a highly debatable proposition. Maybe, as a result of its fumbling for farm relief, Congress may decide to create a body which can continue to fumble.

THE GOLDEN FLEECE

THE Wool Institute is an organization for the promotion of the interests of manufacturers, but incidentally it is doing something for growers. For example it has produced the "Golden Fleece Pageant," which has proved so popular and so valuable in New York that it is now to go to other cities. The Pageant is largely but not merely an exhibition of the uses of woolen and worsted materials in garments. It is intended to interest the public in buying such garments and the distributors in selling them. With one organization promoting the use of its meat and another the use of its wool the sheep industry should not go very far on the downward path.

CHEAPER BLOOD

PURE-BRED hogs were a little cheaper last year than in 1927, according to the annual government report issued last week. This report is based on figures supplied by several thousand breeders. Of the five leading swine breeds represented only one, the Hampshire, averaged higher than the previous year, the others being from about the same to "somewhat" or "slightly" lower. This is to be expected, since the price of pure-breds reflects the condition of the open live-stock market, and is nothing to worry about. The worst thing that has happened to the pure-bred swine business was when pure-bred prices reflected nothing but roseate dreams which later dissolved into financial disaster. Both breeder and buyer flourish when animals are worth what they bring and bring what they're worth.

FUTURE TALK

AN inducement for farmers to attend the Chicago World's Fair centennial celebration, scheduled to take place in 1933, is the statement that "congresses will be held at suitable times. At these all the perplexing and vital problems of agriculture will be discussed and theoretical and practical solutions offered." Judging from the net results of abundant discussions in recent years we venture to suggest that the coming celebration will offer other things of more interest to farmers than the opportunity for leaders, experts and scientist to talk.

NOT ENOUGH

THE SPECTER of overproduction is not known in one branch of the poultry business, that of supplying eggs for hatching purposes. The Pennsylvania Bureau of Markets reports that hatcherymen have trouble to meet the demand for high-quality chicks because of the small supply of hatching eggs. This does not mean "just eggs", but eggs of proud lineage, within which repose the germ of greatness; eggs the ancestors of which have made hen history so that offspring should elevate the poultry race; eggs of youth and promise—for age and experience are no asset to an egg. Chicks from such eggs are requested by the crafty poultryman, who has not only learned when to count his chickens but what chickens are worth counting at all.

OSCAR E. BRADFUTE

ONE by one, at the stern behest of Death we must part with our old and true friends. Last week Oscar Bradfute, a friend and patron for more than forty years, answered the final call. An account of his activities in the cause and in the business of agriculture appears elsewhere in this issue. Of his personal character his neighbors and his associates gave ample testimony last week, while they filled a large auditorium to pay tribute to his memory. His public service was marked by both ability and integrity. He was a faithful to every public trust. He was a thinker, a forceful speaker, a hard fighter for a square one for any cause he espoused, and we have differed some times and agreed many times, but our personal relations were no different at any time, for he was big enough to grant to others that which he demanded for himself—the right of every man to do his own thinking. His life is a witness to the fact that the soil produces men of force and usefulness; and it will continue to produce them.

FORTY Eastern Shore farmers in lower Accomac county, Va., are seeding this week for the first commercial crop of flax. The total acreage for this crop will be about 40 acres. Unusual interest and enthusiasm has resulted from a proposition made by a Philadelphia textile mill to the farmers in this section that they grow flax for the production of fiber. According to Mr. T. P. Haughey, a representative of the mill, the Eastern Shore is ideal for the production of flax. At one time flax was grown in nearly all states of the Atlantic Seaboard, and flax seed can be found in the garrets of many farm homes today. It is the belief of Mr. Haughey that if the present flax producing machinery been installed before the cotton gin, flax would have been the money crop of the South rather than cotton.

Flax requires only between 75 to 90 days from time of planting to harvesting, and under the Eastern Shore climatic conditions can be planted in months except July, November and December, it is claimed that this crop will compete favorably with the Eastern production. The work of harvesting flax and separating the fiber, which is the valuable part of the plant and fiber, has become very much simplified. Machinery to do the work at a cost of about 50 per cent of the flax by hand. Machinery costing from $3,500 to $5,000 will replace 30 to 35 men. Machinery for the harvesting,

Kentucky Bluegrass

Fertilization and Management of Highly Productive Pastures

By J. W. WHITE

MANY letters have come to me since the publication of the first of a series of articles on Kentucky bluegrass in the January 5 issue of Pennsylvania Farmer. These inquiries emphasize the interest in pasture development and the lack of definite information on the subject.

Most of the experimental studies have dealt largely with the rejuvenation of old pastures of extensive acreage in an attempt to stimulate the growth of existing grasses often on land unfit for the growth of economic pasture vegetation. The results of these studies, made on the wrong side of the fence, have led experiment station workers to feel that pasture fertilization beyond the use of lime and superphosphate is unprofitable. Prior to the present studies of the writer, little information was available concerning the possible value of highly developed Kentucky bluegrass pastures. Most of the letters received during the last month have dealt with questions concerning pasture management, including fertilization, grazing methods, weed control, grass mixtures and rate and cost of seeding.

This article therefore deals with the answers to the many questions asked concerning fertilization and management of bluegrass pastures. The third article will deal with feeding value of bluegrass pastures compared to a grain rotation, also the carrying capacity and economy of pasture feeding.

In the former article on Kentucky bluegrass the writer discussed the growth of bluegrass in relation to fertilizer treatment. It was shown that the development of highly productive pastures in our northeastern states depends on the use of lime and liberal applications of commercial fertilizers. Kentucky bluegrass, the most nutritious of all pasture grasses, is a high protein feed rich also in minerals essential for milk production and other animal products.

All the nitrogen, phosphorus, potash and lime contained in bluegrass are, of course, obtained from the soil and these materials must be frequently applied to the land in the form of commercial fertilizers and some form of lime. Continuous cropping without the return of sufficient plant food, so often practiced by farmers, leads quickly to soil exhaustion. Not only does the soil become infertile, but the reduced yields of pasture grasses make possible the invasion of weeds and the introduction of less desirable grasses of low feeding value.

To bring back a worn-out pasture to a high state of production is much more expensive than maintaining fertile grass land by methods suggested—"An ounce of prevention is worth a pound of cure."

The Road to Pasture Depletion

A bluegrass pasture producing 5.6 tons per acre of green grass will remove each year from the soil 55 pounds of nitrogen, 16 pounds of phosphoric acid and 60 pounds of potash. To return these materials in commercial fertilizers would require the application of 270 pounds of ammonium sulphate or 357 pounds nitrate of soda, 100 pounds superphosphate and 120 pounds of muriate of potash. The cause of pasture depletion where continuous cropping is practiced is shown from these figures.

The yield of 5.6 tons of green bluegrass per acre represents the average yields per acre on three soils obtained by the use of a complete fertilizer containing 48 pounds nitrogen, 65 pounds phosphoric acid and 50 pounds of potash. The fertilizer was applied every other year. By this system of fertilizing we are actually removing 129 per cent more nitrogen, 140 per cent more potash and 50 per cent of the phosphoric acid applied. It is seen therefore that even liberal applications of fertilizers will not replace the plant food removed by cropping except in case of phosphoric acid. The amount of fertilizers used on this field, however, is sufficient to maintain for many years a highly productive pasture..

Under permanent sod nitrogen is added to the soil in considerable quantities. This is brought about by bacteria called azotobacter which fix nitrogen from the air just as legume bacteria fix nitrogen by formation of nodules on clover roots. These azotobacter work independent of legumes and depend on grass roots as their source of food or energy. This nitrogen is converted into



Master Farmer E. S. Ferry was a leader in the group of farmers who introduced alfalfa into Bedford county, Pa. This picture taken on his farm shows how he keeps his soil in condition to grow good crops of legumes

organic form and changed very slowly to nitrates. There are present in the soil other forms of bacteria which use nitrates as their source of food. So you see there is under sod conditions actual sharp competition between the bacteria and pasture root grasses for the nitrates present.

Even though nitrogen may accumulate under bluegrass sod there is always a deficiency of soluble nitrates for the reason just stated. The large increase in yields of bluegrass when soluble nitrogen is supplied is explained by the facts given above. About half of the nitrogen removed by bluegrass cropping should be supplied by that already present in the soil. An annual application of 25 pounds per acre of nitrogen as nitrate of soda or sulphate of ammonia is sufficient to furnish that necessary for the maintenance of a highly productive pasture provided lime, phosphoric acid and potash are also applied.

Most of our eastern soils are very deficient in phosphorus. It is therefore necessary to apply considerably more than that removed by crops. A very short time after being applied to the soil the soluble phosphorus in superphosphate becomes fixed in the soil in an insoluble form though still available to plants so long as the roots come in contact with it. An application of 400 pounds of superphosphate per acre every other year is recommended for the development of highly productive bluegrass pastures. Such an application will leave about 32 pounds of phosphoric acid per acre in excess of that removed by cropping.

In regard to potash it should be remembered that bluegrass removes large amounts from the soil. Our soils are, however, rich in potash though only a small proportion becomes available each year. The soil should furnish about 60 per cent of the potash re-



Kentucky bluegrass pasture on Volusia soil Bradford county experiment fields. North tier farmers studying results of pasture treatments.



The Lawn Is an Important Part of the Home Picture

Essentials in Growing the Best Turf Grasses

By L. L. Rummell

THE man who would grow a perfect lawn must give it as much care as the farmer who "makes" the 400-Bushel Potato I like down in growing such a bumper crop. The lawn must have as good seed and seed bed, be heavily fertilized and otherwise cared for, because the lawn area does grow an extremely heavy crop in a year. Were it all weighed up at each cutting it would surprise us how it compares with a heavy hay crop.

Therefore we must handle this crop on a merits under intensive culture. We must give consideration to soil, to kind of seed, to proper feeding of the soil through fertilizers, to watering and similar practices that enter such an intensive program.

Lawns naturally divide themselves into two classes, and we will thus consider them, namely, those to be started this spring and those which are already made and need rejuvenation. Let us look first to the making of a new lawn and the essentials in its foundation. Three lawns were started on our street in the last two years that this spring tell a story for themselves. In each case a cellar was dug out and the stiff old clay subsoil was scattered over the yard. Contractors always use the top layer.

Lawn No. 1 was made on this poor subsoil. It is always thin and grasses there are struggling. It never will make a good turf under present management. Lawn No. 2 is close by and on a similar soil. The owner though put on some well-rotted manure and about an inch of rich loam soil over the top and then seeded it. It got some fertilizer too. Today it looks like the best turf on our street. It was an ideal way to start a lawn. Lawn No. 3 has this old sticky compact clay on it too, and then it was sodded with an old pasture sod. It makes a good-looking job over night, a sod in place like magic, but it has no foundation and never will be satisfactory. I have been wrestling with that kind of a job the last four years.

Yes, my suggestion would be, from my study of all types of lawns, to seed rather than sod. Level off the lawn, break up lumps, put on a good application of rotted manure, add half an inch to one inch of good fine loam soil; add a complete fertilizer, as 3-8-4 or 4-12-2, at the rate of 400 to 600 pounds per acre (10 to 15 pounds per 1,000 square feet), and several days later seed it.

Now as to the kind of seed. This varies through all degrees of quality. The New York Experiment Station tested a large number of lawn mixtures and found almost a third had timothy predominating and almost a fourth were made up largely of rye grass. Only about 11 per cent had Kentucky bluegrass comprising 50 per cent or more of the mixture. The tests made in our own state laboratory will show a similar condition here. They vary also in percentage of germination.

Kentucky bluegrass should predominate in our grass mixtures. That is what we want in a lawn. Redtop or timothy or rye grass will come on quickly, but they are all coarse and do not last. Bluegrass varies from 18 to 28 pounds per bushel. The highest quality seed should always be bought. We have always bought the seeds separately and mixed them, as three pounds of Kentucky bluegrass, one pound of redtop and one pound of white clover. Use this at the rate of two and one-half to three pounds per 1,000 square feet. Tests at the Ohio Experiment Station indicate this is as good as any heavier seeding. If you do buy a mixture insist on high quality.

For shady places shady mixtures are sold. Rough stalked meadow grass gives a uniform turf. Red fescue is also used, but tends to bunch.

For spring seeding the mixture can be used when the ground is fit to work, usually in April. A good time to seed is late August or September, because then there is not the competition with weeds.

Next let us look to the lawn already established that needs help. If it has bare spots it is a good plan to rake these over, use some rich loam, some fertilizer and reseed. Fertilizer will tend to thicken it up and give good grasses a chance so that they choke out the weeds. For these sodded lawns laid over poor clay, an application of coarse sand will help. It gradually works down and tends to loosen the clay. Golf courses follow this practice.

Each spring I use a complete fertilizer of high analysis. A 3-12-4 was the best I could get at my dealer last spring. I would prefer one of higher analysis. I use this at a rate of 500 pounds per acre, spreading it thin before growth starts in the spring. Then too I put on sulphate of ammonia at this time, and about two other applications later in the summer. Sprinkle this on thin, just as you seed grass, about five pounds per 1,000 square feet as a maximum. Half that quantity in two doses a month apart is better. Put it on when the grass is dry, the middle of the afternoon, or better still just ahead of a rain, and it then will not burn the grass.

This sulphate of ammonia used year after year increases acidity of the soil, hastens growth of the desirable grasses, and gradually crowds out dandelions, chick weed, crab grass and similar weeds. Lime tends to improve conditions favoring such weed growth. It is safe to say more lawns are damaged than are improved by lime. Fertilizers are a far better investment than fresh strawy manure or any form of lime.

There are other lawn questions in addition to these. One is rolling. It should be done each spring when the ground is dry enough and yet will pack the soil firm. The lawn clippings are often taken off at each cutting. If the grass is cut often, it is better to leave on the clippings to feed the soil for the future crops. If grass is not allowed to get over three inches long, these clippings are not unsightly, and are really beneficial as a mulch and fertilizer. Tests at the Ohio Station on lawn management bear out that statement.

Crab grass is the bane of a good lawn. It is an annual and hence starts from seed each spring, although somewhat late. If good grasses are started early and well fertilized, they may crowd out much of the crab grass before it gets started.



A Clean and Smooth Lawn Enhances the Appearance of Any Farm House

A Bug This Week--Ants

LAST spring ants caused me no little worry in the center of my front lawn. They were the great big black fellows that made runways the size of a pencil. In a few days they had uprooted an area four feet in diameter and actually lifted the sod in its place. As one tramped the sod he could press it down an inch or two in place, just like a large flat sponge. The yellow clay subsoil was being carried up through the sod, making in its entirety a very unsightly spot.

A few baits and poisons were sprinkled about for them. My library did not contain a remedy that was a sure cure. Tramping out their nests or turning a hose on them was of no avail. Finally I decided carbon bisulphide ought to turn the trick. I had often used it on the farm for grain weevil, and I figured it would kill ants too. It sure did. And the grass too. I poured it on and covered with bags to hold in the fumes while it penetrated the burrows. It was the end of the ants. The grass was an eyesore for about two weeks, but the roots were not killed and it came on again.

Since then I have found that an effective control measure is to lay back the sod, sprinkle calcium cyanide over the surface and lay the sod back in place. In the tropics ants are a great nuisance. A poison is made up as follows: First make a solution by boiling one pound of sugar, 1.4 grams of crystal tartaric acid and one-half pint of water. Put 1.4 grams sodium arsenite in one-half ounce of boiling water. Mix the two solutions, add some honey, and then soak up bits of sponge in it and leave at the ant hills. Entomologists say this kills these big voracious ants in the tropics. I never used it. I still believe my carbon bisulphide treatment is effective if I poured it down the runways rather than sprinkled it over all the colony, and thus it would not injure the grass.

Ants are always seen about peony flower buds getting the sweet secretion. They are seen with aphids too on tender plants to get the sweet secretions or honey-dew. They do no direct harm themselves except as they care for the aphids. Spraying with nicotine sulphate or a phrethrum extract will kill the aphids and the ants then disappear. L. L. R.

Care of Peonies

I should like advice concerning some peonies which we have. Every autumn we put a good covering of strawy manure on the roots and try to take care of them. The plants produce many blooms but each year they become smaller. Should the roots be divided and when and how should this be done?
Miss Lena Bertolet.

PEONIES are somewhat exacting as to the time of year they can be handled. I heard one peony specialist say that the only correct time to move peonies was September 15th. This is too exact of course, but it represents the optimum time for this section of the country. I would therefore suggest that you do not touch these peonies this spring, but wait until some time in September, then take them up and divide them with about five eyes to each division, and replant, being careful that you do not plant these eyes too deep. They should merely be put beneath the surface, not more than an inch or two. It is better to set them two inches deep, because the first year they may be heaved out a trifle. If you should notice the eyes at the surface in the spring, put some dirt over them for protection.

In making the division and replanting, be sure to make the holes large and use plenty of rich loam soil and some fertilizer. If your peonies have been in the same location for several years they likely have become a mass of small roots with numerous eyes and you cannot expect satisfactory bloom under such circumstances any more than you might expect perfect ears of corn if you had twelve kernels in a hill.

Now for this spring the only thing you can do is to feed these plants very liberally. Peonies are rather sensitive to applications of manure, and sometimes if this fertilizer is too strong it causes rotting and loss of part or all of the plant. Peonies really require no winter covering after their first year, and then only to prevent heaving by alternate freezing and thawing. The best fertilizer is a liberal application of bonemeal. Use it quite liberally in a ring around the plant, working it into the soil. You are safe in using a good-

(Continued on page 29.)

TIGHT BINDING TEXT CUT OFF

The Farm Home

Aunt Jane's Visit

By ALICE MARGARET ASHTON

AUNT JANE was coming for a visit. She had strict ideas about the training of children.

"Oh dear," sighed little Jamie's mother, picking up her small son and squeezing him rapturously, "we'll just have to mend our ways, young man, if we keep in the graces of Aunt Jane!"

"Mother will have to be as strict as strict with her little boy! And you must just jump when mother speaks—do you understand?"

Jamie understood that he and mother were having a nice loving time. So he twined his sturdy little arms and legs about her and laughed aloud. "Jamie!" he agreed. "Jamie jump!"

"I don't suppose I have been very systematic in my training," mother reasoned rather worriedly. "But we've had such a good time and we've managed pretty well. Maybe we need Aunt Jane's watchful eye!"

Aunt Jane arrived late one afternoon and promptly and properly fell in love with little Jamie.

When bedtime arrived Jamie was having the time of his young life. "Put away your toys, Jamie, it's bedtime," said his mother. Jamie placed three blocks and a woolly sheep in the cupboard and closed the door. Usually mother helped but tonight she just sat in her chair and looked severe and rather unhappy. "Put them all away," she ordered.

"I'm tired," said Jamie.

Jamie Finds a Champion

"Jamie, do as I tell you!" Jamie's lips quivered but something about mother frightened him and he began hopelessly picking up the remainder of the blocks.

"Here, old man, you need help," daddy said suddenly flinging the rest of the playthings into the cupboard just as the child burst into a tempest of sobs. "Come, don't you cry. We'll play bear!"

Jamie's sobs soon turned to shrieks of delight at the ferocious growlings of the bear under the piano.

"Bedtime," mother said again and bore him protestingly away.

Mother did hug and kiss him quite tenderly before she tucked him into bed. But after a brief admonition to go to sleep she turned on the lights and walked out closing the door behind her.

Jamie didn't like the dark. He could distinctly hear the growlings of the bear under the piano—or was it under his bed? "Oh, oh," he sobbed aloud. "I don't like it here. I want mother. I want a light. I want a drink."

Mother sat, determined and miserable, on the edge of her chair. Daddy frowned behind his paper. Suddenly Aunt Jane flung down her knitting and marched toward the closed door. "No child is going to cry himself asleep in the dark when I'm around," she announced.

"You children just leave me alone," she ordered when she came back, a blanket and the sobbing baby in her arms.

In a moment she was seated before the fire crooning to the baby snugly wrapped in the warm blanket. "There, there, Aunt Jane's little boy is going to be all right because she loves him best of anybody. And we're going to sit right here until his little toes are all warm and his little eyes are all sleepy—"

"Truly, Aunt Jane," said mother coming back from tucking the sleeping baby in his bed, "I never let him cry himself asleep in the dark! I'm not very strict about his training, truly!"

"Very likely not," sniffed Aunt Jane.

"It was only this once—my arms ached. I have such strict ideas about children and I—"

"So, to 'save your own face' you took it out on Jamie?" suggested Aunt Jane severely.

Then, at mother's look, she laughed. "Well, my dear, it isn't the first time parents have done just that. But let me tell you, it isn't fair to the children nor to the aunts, either!

"I do not want my grand-nephew to dread my visits as times when he is expected to do unpleasant things he needn't do at other times and doesn't half understand.

"I'd much prefer his remembering my visits as times when he did delightful things he couldn't do any other time.

"Bring up your child as well as you can. And don't pay too much attention to what some one else thinks about it."



Living-room in the home of F. P. Willits, Delaware county, Pennsylvania. The windows afford a splendid view of the rolling hills of southeastern Pennsylvania as Mr. and Mrs. Willits built this comparatively new house on one of the highest points of land in the county. The walls of this room and of Mr. Willits' private office adjoining it have the autographed pictures of numerous nationally known figures who are his personal friends.

If You Like Roses

PLANTING. During the next few weeks many rose bushes will be planted. Some came to us this week. Knowing the ground was too wet and too cold to put them in their permanent bed, we went to the vegetable garden and "heeled them in" where they can safely remain until the ground is fit for the real planting.

"Heeling in" means to dig a hole in the ground and place them first as they are tied in the bundle with only the paper wrappings removed in the hole so the bushes are buried about 18 inches in depth. Then pack the soil closely around them and leave nature to plant in their own bed. If more than a dozen have been purchased, it is better to untie them, cut "and place in a deep trench, partly on their sides and keep them well covered with soil for 15 inches of their length.

Pruning. When rose bushes are purchased it should be remembered that they are always shipped already pruned and need no further pruning this spring. They should be placed 12 to 18 to 20 inches apart when planted.

Fertilizing. Although there are various good fertilizers to use for rose bushes an old florist who has conducted a large rose establishment for years, recently told me that the cheapest fertilizer for roses was a good sized grass sod square for each bush. The sod is placed with roots up in a hole that has been dug a little deeper than is usually needed for a bush. Then the bush is planted on top of the roots of the sod. The latter feeds the bush for one season's growth, all that it needs, if good fertile sod has been well spaded a foot deep, in a place where it is well drained and where the sun shines most of the day. Though rose bushes need to be well watered after planting, they will surely never do well if planted in a wet location.

Disease and insect remedies. We have found that if mildew, a grayish white coloring of the foliage, attacks our roses a mixture of one-half pound of carbonate of soda and one-half lye or ordinary laundry soap dissolved in seven gallons of water makes a spray to control the disease. It is better to use it as soon as the shoots are well leafed out and prevent its appearance than to wait until it has appeared.

If the rose leaves turn yellow after black spots have appeared on them, they have been struck by the fungus disease. This can be avoided by using the nicotine solution, found in all seed and drug stores, called "Black Leaf 40." The latter will also destroy the green fly that is another pest. It is used often enough according to directions on the package.

When insects or flowers are [illegible] always know that "Trapp", an insect that eats into the bud, is present. We have found that one-half teaspoon of Paris green, one-quarter pound of sugar and six quarts of water used as a spray, is the best remedy for this pest.

E. M. I. Blanchet

April

April is a fickle maiden,
Skipping, tripping, blossom laden;
Weeping, laughing, doubting, smiling,
Flirting, pouting, and beguiling.
Constancy she does not claim;
But we love her just the same.

Marguerite Steele McCreary.

A Page from Life

By HEPSY NEFF

IT has been said that [illegible] half of the world does not know how the other half lives, but that is no longer true. By reading the newspapers, the radio, the telephone and [illegible] we have a fair understanding of what [illegible] in a general way and in our own land. [illegible] information is more valuable than [illegible] of those who are working for human [illegible] cities and towns. We in our quiet [illegible] are a part of world problems, a part [illegible] as well as cures. More and more [illegible] that the public [illegible] means all [illegible] the responsibility [illegible] poverty, [illegible] which prevail [illegible] work. We must [illegible] the curing of [illegible] conditions [illegible] and to which [illegible] contributed. To bring a page from the life [illegible] experienced worker to supplement our own knowledge to emphasize the need of more study [illegible] cooperation with all the agencies seeking to [illegible] human welfare is the object of this [illegible] lengthy extract from a recent article in Welfare Magazine.

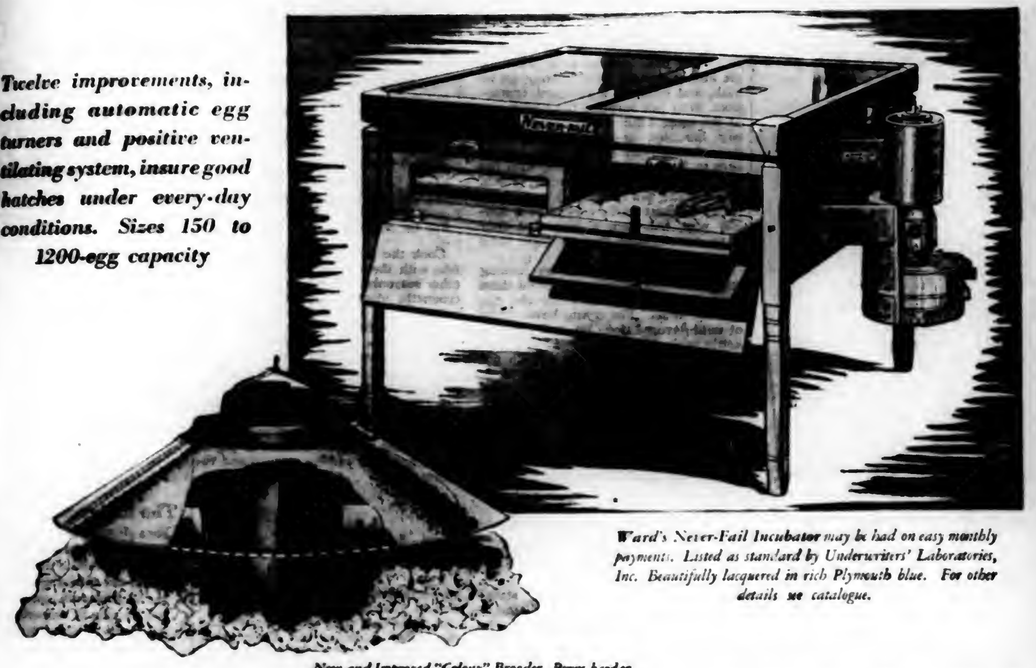
"I have been a [illegible] nearly for a fairly large [illegible] I have fed a group [illegible] fairly hearty meals and fed them adequately and satisfactorily, too, on an allowance of [illegible] that less than fifty cents a day, agree, and for [illegible] end. That sort of thing will not do [illegible]. I was also responsible for their clothing and [illegible] and for the cleanliness of their surroundings. Everything must be spotlessly sanitary and the [illegible] bill must be kept within very reasonable limits. [illegible] does not command the United States Army [illegible] and I have commanded several in such a manner as to get by the inspectors without becoming a housekeeper of parts.

I think I am safe in saying that a clear majority of our women [illegible] have decided that housekeeping is a [illegible] routine. So often [illegible] the [illegible] conditions, and spend [illegible] and trying to stifle the [illegible] urge for creative activity by the [illegible] of a whirlwind of [illegible] bridge parties, movies and other [illegible] entertainment. [illegible] woman who attacks her housekeeping problems in the same [illegible] and with the same general methods which her successful husband brings to [illegible] problems, she will find there is something [illegible] housekeeping than dull and distasteful physical labor. The reason why [illegible] work is interesting is because we are interested in it and spend thought and effort in developing its best possibilities. [illegible] It strikes me that housekeeping offers, to an active heart and brain, about as large a field of possibilities for development as any occupation with which I am familiar.

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MONTGOMERY WARD & CO

TIGHT BINDING TEXT CUT OFF

Here's why POST Toasties is called the "Wake up Food"



-its crisp delicious flakes bring quick new energy to your body

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How to Make Good Croquettes

TO paraphrase an old epigram, left-overs occur in spite of the best regulated housekeeping. When they consist of meat and perhaps potatoes, the family expects them to reappear as hash, and puts on a resigned expression. Why not surprise them with one of the most select foods appearing on any luncheon menu,—one which is quite hearty enough for dinner,—and sure to be as popular as it is with the ladies' clubs? Have croquettes, which, if you insist, are really only one of the forms of meat hash, cooked in a special way, but such a way that they have an elegance that is quite their own.

Some important points on making croquettes successfully are: Mold them long enough in advance for the egg coating to set. For frying have plenty of mild-flavored deep fat, and a drying kettle with a basket. Heat the fat to just the right temperature and do not let it smoke. Fry only two or three croquettes at a time, and watch them constantly. As soon as they are brown, remove them from the fat, and drain on absorbent paper so they will not be greasy. The recipe below, from the Bureau of Home Economics, is for beef croquettes, made from leftover roast or steak, but any preferred cooked meat or chicken may be used.

Beef Croquettes

2 cups ground lean cooked beef,
1 cup mashed potato
3 tablespoons gravy or stock
1 tablespoon onion juice
1 tablespoon chopped parsley,
1 tablespoon butter
Tabasco sauce, as desired.
Salt
Pepper
Dry grated salted bread crumbs,
1 egg beaten up with one tablespoon water.
Fat for deep frying.

Cook the parsley in the butter, and mix with the meat, potato, gravy and other seasonings thoroughly. Mold into croquette shapes. Dip into the egg mixture, roll in the bread crumbs and let stand an hour or longer to dry the coating. Heat the fat in a deep vessel to 350 degrees F., or until a cube of bread browns in 40 seconds. Place two or three croquettes at a time in a frying basket and lower slowly into the hot fat for two minutes or until they are a golden brown. Remove the croquettes and drain on a sheet of paper. Serve hot with parsley garnish and tomato sauce.

G. S. S.

The Best Soup Ever

"MY idea of high living," stated a man accustomed to dining at the best hotels and clubs, "is to be served twice a week a dinner comprised entirely of soup thick with vegetables, and nothing else!"

That does sound good, doesn't it? Most of us enjoy a one-dish soup meal. Historians tell us that even the early people drank the broth from meat, which probably was the beginning of our appreciation of soup.

Broth, consomme or houllion, have an amazing value in preceding the meal, for though of low nutritive content in themselves, they tend to check over eating. They are also gently stimulating to digestion. To be sure, a thick soup is possessed of considerable nutritive value and may justly comprise the meal.

Ice-Box Review

The best soup I ever ate was made from left overs, a sort of ice-box review of supreme flavor. Flavor is the important item in soup making and should be easy of attainment because we make soups not from bland cereals, but from flavorful vegetables and meats. However, the error if any, would be in diluting the stock too much.

"You can expect just about so much from one chicken," one of our neighbors often said. The same is true of a soupbone, or oysters or clams. A good soup must have flavor, and an overdose of water drowns it.

Fortunately, a fad prevailing just now promotes good soups. That is, saving "pot liquor" from our milder flavored vegetables and adding this liquid to soups. We keep a jar conveniently near serving operations, into which we pour the juices from spinach, celery, onions, cabbage, string beans, and even a little potato water now and then. This liquor, added to stock, makes a delicious soup and one rich in vitamin content.

A little boy who visited us scorned the boiled onions at the dinner table, but next day ate the kettle dry of soup made from the liquor off those very onions combined with left over beef steak, spaghetti and a little spinach juice.

A Two-Day Operation

Soup, from stock, to be at its best, is a two-day operation. Then the cook can easily remove the cake of fat from the stock after it has cooled over night. Besides, she can use foresight enough to plan for the two previous dinners, vegetables that are savory in soup and then save out a small portion of each kind, and perhaps the pot liquor.

A vegetable salad one day and soup the next, works out very economically from several angles since the vegetables for both can be gathered at one time; diced at one operation and the better portions used in salad while the equally nutritious but less attractive pieces may be relegated to the soup kettle.

You will be complimented on the excellence of your soup, if you

1. Select tough or "cheap" cuts and have the bone sawed.
2. Brown a small portion of the meat in a little fat.
3. Soak the meat and bones in cold water, slightly salted, at least a half hour before cooking.
4. Simmer, not boil, the meat for six hours.
5. Remove bones and let stock stand until cold, if possible.
6. Remove fat from top.
7. Add diced vegetables only long enough before serving to cook them tender.
8. Add pot liquor when possible.
9. Remember to flavor with one or more of the following: bay leaf, a few cloves, onion or a trace of garlic, a few peppercorns, a small amount of Worcestershire sauce, a sprig of parsley, or a cup of tomatoes.

Vegetable Soup

To each two pounds of shank, plate, neck, or underpart of round, allow two quarts of water. Rinse off the meat, start a small portion browning in a little fat in the skillet and add the rest to the cold, salted water. Let it stand twenty minutes or longer. Add the browned meat and simmer for six hours. One cup of tomato juice may be added early in the cooking as the acid softens the fibre in the meat.

Dice or put through food chopper two onions, four carrots, a quarter of a small cabbage, two potatoes, a few pieces of turnip, if desired, and a half bunch of celery. Add to the stock and boil about thirty minutes. Two or more tablespoons of corn, some left-over cooked peas or string beans may be added at the last.

Barley Soup with Stock

Wash and add one-third cup of pearl barley to two quarts of soup stock the last hour of its cooking. Add one cup of tomatoes, and later add a diced onion and a carrot, diced.

This is a delicious dish if the vermicelli is finely broken and added gradually to the boiling soup about ten minutes before serving. The soup must be stirred frequently. A half cup of vermicelli may be added to about two quarts of any thickened vegetable soup, but a stock from shanks of lamb and breast of veal, celery, parsley and onion, is particularly tasty.

Two tablespoons of Parmesan cheese or another finely grated cheese may be added at serving time.

Chicken Soup

To two quarts of chicken stock add one or more cups of finely cut celery, one diced potato and also, twelve minutes before serving, add one cup of broken egg noodles. Celery is especially well adapted to develop the delicate flavor of chicken stock. The stronger flavored vegetables are not desirable.

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Lye Hominy

Would you please publish in your valuable paper how to make hominy from field corn and store lye? Also how to can it after it is made. Also how to treat a window glass with epsom salts so you cannot see through.

Reader

USE the sweet flat corn. Most early varieties of sweet corn, of which "Stowell's Evergreen" is an example, have the flat kernels. To obtain best results in preparing lye hominy, dissolve two ounces of concentrated lye in one gallon of boiling water, drop the corn into this solution and boil rapidly for twenty-five to thirty minutes. Drain and drop into cold water. If possible, allow cold water to run over it for three or four hours to remove all traces of the lye. After this, place in a barrel churn and turn the churn for five to ten minutes to remove the hulls and black eyes. After removing the hulls, place the corn in an enameled kettle, cover with clear boiling water, and cook until tender. Wash again and remove any hulls or eyes which you failed to take off in the churn. Fill the cans to within one-half inch of the top and cover with brine (two and one-half ounces of salt to one gallon of water). Process in a steam canner for fifty minutes under a fifteen-pound steam pressure. It is very important that all trace of the lye be removed before packing the hominy into the cans.—From "Successful Canning and Preserving" by Ola Powell.

Note: Many folks prefer to make hominy with baking soda. In this method use white corn and to each quart of corn allow four teaspoonfuls of soda. Add enough water to cover the corn and boil slowly until the skins slip off. Wash thoroughly using several clear waters. Return to the stove and cook tender. Season and can as in previous recipe.

G. S. S.





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That's what Cousin Harry wanted to know on his first visit to the Marsh's farm about five years ago. Too early to go to bed. Too tired to do any work. He read all the books the first week. Finished the furniture and seed catalogs the next week. Left the week after. The evenings were lonesomer than ever after Harry left. The Marsh's remembered what he said. "The gay shows . . . music . . . entertainment . . . something interesting every evening of the week in the city!"

Cousin Harry came out again last week. Expected to be bored. *But that evening in the Marsh's living-room he heard the most magnificent concert he had ever heard in his life!* Six hundred miles away he heard the orchestra as clearly as if he were sitting in the front row . . . *the Marsh's had bought a radio.*

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Happy Sense of Rightness

By GERTRUDE S. STEWART

MRS. GRIEBEL, clothing specialist in New Jersey Extension Service, spoke to the women of Burlington county, March 21, as to "what's what with clothing." But her talk was very broad, and we took home with us high ideals for dressing, not only for this season but for all time.

She urged women to study their own "personality" and dress accordingly. Personality, that subtle something that makes you "you" and makes me "me," must not be forgotten when we choose our hats and figured prints. The young miss with dashing vivacity should not be clad in garments like the conservative quiet woman of sixty-seven.

Every woman should be more important than the clothes she wears. In planning your wardrobe, think not only of what color is best for you, but think also of what is best for your type in design. Mrs. Griebel startled us by saying that seventy per cent of American women are uninteresting because of the clothing worn.

Have you ever felt how very much proper clothing puts you at your ease? How high you hold your head, how lightly you step, how heartily you laugh, when you know your personal appearance is just right. People are charming when they act natural. Who can feel natural when worried over soiled gloves, a hole in the stocking, run-over heels on the shoes, sagging or twisted stockings, a slip that shows or too many stray hairs under the hat.

If you are uneasy about any detail in the grooming, you are not yourself, and certainly cannot act natural. Mrs. Chase, editor of Vogue, says it is not a God-given privilege to dress well. It does require some money, but it requires also good taste and enough time spent on one's self to take care of the little things.

Spring Fashion Trends

This is indeed a colorful season, said Mrs. Griebel, yet white was never better. All values of white are good, so find which is best suited to you, and have one white outfit this summer. Black too is very good and is livened with ornaments of coral or jade. Yellow is the most important spring color.

All beiges are excellent. They are influenced by yellow as is also the best green. Rosand is an interesting new color. As you have guessed it is a lovely rosy sand shade. Nasturtium colors are all good.

This is a season of sharp color contrasts, there being pipings of brightest colors. Tri-color prints are highly favored. They have pipings and cordings using the bright colors of the print.

Mrs. Griebel urges all women to be guarded in buying prints and select something lovely as well as fashionable. Choose according to your size. Although checks are very smart, no large woman should dress in a large-check gown.

Dresses are a bit longer. None should be shorter than two inches below the knee, and three or four below are even better. (This applies to daughter, too.) Flares and flounces are used with fine effect.

Mrs. Griebel appeared in twelve costumes which emphasized the styles in fabrics and in design for this season. Three ensembles were worn. One was a dress and long coat of Frostkrepe. The second a dress and short jacket of Cheney silk print. The last a sleeveless dress and short coat of printed chiffon. With all of these costumes she wore biege hose and gloves and a small snug hat.

Exquisite Simplicity

You would have enjoyed her kitchen ensemble of cotton print. It was a morning dress and apron. I was a bit surprised that there were no bloomers of the same for they are quite nice and make the petticoat useless.

In the tailored garments she wore one of black and white checked gingham, another of cotton tweed and one of a woven silk design. Did you know that gingham is in front of fashion for this season? Manufacturers are working their plants twenty-four hours daily.

You would have enjoyed seeing her two sports dresses. One was sleeveless and made of white pique. Pique is another of the foremost fabrics for spring's styles. She was wearing another sports costume of white and blond crepe. This is a lovely new fabric of spun silk and rayon.

Three afternoon dresses [illegible] green and white print, a blue and white voile and a black and white [illegible]. All were lovely and suggestive of summer. Be sure you are right, then look ahead and choose for yourself wisely among the many lovely things which fashion dictates. Remember that simplicity is exquisite.

A Bed for Dolly

At our local hardware store [illegible] a box crate measuring 12 inches by 5 inches. The sides [illegible] adapted, there being just one smooth board.

For comfortable springs [illegible] strong muslin, tacking it [illegible] across the open bottom. The head were uniform in size so [illegible] the trimming by using higher [illegible] at the head than foot. These were [illegible] ed to the corners with long [illegible] nails.

Doorstops made ideal legs. [illegible] is further needed is several [illegible] gay paint, a small fitted pad [illegible] mattress and a neat pillow. It [illegible] a good idea to allow the little [illegible] mother" the happy privilege of [illegible] the sheets, pillow covers, and [illegible] all herself. You will enjoy her [illegible] ness as much as she enjoys this [illegible] toy.

Mrs. C. B. L[illegible]



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Orchard Windfalls

By S. W. FLETCHER



THIS is a big [illegible] I am growing. He may [illegible] quite big [illegible] because not enough [illegible] to disperse [illegible] to [illegible] fortune to [illegible] not to disperse [illegible] price [illegible] prince of using [illegible] selection of [illegible] good care; but [illegible] employment of [illegible] large.

I remembered that [illegible] prophet is [illegible] age, are no [illegible] and and [illegible] establish M[illegible] wholesale [illegible] statement [illegible] force to [illegible] which [illegible] great business [illegible]

I predict [illegible] fruit growers [illegible] judgment in the [illegible] sites, soils and [illegible] to bear on [illegible] kill [illegible] will receive a [illegible] reward for their [illegible] the next ten years [illegible] during the [illegible] prophecy is [illegible] found to [illegible] every failure the [illegible] likely to occur.

• • •

A [illegible] meeting of the [illegible] Association [illegible] more severe [illegible] orchard, the bacterial [illegible] previous year, [illegible] practice has [illegible] A hint as to [illegible] trial comes from Illinois. A [illegible] twelve years ago several [illegible] oil trees were discovered in the [illegible] orchard of John A. Gage, near [illegible] Ill. Trees were much more [illegible] and less in light than Elberta, [illegible] 30 feet spacing, but the fruit [illegible] practically identical with that [illegible] in shape, color, quality and [illegible] ripening, and could be sold as [illegible] Later it was found that these [illegible] were practically immune to [illegible] while Elberta and J. H. Hale [illegible] them were seriously affected. [illegible] two differences have persisted; [illegible] other respects the trees are [illegible] save for minor differences in [illegible] blossoming and color of bark.

The "Gage Elberta," as it is [illegible] now is being propagated and [illegible] commercially. The presumption [illegible] it originated as a bud variation [illegible] limb of Elberta, and that such [illegible] several original trees in this [illegible] were propagated from the same [illegible] stock. This is a good example [illegible] possibilities that lie in a [illegible] virgin field, so far as fruit growing [illegible] concerned—the prospect of [illegible] necessity for a good deal of [illegible] for disease control by the [illegible] of resistant varieties. This is the [illegible] of the plant breeder in the Experiment Station.

• • •

"THE Pea[illegible] [illegible] is [illegible] Bureau of Agricultural Economics is pretty reliable as any guess can be. At best it can be no more than a guess. Under predictable conditions in trade and in the [illegible] affect the market [illegible] and the production of competing fruits and vegetables also affect the market for apples.

The Bureau says: "Commercial production for the country as a whole will continue at a high level and probably will increase over a period of six to ten years. The rate of increase is likely to be lower than during the last ten years, but with the large number of trees now in commercial and small farm orchards the possibility of heavy production and low prices will continue. Over a period of years, however, commercial growers who are favorably located and who produce fruit of high quality at low cost may view the future with some optimism, if plantings in general are confined to those needed for replacement purposes. The future appears to be no brighter than the past for growers whose returns have been low because of poor varieties, or because of poor location with respect either to market or to growing conditions. Commercial plantings appear to be justified only where unusually favorable conditions exist for the economical production of good quality fruit."

This is conservative advice. Nevertheless, some of us cannot help but hope for, and fully expect, at least one "big year" in the next decade.

• • •

AS for peaches, the federal prophet says: "The outlook is for continued heavy production of peaches for the next few seasons, whenever weather conditions are favorable. In the South production for the present cycle is probably near the peak. In commercial peach areas other than California, which [illegible] in production during the next few years will be in the clingstone [illegible] named varieties. Recent new plantings have been moderate and no large increase in production under normal weather conditions is anticipated in the near future. Indications are that some reduction in bearing acreage in the southern states will continue."

He has protected himself well with such qualifying phrases as "whenever weather conditions are favorable" and "under normal weather conditions"—

ALLOW me, one of your [illegible] to say that I tried paper [illegible] not that manufactured for that [illegible] pose, but common newspaper [illegible] transplanting of evergreen trees, [illegible] found it to be very efficient.

I transplanted evergreens five [illegible] feet high and one to two [illegible] diameter without fail, by simply [illegible] ing the space about the [illegible] newspaper five or six [illegible] nesses, and then covering [illegible] with three inches of soil to [illegible] wind from blowing the paper [illegible]

My method of planting trees [illegible] dug a hole large enough so as [illegible] double the roots, then place [illegible] to five inches of soil on the roots, [illegible] cover with plenty of water to [illegible] dle the roots well, then in about [illegible] minutes fill up the hole with [illegible] to about three inches from [illegible] then the paper and remaining [illegible]

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MASTODON	2.50	5.50	11.00	17.00
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BIG JOE	1.00	1.70	3.00	4.75
GLITTON	1.00	1.60	3.00	4.75
Aroma	.90	1.60	3.00	4.75
Dr. Burrill	.90	1.60	3.00	4.75
Senator	.90	1.60	3.00	4.75
KLONDYKE	1.00	1.90	3.00	4.75
Big Late	1.00	1.90	3.00	4.75
Mr. Bolt	1.00	1.90	3.00	4.75
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EVERBEARING GRAPE 3 yr. bearing size 15c each; Progressive, Washington 2 yr. Asparagus 12.50 per 100, 100 per 1000. Mrs. Townsend's Giant Mammoth Sage 25c; 3 for 50c. 20 choice varieties. 11 for 50c.

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L. PRYOR, Route 4, Salisbury, Md.

The MARKET PLACE

By W. R. WHITACRE

THERE is a lot to be learned about marketing. I heard a new theory today and it has just enough facts to back it up to be interesting. A dealer handling southern asparagus said, "I wish that asparagus had been cheaper ten days ago, because if it had it would be higher today."

I thought that was a foolish statement, but he went on to explain that he believed a rather low price at the opening of the season encouraged people to buy. After they started they would continue to buy and this would cause the price to advance gradually, even though the supply increased. He stated that when the price of a commodity was high, only a relatively few people would purchase and when the supply increased consumption would not increase as rapidly as receipts. Then unless something unusual happened the bottom would drop out of the market and prices would be very low. After the price had dropped to these lower levels it would be practically impossible to bring them up again.

A Car of Rhubarb

He did not claim that his theory applied to all commodities, but he cites one illustration that occurred several years ago. A shipper sent him a car of rhubarb at a time when it was the only car on the market. The shipper expected to get about $4 a box for it, but this dealer sold the entire car at the rate of $2.75. The shipper was disappointed but the dealer finally persuaded him to send another car. This he sold at $3.25 and as time went on he received a number of more cars from the shipper and was able to sell them at prices ranging from $3.50 to $4. He claimed that he could have sold the first car at $4, but then when the later cars were received there would be only a limited outlet and the price would have been far lower than $2.75. For this reason he felt confident that the average price received was much higher than it would have been if he had started out with a high price.

An Interesting Theory

This past season I have noticed another case somewhat similar to this that would tend to prove his theory. The market for strawberries opened with prices around 30c per quart. In fact it was possible to buy fair berries at the retail stores in our section around 35c to 40c per quart. Gradually the supply increased but a good many people could afford to buy strawberries at these prices and even though the supply increased there were more buyers. At this time there are many more cars of strawberries arriving on this market than earlier in the season but the price is considerably higher.

According to his theory if dealers continue to force prices higher there will be a point at which the consumer will stop buying berries and then the price will drop quite low. After it reaches these low levels it will be very hard to bring it up again. It also seems fairly logical that dealers would be able to maintain a fair price even though receipts increased, if they continued to sell at a price at which the public could afford to buy.

This idea of market is a contrast to the usual theory that a grower or shipper must get high prices for his first offerings or order to bring up the average of his late season sales. I believe that generally it would be very hard to get either farmers or dealers to follow such a plan and even if it were possible it might not prove advisable in all cases. At least it is worth while watching.

Dopey: "What would you do if a girl dared you to carry her upstairs?"

Mopey: "I'd be inclined to take her up."

The market is always willing to pay a premium for quality produce

Surplus crops reduce the average bushel price, but because quality products always demand more or less of a premium price over the going market, the grower who is persistent in his employment of scientific methods, can always realize a profit while his less aggressive neighbors are suffering losses.

Quality potatoes can be insured by protecting the crop from blight, scab and insects.

Blight can be absolutely prevented by spraying with freshly mixed Bordeaux every two weeks after plants are 6 inches high until at least five applications have been made.

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Here, all excess moisture is removed from the corn before cold weather sets in. It is done scientifically—correctly—surely. Freezing can't hurt the Seed Corn thus treated. Disease cannot develop. The full vigor and health of the life-germ is retained. Germination is almost perfect. Seed is twice inspected ear by ear, thoroughly tipped, graded and properly stored. You get only the choicest grains in this Seed.

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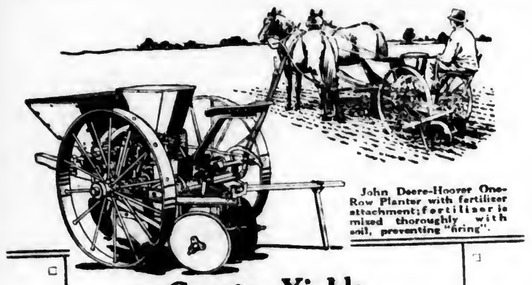
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Hagerstown, Maryland

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John Deere-Hoover One-Row Planter with fertilizer attachment; fertilizer is mixed thoroughly with soil, preventing "firing".

Greater Yields
through
Greater Planting Accuracy

John Deere-Hoover Potato Planters are famous for the regularity and dependability with which they plant. The secret of their accuracy lies in the Automatic Seed Control which maintains the proper amount of seed in the picking chamber at all times. There is no bunching, no misses. General simplicity and ease of operation also distinguish these planters. Planting is visible from driver's seat. One lever controls both the furrow openers and disk coverers. Covering disks quickly adjustable. Nine changes of dropping distance easily available.

JOHN DEERE-HOOVER
Visible
POTATO PLANTERS
with Automatic Seed Control

are made in one-row or two-row sizes with or without fertilizer attachments.

Each half of the two-row machine works independently of the other, which enables the operator to control depth of planting to suit uneven conditions of the ground. Draft of both machines is light, due to large wheels, wide tires and small amount of seed in picking chamber. Practically all-steel construction—very durable.

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World leaders for 47 years

THE SPRAYER THAT NEVER CLOGS

Garden and Truck Crops

By GILBERT S. WATTS

PLANTING what enthusiasm [illegible] and what hope [illegible] hunger for hometown harvest! What a welcome pleasure it is after the restraint of winter to walk the mulch [illegible] and plan and plant.

* * *

TODAY I have been superintending the sowing of several tons of green manured crops that were planted last fall to cover the ground and to conserve nitrogen and to produce organic matter over winter. All have come through in remarkable condition and this spring on the 60 odd acres that was cropped last year there will be more than 80 acres of green manure crops to plow down. Sometimes I wonder whether the use of green manures together with liberal applications of commercial fertilizers will not provide a more economical system of maintaining fertility on the vegetable farm than the use of [illegible] manure.



It was interesting to compare the way that plants early in March [illegible] with other patches planted at various dates up to the first of November. Even now in the last week of March the early planted rye is growing actively and is a good ten inches high. The later plantings are coming along but in proportion to the dates of sowing. Even the last sown November first has wintered a full stand and will provide an abundance of succulent organic matter for tomatoes and late cabbage.

As a conserver of nitrogen rye or wheat are hard to beat. There is no question that in following heavily yielding tomatoes, Do not want to [illegible] What about using the leaves [illegible] the same question on [illegible] mushrooms. We have a [illegible] cellar under the wagon [illegible] and would like to try some of [illegible]

Henry X. Cole

* * *

I [illegible] is your intention to grow [illegible] and pepper plants [illegible] transplanting or "spotting" before [illegible] are considered to be the field you [illegible] sow rather thin in rows six to [illegible] inches apart, otherwise the plants [illegible] crowded and will grow [illegible] and sickly. If you can arrange [illegible] transplant once spacing the plants [illegible] or more inches apart each way. [illegible] three you will find the better [illegible] scarcely will more than compensate [illegible] the additional labor.

It is very important to [illegible] damping off prevent an excessively [illegible] of moist atmosphere. Try to [illegible] on the side away from the prevailing [illegible] wind and when outside temperatures [illegible] are not so low that the plants will be chilled. As planting time approaches it usually is desirable to ventilate [illegible] freely, finally removing the sash altogether in order to accustom the plants to sunlight and wind. Ordinarily the best practice in watering is to water very thoroughly when you water at all and to do this in the fore part of the day.

A comprehensive information on [illegible] crop growing would require more space than is available in a letter. I would suggest that you write the Pennsylvania Department of Agriculture, Harrisburg, Pennsylvania, and ask for General Bulletin No. 392 which is a very complete discussion of [illegible] practices.

◇

Tomatoes and Peppers

I [illegible] in a hotbed for [illegible] tomatoes. Do not want to [illegible] What is the best way to [illegible] What about using the leaves [illegible] the same question on [illegible] mushrooms. We have a [illegible] cellar under the wagon [illegible] and would like to try some of [illegible]

Henry X. Cole

I [illegible] is your intention to grow [illegible] and pepper plants [illegible] transplanting or "spotting" before [illegible] are considered to be the field you [illegible] sow rather thin in rows six to [illegible] inches apart, otherwise the plants [illegible] crowded and will grow [illegible] and sickly. If you can arrange [illegible] transplant once spacing the plants [illegible] or more inches apart each way. [illegible] three you will find the better [illegible] scarcely will more than compensate [illegible] the additional labor.

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◇

Onions

Last year I planted a thousand [illegible] multiplying onion plants. Some of them [illegible] fall in the ground and the rest [illegible] after they were pulled. What [illegible] wrong. Please print an article [illegible] how to raise them and how to [illegible] them for winter.

[illegible]

It is not a small matter to [illegible] onions in a rainy season. About the best that one can do is to pull the crop as soon as the condition of the weather permits and then remove them to a dry airy place and spread them out not over two layers deep, on a [illegible] floor or in crates.

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Bedford	J. F. Fulton	Everett
Bedford	J. C. Winebrod	Curryville
Blair	Brumbaugh & Mosley	Martinsburg
Bucks	Orr & Grazier	Tyrone
Butler	Chas. R. Shore	Doylestown
Cambria	Grossman's Drug Store	Butler
Cambria	Schettig Hardware Co.	Ebensburg
Cambria	Bellefonte Hardware Co.	Bellefonte
Centre	Howard M. Wonset	West Chester
Clearfield	Coudersport Drug Store	Clearfield
Clinton	Ray Arbutt	Lock Haven
Columbia	A. L. Ballenger Co.	Bloomsburg
Cumberland	Harrisburg Seed Co.	Carlisle
Dauphin	Kunkel Pharmacy	Harrisburg
Delaware	W. E. Angle	Girard
Elk	A. E. Rhett & Son	Ridgway
Erie	Jno. J. Hess's Sons	Erie
Fayette	M. W. Trader	Uniontown
Franklin	The White Drug Co.	Chambersburg
Fulton	Louis Zerfoss & Son	McConnellsburg
Greene	R. R. Wilmer	Waynesburg
Huntingdon	A. E. Groff	Huntingdon
Indiana	Sprowls & Orris	Indiana
Jefferson	M. F. Rehl	Punxsutawney
Juniata	D. F. Marr	Mifflintown
Lackawanna	Lehman Implement & Supply Co.	Lehighton
Lancaster	Speaker Farms	Allentown
Lancaster	J. G. Gehman	Coopersburg
Lancaster	Traxler Farms	Ringgersville
Lawrence	Gallagher & Stavick	Wilkes Barre
Lebanon	Kline & Co., Inc.	Williamsport
Lehigh	Chapman Seed Store	Williamsport
Luzerne	A. Gabbanay	Bellbville
Lycoming	G. L. Schlabach	Easton
Mercer	Paul W. Hartman	Wasserth
Montgomery	W. W. Kalb	Sunbury
Northumberland	Eulalia Milling Co.	Coudersport
Potter	Ed. D. Daily	Genesseo

County	Dealer	Town
Potter	J. M. Parke (Valley Milling Co.)	Harrison Valley
Snyder	William M. Grover	Ulysses
Somerset	R. C. Walters Estate	Middleburg
	Berlin Feed Co.	Berlin
	Pearsoe Wolf Co.	Rockwood
	H. G. Beeris Sons	Somerset
	C. H. Schmucker	Friedens
	Markleton Supply Co.	Markleton
	C. A. Phillips	Meyersdale
	R. Reich & Son	Meyersdale
	S. S. Thomas	Thomas Mills
Warren	Pickett Hardware Co.	Warren
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Westmoreland	The Frank O. Reamer Co.,	Greensburg
Wyoming	Ray-Murray Co., Inc.	Tunkhannock
York	Emery V. Bupp	York
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Kent	James E. Bice Co.	Dover
	W. M. Hinkle	Dover
	J. A. Frear & Sons	Dover
	Clarence Postnell & Son	Felton
	W. W. Wilson	Frederica
	Harrington Hardware Co.	Harrington
New Castle	Ellwood A. Pierson	Wilmington
	The Phillips-Thompson Co.	Wilmington
Sussex	George E. Swain	Georgetown
	Chipman & Prensel	Laurel
	Collins and Ryan	Millsboro
	Burton Brothers	Seaford
MARYLAND		
Anne Arundel	Arundel Supply Co.	Annapolis
Baltimore	The Mayer Seed Co.	Baltimore
	Wiseman-Downs Co.	Baltimore
Carroll	King's Pharmacy	Westminster
Cecil	O. A. Allender	Elkton
	C. W. Ashby	Rising Sun
Frederick	P. L. Margell & Co., Inc.	Frederick
Harford	McComas Bros.	Bel Air
Howard	Patapsco Pharmacy	Elliott City

County	Dealer	Town
Kent	Massey & Wilmer	Chestertown
Queen Annes	Queen Annes Co. F. B.	Centerville
Washington	Ernest Miller	Hagerstown
Wicomico	White & Leonard	Salisbury
Worcester	D. H. Bradford & Son	Snowhill
NEW JERSEY		
Burlington	Fenimore Brothers	Mt. Holly
	J. A. Collins & Son, Inc.	Moorestown
Camden	Gardiner Chamerman	Gibbsboro
Cumberland	Minches Seed Store	Bridgeton
	I. Sereta & Sons	Bridgeton
	S. W. Davis	Shiloh
	Vineland Farmers Exchange, Inc.	Vineland
Gloucester	Reef & Estelow	Malaga Mill
	Ed. Mann	Swedesboro
Mercer	Farmers Co-operative Assn. of Mercer County	Trenton
	M. C. Ribsam & Son's Co.	Trenton
	Jos. H. Courtney & Co., Inc.	Windsor
Monmouth	W. T. Pierce	Allentown
	Rooney & Ely Co.	Englishtown
	Monmouth County Farmers Exchange	Freehold
	H. S. Kemp	Long Branch
	Reed & Perrine	Freehold
	C. H. Roberson	Freehold
Salem	Andrews and Avis	Elmer
	Garrison's Rexall Pharmacy	Elmer
	G. M. Andrews & Son	Woodstown
	The South Jersey Farmers Exchange	Woodstown
WEST VIRGINIA		
Cabell	C. M. Love & Co.	Huntington
Hancock	The Faulk Drug Co.	Chester
Harrison	Weber's Flower Shop	Clarksburg
Kanawha	Charleston Nursery & Seed Co.	Charleston
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Jobbers of Du Bay Seed Disinfectants in Pennsylvania, Maryland, Delaware, New Jersey and West Virginia.

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Bruce Bros.	Johnstown
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Mt. Gretna Manor Co.	New Castle
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The Wells Seed Co., Inc.	Philadelphia
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W. J. Gilmore Drug Co.	Pittsburgh
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The W. Scott Co.	Pittsburgh
Shipley-Marsingham Co.	Pittsburgh
Bright Hardware Co	Pottsville
H. F. Hertzog	Reading
Peerless Drug Co.	Reading
White Rose Seed & Nursery Co.	York

DELAWARE

O. A. Newton & Son	Bridgeville
N. B. Danforth, Inc.	Wilmington

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James Baily & Son	Baltimore
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Gilbert Bros. & Co., Inc.	Baltimore
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Chamberlain & Barclay	Cranbury
Deaphten Seed Co.	Newark
New Jersey Wholesale Drug Co.	Newark
Reuber & Kuebler	Newark
Bennett, Bowman, Clayton & Company	Prospect Plains
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Look for the brown can with the red Du Bay Diamond when you buy SEMESAN BEL.

DUBAY
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SEMESAN BEL
REG. U. S. PAT. OFF.
Instantaneous Seed Potato Dip

BAYER-SEMESAN COMPANY, Inc., 105 Hudson Street, New York, N.Y.
Successors to Seed Disinfectants Divisions of The Bayer Co., Inc., *and* E. I. du Pont de Nemours & Co., Inc.

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The Old Reliable LINESVILLE HATCHERY Linesville, Pa.

Write today for free booklet and prices, also free book on brooding.

CHERRY HILL CHICKS

	100
S. C. W. Leghorns—Wyckoff Strain	$12.00
S. C. Everlay Brown Leghorns	12.00
Barred Rocks—Wm. Nace's Select	14.00
S. C. Rhode Island Reds	13.00
Mixed or Broiler Chicks	9.00

We lose less in 500 lots, 1c less in 1,000 lots. 25 chicks add 2c, 50 chicks add 1c. Full count 100% live arrival guaranteed. Parcel Post pre. paid. Bank reference. Order direct from this ad or write for free circular.

CHERRY HILL POULTRY FARM.
Wm. Nace, Prop. McAlisterville, Pa.

BABY CHICKS

	50	100	500	1,000
White Leghorns	$6.50	$12.00	$57.50	$110.00
S. C. R. I. Reds	7.50	14.00	67.50	130.00
Barred Rocks	7.50	14.00	67.50	130.00
White Rocks	8.50	16.00	77.50	
Buff Orpingtons	8.50	16.00	77.50	
Heavy Mixed	6.50	12.00	57.50	110.00

Our White Leghorns are from Tancred and Barron stock. All our chicks are from free range flocks. We sell either cash with order or C.O.D. and guarantee 100% live delivery.

MONROE HATCHERY, Box 10, Richfield, Pa.

BABY CHICKS

	25	50	100	500
Wh., Bl., Br., and Br. Leghorns	$2.75	$5.50	$10	$49
Rocks, Reds and Wyandottes	3.50	7.00	13	61
Heavy Broilers	3.25	6.50	12	59
Light Broilers	2.75	4.50	8	39

Twenty-four page catalogue free. 19 years in business. Hogan tested flocks. Postage paid. 100% delivery.

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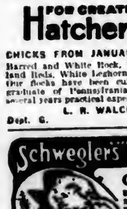
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CHICKS FROM JANUARY TO SEPTEMBER, 1929

Barred and White Rock, White Wyandotte, Rhode Island Reds, White Leghorns, Anconas and heavy mixed. Our flocks have been culled by Mr. Lloyd Baker a graduate of Pennsylvania State College, also having several years practical experience. Write to your nearest years practical experience. Write to your nearest

L. R. WALCK HATCHERIES
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Schweglers THOR-O-BRED BABY CHICKS



OUR breeders are bred for high egg production. White, Brown and Buff Leghorns, Barred and White Rocks, R. I. Reds, Anconas, Black Minorcas, Buff Orpingtons, White Wyandottes 12c and up. 100% live delivery guaranteed. Write today for FREE CHICK BOOK.

SCHWEGLER'S HATCHERY
201 BABCOCK STREET, BUFFALO, N. Y.

BABY CHICKS

	25	50	100	500	1,000
S. C. W. Leghorns	$3.25	$6.50	$12	$57.50	$110
Bd. Rocks & S.C. Reds	3.75	7.25	14	67.50	130
Heavy Mixed	3.25	6.50	12	57.50	110
Light Mixed	2.50	4.75	9	42.50	80

A Special Discount on orders placed in advance

PINECREST POULTRY FARM & HATCHERY
Herbert Miller, *Prop.* Box 2, Richfield, Pa.

BABY CHICKS

100% arrival guaranteed.	25	50	100	500
White Leghorns	$2.75	$ 5.25	$10.00	$47.50
Bd. Rocks and Reds	3.25	6.25	12.00	57.50
Heavy Mixed	3.25	5.75	10.00	47.50
Light Mixed	2.50	4.75	9.00	42.50
Pekin Ducklings	6.50	12.50	24.00	
Mixed Ducklings	6.50	13.00	25.00	

JOHN SHADEL HATCHERY
Route 2, McAlisterville, Pa.

COCOLAMUS HUSKY CHICKS

	25	50	100
Tancred Strain S. C. White Leghorns	$1.50	$ 6.50	$12
Ever Lay Strain Brown Leghorns	2.50	4.50	12
Red, Rocks, S. C. Rhode Island Reds	4.00	7.50	14
Mixed or Broilers	2.50	5.00	9

Special prices on 500 and 1,000 lots, all heavy laying free ranga flocks. Free circular and price list. 100% live delivery guaranteed. Parcel Post prepaid.

COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

Clear Spring Quality Chicks

	100	500	1000
S. C. White Leghorns	$11.00	$52.50	$100
Barron and Wyckoff Leghorns	12.00	57.50	110
Harred Rocks and R. I. Reds	14.00	67.50	130
Light Mixed	9.00	Heavy Mixed	$12.00

For March and April. 100% live delivery. Postpaid. New circular free, giving full details of all breeds.

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CHICKS Will ship C.O.D.

	25	50	100
S. C. Reds	$1.00	$7.50	$14.00
Barred Rocks	4.00	7.50	14.00
White Leghorns	3.50	6.50	12.00
Heavy Mixed	3.50	6.50	12.00
Light Mixed	2.75	5.00	9.00

500 lots 5c less. 1,000 1c less. Free Range. 100% Delivery. Circular.

W. A. LAUVER, McAlisterville, Pa.

Chicks S.C.W. & Br. Leg'hns $11.00 per 100
S. C. Barred Rocks.... 13.00 per 100
S.C.W. Leg. Tan. Str. 12.00 per 100
Assorted chicks..... 9.00 per 100

Special price on large lots. 100% live delivery. C. O. D. paid. Order from adv. or circular free.

Chester Valley Hatchery, R.2, McAlisterville, Pa.

BARRON and WYCKOFF STRAIN

S. C. White Leghorn chicks, 11c each. $100 per 1000. Prepaid and safe delivery guaranteed. Our 19th year. Circular free. $1.00 books order.

THE PENN'A HATCHERY, Liverpool, Pa.

Aristocratic Chicks

By R. L. SCHARRING-HAUSEN

THERE is an increasing demand by poultrymen for chicks of superior quality, not merely pure-bred chicks, but chicks from selected parents where high-producing blood has been used in the matings. To supply them is the function of the "breeder hatchery" which is usually a large establishment maintaining its own birds to supply eggs for its incubators, and by careful selection and the use of pedigreed males turning out a quality of chicks which the ordinary poultryman will find to be an improvement over his own stock.



I recently visited such an establishment in Monmouth county, N. J. This plant maintains 8,000 layers, has incubator capacity of 72,000 eggs, a long brooder house capable of handling 40,000 chicks at one time, and during the spring, summer and fall turns out a great many thousand chicks and pullets, with a constantly increasing demand.

This farm has an interesting history and applies some very forward-looking ideas to the poultry business, both in the operation of the plant and at the selling end. Before taking up the work with poultry some seventeen years ago the owner had been in business in the city, and the experience and outlook gained in his former work have done much to make the poultry operations successful.

In order to obtain high-class males to mate with his breeding birds entries are made in the various egg-laying contests, and from the hens that have made an official record of 200 eggs or more mated with pedigreed males come the cockerels to head the general flocks. Vigor, laying qualities and size of egg are all emphasized.

There is a large sale for baby chicks, and also for pullets of various ages; and to provide for these pullets and also for birds for future breeding flocks, a long tile brooder house, centrally heated, with a capacity of 40,000 chicks has been built. The farm is located on a very light soil, and during the brooding season the ground in front of the building is harrowed up every day in the interests of sanitation. At the close of the season the area is limed and seeded to clover. According to the manager these methods afford a satisfactory sanitary program.

Vitamin Eggs

The pullets are reared on range, and the surplus above the replacement requirements of the farm are sold at the age of eight weeks to ready-to-lay. Sometimes the demand is for the young birds and in other years for mature pullets, but I was assured that the demand always exceeded the supply.

The farm enjoys wonderful marketing facilities, being in the heart of the Jersey Shore resort section and not far from New York. During the season the eggs are sold locally, bringing a premium of ten cents over the market, and when winter comes bit high prices in New York. The shore market also absorbs great numbers of the young Leghorn cockerels as broilers.

I was particularly impressed with the up-to-date method of marketing eggs which secures a good premium above the market. The eggs are packed in dozen size cartons. Realizing the present interest in vitamins, the cartons bear on the side the legend "Vitamin Eggs", and on the top, in addition to the name and address of the farm, the following statement:

"EGGS CONTAIN VITAMINS
We Put Vitamins in Our Eggs Through Scientific Methods of Feeding Vitamins Are Essential to Health."

The "scientific methods of feeding" are no more than those employed by every progressive poultryman these days—the use of cod liver oil yellow corn, green feed and C in the ration, but they are sufficient to enable us to call the term Vitamin eggs without any misstatement of fact, and the term acts as a trade mark and attracts enough attention to the brand to command the nice premium above the market mentioned before. Such little points seem simple enough after some one else thinks them out, and yet their advertising value may be enough to spell the difference between a bare income and a mighty comfortable one.

This farm has also worked out a system of handling litter and manure so that what is ordinarily a source of expense or a nuisance on the average poultry farm brings in a substantial revenue. To begin with, peat moss is used as litter. Then the space under the roosts is boarded off in front and wired off on top so that the birds cannot get into the pit thus formed. The dust from the peat coats the droppings which fall into the pit-like area, and occasionally some of the peat on the floor is added, so that the manure remains dry and odorless.

Every six months the accumulation from floor and pit is cleaned out and sold to a large floral company for use in their greenhouses, yielding a revenue of several thousand dollars a year and a handsome return above the cost of the peat.

The infrequent cleaning may seem to be an unsanitary practice, but the system works satisfactorily as the peat being very absorbent takes up the moisture from the droppings and everything remains dry. It is a well-known fact that most disease organisms are dangerous only when moisture conditions are favorable to them, and the absorbent qualities of the peat moss keep disease germs which may be present inactive.

No Patent Principles

This plant is a highly successful enterprise, and in summing up the factors which make it so, several are important. The first is that they produce a good quality of chicks and pullets and obtain a good price for them, instead of putting out a low-grade product and cutting the price so hard that there is no profit left. The second is that through favorable location and the advertising value of the term "Vitamin Eggs" they are able to obtain not only a good market the year round, but also a premium above the general price level. The third is that they effect economies of management, of which the long brooder house with central heat and the method of handling the manure and litter are examples.

Experience with Oats

FOR years I have read the Pennsylvania Farmer. I like your continued stories, and the poultry section. Thanks for some good information all around. As it is not good policy just to receive and not to give, I think I owe you some. I am an old retired engineers and I spend most of my time with my S. C. Reds.

I read in your last issue about a Mr. Kline who has trouble with his oats sprouter. I soak my oats over night, then I sieve ashes, make it half and half, drain the water from the oats and mix it well, put it in the trays and press it down with a square trowel and soak it just enough every day to keep it moist. This is for sprouted oats only.

I don't know what the man means by six quarts of water to the pan. My pans are all perforated except the lower. I use no lights. My pans are setting in a warm place. I have started cats on Monday morning and the next Friday it was an inch high. I am not troubled with mould. J. P. V.

100% Live Arrival

	100
Ferris Strain W. Leg.	$12
Everlay Brown Leghorns	12
Basom's Barred Rocks	14
Owens' R. I. Reds	14
Mixed Chicks	9

Our breeders are selected for size. Free circular. production. THE HEN THAT PAYS. Write today for literature.

CHIX JUNIATA POULTRY FARM, Box R, Richfield, Pa.

White Diarrhoea prevented, or cured, in spite of Bourbon Poultry Remedy. In the drinking water. First 10 days. Cheapest, safest, purchased, pound and quart. Used daily to keep your chicks healthy. Small size 60c, half-size $1, at druggists, or by mail postpaid.

Bourbon Remedy Co., Box B, Lexington, Ky.

WHITECAP Greatest All-Purpose Feed

Superior to Leghorns. One writes: "24½% net profit in 3 months." Another: "A flock of 14 hens average of 198 eggs in a year." another: "210 Leghorns had 24% production in Jan. while 345 Whites had 45% production in Dec. and 795 in Nov." CATALOG FREE. stamps appreciated.

NABOR POULTRY FARM, Box 22, Gordon, Pa.

BEST CHICKS

Ohio Accredited chicks. Every breed banded. Strong, healthy and well bred, carefully bred for high production. Prices reasonable. Quality high. Write for WE SHIP C. O. D. Send for 100% live delivery. Postman for your chicks when they arrive. Illustrated catalog and price list free.

BLUFFTON HATCHERY, Box H, Bluffton, Ohio

QUALITY CHICKS

Chicks from winter laying, farm raised, S. C. White Leghorns, R. I. Reds, Barred Rocks, Orpingtons, Anconas, Black Jersey Giants, Buff Rocks, White Plymouth Rocks, Blue Andalusians and Indian Runner Ducks; $12.00 per 100. Live Delivery guaranteed. Parcel Post prepaid. Circular free. Shipment will be made from our selected hatches nearest the buyer.

GLEN ROCK NURSERY & STOCK FARM, 795-B Ridgewood, N. J.

NO BLUFF CHICKS JUST REAL HARD QUALITY. Thousands of customers know what great value we give. Read the experience of our latest advertiser in this small ad of WHITE and BUFF LEGHORNS. Special 200 to 290 Egg Strain 100; 500 or more, $11 per 100. 100% Live Delivery Prepaid. Free and 100% Live Delivery Guaranteed. 14 per 100.

HOUSEWORTH'S LEGHORN FARM, Port Trevorton, Penn'a

Baby Chicks from High Egg Layers

11 years reliable. Customers say we are Reasonable. Write for free and prize list.

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STRICKLER'S SUPER-QUALITY CHICKS

High Egg Production Breeding. Large size Tancred-Barron English White Leghorns. 270-310 egg lines. No lights used. Chicks are extra hardy and vigorous. These quality, pure-blood chicks are guaranteed at $10 per 100; $47.50 per 500; $90 per 1,000. 100% live delivery guaranteed. Catalog free.

LEONARD F. STRICKLER, Box F, Mount Joy, Pa.

SCOTT BROS. CHICKS

White Leghorns ..... 12c each
Tancred White Leghorns (Grade A) ..... 12c each
Tancred White Leghorns (Grade A1) ..... 15c each
Rose Comb Reds ..... 12c each
Barred and White Plymouth Rocks ..... 12c each

Every chick from pure-bred stock culled for production and standard quality.

Leghorns (without a doubt America's best) were purchased from Tancred Farms and Barron. 100% live delivery guaranteed. Postpaid. Circular free.

Scott Bros. Waithey & Poultry Farm, Elmira, N. Y.

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SHIPPING CRATES LOANED FREE

SHIP YOUR LIVE BROILERS and get New York's Oldest Live Poultry Commission House. We are headed commission merchants. Highest returns made daily. Highest prices. Prompt returns. Stencils and shipping tags furnished free. Write for prices, shipping instructions and free booklet. Folder F-2. KRAKAUER POULTRY CO., 309-311 West Washington Market, New York City.

EWING'S English White Leghorns

are the product of 15 years of breeding for high egg production. Imported Barron strain sires, with pedigrees of 314 eggs. Breeders extra large and vigorous. Baby chicks fertile eggs. Fully guaranteed. Circular free.

R. T. EWING, Bloomsburg, Pa.

GERIG'S BABY CHICKS

We Import from Barron, Tom Barron breeding farm, England. Hatches: Feb.; Mar 15; May; last month for Leghorns. Gerig's Leghorn Farm, R.D. 6, York, Pa.

Chicks, Barron Eng. White Leghorns

Common Leghorns, Barred Rocks, Light Mixed, as low as 8c each. 100% live delivery. Free catalog. Prepaid.

TWIN HATCHERY, Reinholds, Pa.

Baby CHICKS (Smith Hatched) White Wyandottes, all leading breeds. Quality and service assured. Circular free. Early delivery.

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Make it Live and pay

Most of life or chicks every chick during the first after hatching could double loss of production cost of chicks by feeding

"Startrite" Chick Food

Ryde's "Startrite" Chick will raise a baby chick well past danger period. It is a natural, safe feed of choicest granular ingredients, selected whole grains and dried buttermilk. Easy to feed; economical; best results are obtained by feeding it dry from the hopper. Simple feeding directions are in every bag. Your dealer can supply you.

Chicks Will be Chickens

Ryde's "Startrite" Chick Tested." This assures to you.

Ryde's "Hav-To-Grow" Chick Feed for rapid growth after the first month. Combines the best growing foods and necessary minerals.

Ryde's "Hav-To-Lay" Ryde's "Hav-To-Lay" Mash with Buttermilk supplies the body building elements for greater egg production in one economical, convenient and unequalled feed.

The interesting, instructive Ryde's Chick Game, which includes Ryde's Chick Game, which includes a beautiful leatherboard, spinner and model chicks, sent FREE (worth 75c) upon receipt of 10 Ryde's Chick Feed wrapper fronts or facsimile. Include 10c to pay postage and packing. Address Ryde & Co., 1 Roosevelt Rd., Chicago, Ill.



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all the properties necessary for the rapid and quick growth of young stock. A compounded combination of Proteins and Minerals in the most digestible form known to feeders makes the pigs, colts and calves grow rapidly and vigorously and produce meat, eggs, and milk more profitably.

Write for adjacent and our booklet—"Care and Feeding of Poultry, Swine and Cattle".

CHAS. M. STRUVEN & CO.
1100 S. Frederick St., Baltimore, Md.

Just Paint it on the Roosts!

—Before the chicks oversperch. Only a small paint brush and 8 cts. of "Black Leaf 40" are required to rid a flock of lice and mites. Paint roosts with "Black Leaf 40" and you paint out lice. Full directions in every can. Tobacco By-Products & Chemical Corp., Inc., Louisville, Ky.

Black Leaf 40
Poultry Lice

Pure Concentrated Buttermilk
From Tuberculin Tested Cows

Just add water, 66 per cent lactic acid, thick as cream. Produces delicious, healthful buttermilk. Preserves eggs. Prevents disease. Promotes digestion and promotes fertility and hatchability. Used for chicks, brooders and laying hens. Write us for the factory in barrels or cans. Write for prices.

BARTY PRODUCTS CO.
Titusville, Pa.

Nest Box Notes



I AM using 10-watt lights in my brooder houses at night to prevent crowding as a new departure. They make a dim light which is enough to let the chicks see a little without keeping them up and active. I found this practice to be quite common on some large broiler plants which I visited recently.

• • •

My chicks are hatched from blood-tested stock, were put in a sanitary brooder at the proper temperature, not crowded, and have been fed a good ration with plenty of hopper space available. Losses have been negligible. This little paragraph sums up almost all the essentials of successful chick rearing.

• • •

AFTER elaborate preparations in making a nest my old goose has started to lay and produces an egg every other day. I am going to call on a few broody Leghorns to hatch them as I have done in the past. The gander mounts guard over the nest while his mate is on and hisses and runs at everything in sight. He and the dog have fierce set-tos at frequent intervals. The other day the goose ran down my jumper sleeve with her bill until she came to the hole, and then took a good nip. I hope it was in the spirit of friendliness, but I have my doubts.

A few geese on the farm are interesting and amusing, and provide an opportunity to show your skill at carving on Christmas, or to show the extent of your vocabulary if they get into the garden.

• • •

I WAS very much interested in reading Prof. Knandel's excellent article on Artificial Heat in the issue of March 23, especially the section about heating laying houses. Any practical poultryman who has tried to keep the litter dry during a foggy spell or the hens comfortable when the gales blow and the thermometer shivers can readily see the advantages of artificial heat at such times.

Another point brought out by inference is that farming is becoming increasingly complicated, requiring larger amounts of capital and better methods of management so that conditions can be brought more under the control of the operator and left less to chance. This statement applies with especial emphasis to poultry farming, and particularly when it is carried on as the main enterprise rather than a side-line.

Turkey Pasture

I would like to know what grass I could sow this spring that would come up quick, which I could use for pasture or green feed for turkeys. The land is not rich enough for alfalfa. P. J. B.

It seems to me that a very good way to handle the turkey pasture would be to divide the area into two or more lots, sowing oats or a mixture of oats and rape. The birds could be allowed to pick off the green crop in one lot while that in the second was coming up. After the second lot was ready the birds could be turned on that while the first was being turned over and sowed afresh.

This rotation could be worked all season, and in the fall you could sow wheat or rye at the last to provide green pasture early in the spring. Some breeders set their roosting shelter in the center of the lot and divide the ground into quarters, shifting the birds from week to week as the cover crops are picked off. R. L. S.



We demand
Dr. LeGear's Poultry Prescription
—MINERAL-IZED—
An Iron and Nux Vomica Tonic

Contains valuable mineral and vegetable ingredients scientifically compounded to produce an efficient tonic, appetizer, conditioner and regulator.



Dr. L. D. LeGear, V. S. (In Surgeon's Robe)

Graduate Ontario Veterinary College, 1892. Thirty-six years veterinary practice. Enjoyed country-wide confidence of poultry and stock. Nationally known poultry breeder. Noted author and lecturer. Now Dr. LeGear features on poultry and live stock. Read Dr. LeGear's poultry articles in your paper and farm journals.

Satisfaction Guaranteed

Get a pail or package of Dr. LeGear's Poultry Prescription from your dealer. Use it all. If not satisfied with results, return empty container to dealer and he will refund your money. This guarantee applies to all Dr. LeGear Preparations.

Help Your Baby Chicks!

Give them the right start! In addition to good care and proper feeding, dissolve Dr. LeGear's Chick Tablets in their drinking water. These tablets have a mild antiseptic effect on the water and is very beneficial as an intestinal astringent. Get a can containing 50 tablets from your dealer. Use all of them. If not fully satisfied with results, your dealer will refund your money.

Dr. L. D. LeGear Medicine Company, St. Louis, Mo.

20th CENTURY "HARVEL" CHICKS

from Special Mating Imported Barron White Leghorns

This Nineteen Mating consists of 250 Yearling hens, imported from TOM BARRON of England. The hens weigh 4½ lbs. and produce better than 230 eggs per year per hen. The hens weigh 4½ lbs. and produce better than 230 eggs per year per hen.

Big Healthy Chicks from the World's Best Strains

14 varieties. Matings sired by pure-bred Males from the World's finest Trapnested Egg Strains. Dams of high production. Also Pure Barron, Park's Barrowgate, Pullet, Sheppard, Hoyts, Pape and others of similar famous breeding. 1 Guarantee Satisfaction and give you personal service. Prices reasonable. 100% Live Delivery Guaranteed. Ref.: Commercial Bank, Penn Trust, Bradenton.

	25	50	100	500	1000
S. C. White, Brown, Buff Leghorns; Anconas	$2.00	$3.50	$6.00	$28.00	$115.00
S. C. White Leghorns	2.00	3.50	6.00	28.00	135.00
Barred and White Rocks, R. and R. C. Reds; Black Minorcas	2.50	4.50	8.00	38.00	145.00
White Wyandottes; Buff Orpingtons; Buff Minorcas	2.50	4.50	8.00	38.00	150.00
Imported Barron Leghorns; White Minorcas; Park's Rocks	3.50	6.50	12.00	55.00	210.00

Heavy Mixed, $12.50 per 100; Light Mixed, $9.00 per 100

Ship C. O. D. if desired (our postman on delivery). FREE Illustrated Catalog tells all about our big size Winter Laying Chicks and profits you can make with them. Send for your copy.

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WOLF SELECTED CHICKS

BABY CHICKS C. O. D. Send Only $1.00

Don't miss this chance to get a start with Wolf's extra quality pure-bred high producing stock. Every breeder proposed on free range and health of chicks is guaranteed. GET OUR CATALOG AND PRICE LIST before you buy. Read about prizes won by our birds. Read about Mary Hensel who made over $1,000 profit in one year with birds of our breeding. All leading breeds. Chicks shipped C. O. D. Write today. Ten pullets dropped instantly with Wolf's "No Pick". Order box today. $1.00 prepaid. Satisfaction guaranteed or money refunded.

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Poultry Problems

Feed for Ducks

Please give me information on how to feed and house ducks. Our people have been feeding soft feed with no protein and we are getting no eggs.

James Neal

BREEDING ducks may be housed in a building like an ordinary chicken laying house, except that no roosts or dropping boards are required. Nest boxes may be placed on the floor at the back of the building, or the ducks may be allowed to make their nests in the litter. The floor should be well littered down, and plenty of ventilation should be provided. The ducks should be allowed outside when the weather is fit, although they must be kept in until the middle of the morning until they have laid, as otherwise they will drop their eggs wherever they may happen to be, if it is in the middle of the pond.

A ration for breeding ducks can be made as follows: 10 parts bran, 5 parts middlings, 15 parts yellow corn meal, 4 parts meat scrap or fish meal. Also provide green feed, cooked vegetables, or add 15 per cent alfalfa meal to the mash. The proportions are by weight. Some grain may also be fed. The mash is moistened, and fed twice daily. Also provide coarse sand and oyster shell.

U. S. Department of Agriculture Farmers' Bulletin No. 697 on Duck Raising contains a great deal of useful information and may be had free by writing to Washington. R. L. S.

Sanitation Essential

In January, 1928, I purchased four turkey hens and one tom. In a short time I lost one of the hens, so I started the season with three hens and one tom. May 28 and 29 two hens became the proud mothers of 28 fine poults, and we were as proud of the flock as the mothers. How they did grow! All lived until they weighed four pounds and better each, then came the bump when we lost two, and then when they weighed around eight pounds each again two, and so on the story goes until at Thanksgiving time we had 19 left which weighed up to 18 pounds for toms and 12 pounds for hens each and these were A-1.

These turkeys were raised in a new brooder house, on a one-acre plot, away from other poultry and a liberal amount of sulphur fed in the mash to combat worms, and still with all these precautionary measures it was a plain case upon post mortem examination that it was that dreaded disease, blackhead, that played havoc.

I have increased my flock and have purchased disinfectant with which I will spray the ground in the yard and try raising a crop on the same ground, but will try the confinement and wire sun parlor method until the poults are two months old and use alfalfa leaf meal for greens. H. R.

IT is important that turkeys be raised under the most sanitary conditions. From the time the poults are hatched, throughout the growing period and the adult stage, only wholesome feed should be given. There is a difference of opinion as to what is wholesome feed. A mash which is placed before the turkeys may be satisfactory for a few hours, but after the turkeys have walked in it and a considerable amount of droppings has been added the feed is certainly not wholesome.

Great care must be exercised to see that the turkeys have clean feed at all times. It is, therefore, necessary to either feed a moist mash or to feed the dry mash in hoppers. These hoppers should be so constructed that the poults cannot enter them but must secure the feed by standing on the ground or on perches.

When the turkeys are given free range, it is likewise important that they be fed in hoppers and that the feed hoppers be moved daily so that the ground about them will not become contaminated. A man who raised a considerable number of turkeys last year, moved his hoppers daily. He also took the precaution to see that the turkeys did not have access to the same piece of ground for more than a week at a time. H. C. K.

Chick from Diseased Hens

Would it be advisable to set eggs from hens which have had canker and pox this spring? L. D. V.

IT IS not considered good poultry management to save eggs for hatching from hens which have been affected with disease. Roup, canker and chicken pox are often prevalent on many farms, especially during the early spring months. These diseases reduce the vitality of the hens and males to such an extent that their offspring are weak and puny.

If your fowls have fully recovered from these diseases and are laying well, then you might take a chance on breeding from them. I confidently believe, however, that it would be taking quite a chance and I think you would be better satisfied to purchase chicks this year from a flock which you know to have been free from disease. H. C. K.

Experience with Ducks

I SAW Mrs. Clara C. Roberts' letter in the Pennsylvania Farmer for feed and care in starting ducks. I can't understand why any one cannot raise ducks, so will tell you my way of looking after them.

After they are 48 hours old I take a cupful of mash and mix with skimmilk real wet and give them water. Let them have what they will eat in five minutes and feed five times a day for three days, then they have it as they want.

My starting feed is 25 pounds corn meal, 25 pounds shorts, 15 pounds ground oats, 15 pounds bran, 5 pounds limestone, 3 pounds salt and 10 pounds meat scrap. If you don't have skimmilk and it you cannot get them out, add ten pounds of alfalfa leaf meal.

When they are four or five days old I put them out of doors if the sun is shining. If I can be out with them, they will run after me and it does them lots of good. I keep them out for 15 or 20 minutes, then shut them up in their box to rest and in another day or two let them out in the sun as long as it is good and warm. Do not let them get into water until they are three or four weeks old. Have some place where they can run in out of the rain. Mrs. L. G. Palmer.

Enlarged Livers

One of my May hatched Barred Rock pullets seemed to be ailing, so I tried to doctor her up, but as I did not see any improvement I decided to kill her and examine the entrails. On opening it I found that the heart was very small, as was also the stomach, the lungs seemed to be sort of dry they reminded me of two small pieces of red rubber that had rotted. The intestines were very small and hard, the spleen was about four times its normal size and the liver was so large that the tips extended almost to the vent. The weight of the liver was 11 ounces.

Geo. J. Merz, Jr.

FOR want of a better term, the disease has been designated as "a big liver disease". Very little is known as to how this disease is transmitted or the cause of it. It is quite possible that the disease is not transmitted through the egg.

One scientist in Italy, who has done a considerable amount of investigational work relative to this disease, gives no method of treatment. He has termed the disease leucemia. Fowls affected with this disease on post-mortem examination often show enlarged livers and spleens.

I am sorry indeed that I can be of no aid to you in the solution of your problem. H. C. K.

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have vim and vigor—hatched by men with 18 years experience, from culled flocks. Prepaid and 100 per cent guaranteed. S. C. White and Brown Leghorns, R. C. Reds, Barred Rocks, Mixed Broilers 9c each. $80 per 1,000. Circular free. Our slogan Service after Delivery. THE PENNA. HATCHERY, Liverpool, Pa.

WYCKOFF & BARRON CHICKS FOR MAY

	100	500	1000
United Strain Leghorns	10.00	$37.50	$70
Wyckoff or Barron Leghorns	9.00	42.50	80
Barred Rocks	10.00	47.50	90
Mixed Chicks	7.00	35.00	70

L. E. STRAWSER, McAlisterville, Pa.

TANCRED WHITE LEGHORNS 12c each; Wyckoff White Leghorns $9.00 100; Anconas $11.00—100; R. I. Reds $11.00—100; B. Rocks $15.00—100; Minorcas $15.00—100; Heavy Mixed $11.00—100; Light Mixed $8.00—100. Sixteenth season.

Eclipse Hatchery, Port Treverton, Pa.

BABY CHICKS

From free range flocks of White and Barred Rocks, Reds and S. C. White Leghorns. 9c and up.

PENNS CREEK HATCHERY, Penns Creek, Pa.

Hampton's Black Leghorn 244 EGGS

The kind that lay. Circular free.

A. E. HAMPTON, Box P, Pittstown, N. J.

TIGHT BINDING TEXT CUT OFF

THE YOUNG PEOPLE

Spring Is Here

IF you don't believe it, read what some of our boys and girls find outdoors:

"This morning as I was coming to school I heard a bird go 'kunk-re' and I knew it was a red-winged blackbird. I began to mock it but it flew away."

Clara Young.

• • •

"We are going to have warm weather because I saw some wild ducks flying toward the North."

Dorothy Myers.

• • •

An Exciting Walk

".... First I heard a robin singing, then a rabbit jumped out; I saw a squirrel and some quail. Then I came to a creek and saw six big fish. Later some robins flew on a chestnut tree, a flock of killdeer flew to the ground about three yards from me. I saw chestnut, June berry, maple, pine and spruce trees."

Palmer Klahie.

• • •

"It is beginning to get warm and I love to sit out on the porch steps late in the evening and listen for frogs. When I hear the first one I will get a thrill clear to the end of my toes for I will know spring is really here."

Katherine R. McClure.

• • •

"I find plenty of mud to pull at my overshoes when I am in a hurry."

Ruby Gillespie.

• • •

About the Killdeer

"A killdeer is a medium size bird with long legs. They run along the ground and can go very fast. If they have a nest and you get near the nest, the mother-bird will make believe she is lame. She will limp along the ground so you will try to catch her, always leading you away from the nest. The little birds look like a bunch of cotton on two sticks. They can run very fast too and are not very old when they leave the nest and can run around almost as well as their parents."

James Plummer.

• • •

"The grass on the lawn will soon be up for the lawnmower!"

Mary F. Cross.

• • •

The Nesting Season

"A bluebird is looking over apartments here. Truly they have strange habits. Among the first birds to begin nesting are chickadees. The robins build on fence posts not five feet from the house and the cats destroy the little birds before they are hatched a week. The eggs of the mourning dove are usually two in number, and white. The bob-o-link builds a loosely made cup-like nest and has five or six gray eggs spotted with brown. The nest of the meadowlark is a beautiful thing. It is made of dead leaves, shaped very nicely and has a sheltering cover to protect the baby birds from the weather, and also to make it difficult to find."

Richard Freeman.

• • •

Cock Robin

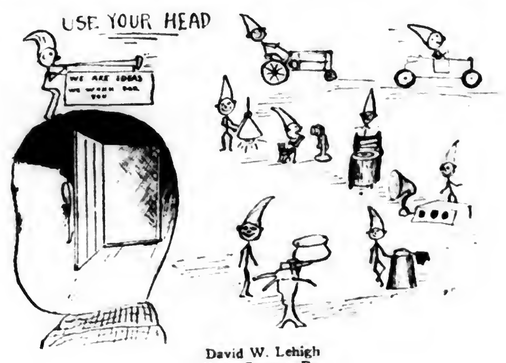
"I like to shoot my bow and arrow but I don't shoot at the birds. My brother and I like to trap and last winter we caught 57 rabbits, eight skunks, four possums and one weasel."

Edwin Thompson.

• • •

"In the woods the maple trees are tapped and the sap goes drip, drip into the pails. The sugar-making season is about over for the moth millers have begun to get into the sap. These millers come from their winter quarters in the ground when warm weather comes and fly around the trunks and limbs of the trees. The female is wingless and lays her eggs on the limbs where they hatch out later and the young worms eat up the leaves. They are called canker worms."

Alice Sybrant.



David W. Lehigh
York County, Pa.





Paul Krenisky
Butler County, Pa.



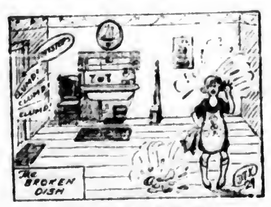
Merrit Pike
Franklin County, Pa.



Homer J. Darlington
Chester County, Pa.



Frances Custellan
Crawford County, Pa.



Dorothy T. Kundra
Montour County, Pa.



Veronica Kirsch
Cambria County, Pa.

THE PRIZE LETTERS
Will be announced next week.

A STATE GUESSING GAME

Answered by abbreviations of the names

1. What is the most religious state?
2. The state of exclamation?
3. Best state in haying time?
4. Best state to cure the sick?
5. Best state in a flood?
6. Most maidenly state?
7. A numerical state?
8. The father of states?
9. The last cereal state?
10. Best state for times?
11. Represented by a girl's name?
12. Good start for the untidy?
13. State indicated by a note in the musical scale?
14. The most egotistical state?
15. The highest state?

LETTER PUZZLE

Example. To a letter add indentation and get a sweet sound. K, dents (cadence).

To a letter add a small dog and get a game.

To a letter add a cat's cry and get a bird.

To a letter add a burden and get a vegetable.

To a letter add an invitation to dance and get a drug.

To a letter add a funeral pile and get aluminum.

To a letter add twelve dozen and get an engraver upon.

To a letter add an Eastern monarch and get to permit a command.

To a letter add a sound made by a cat and get an anti-.

To a letter add pennies and get out.

For the Little Folks

WHICH ARE YOU?

The bones in the body
Are two hundred or more;
But for sorting our people
We need only four.

Wish Bone People:
They hope for, they long for,
They wish for and sigh;
They want things to come, but
Aren't willing to try.

Funny Bone People:
They laugh, grin, and giggle,
Snuffle, twinkle the eye;
If work is a joke, sure,
They'll give it a try.

Jaw Bone People:
They scold, jaw, and sputter,
They froth, rave, and cry;
They're long on the talk, but
They're short on the try.

Back Bone People:
They strike from the shoulder,
They never say die;
They're winners in life, for
They know how to try.

A Narrow Escape

"He's got a bone in his mouth!" announced Charles. "Way back in the soft palate. He can't shut his jaws on account of it."

He reached into the animal's mouth and pulled. There was an agonized yelp from the dog as the bone came away and blood flowed freely, but his relief as he was again able to close his mouth was evident.

They wouldn't allow Virginia to touch him just then because she might get her best clothes soiled, but she talked to him and cried a little for pure happiness. Next day she made it all up to him, hugging and petting him and giving him milk to drink because his mouth might be too sore to eat anything solid. Everybody else was happy too and no one seemed to notice that Virginia's crusts were wider than ever and the fat from her ham had a tiny strip of the nice juicy lean on it. They were glad to have Dan still with them.

Florence C. Hebel.

The End.

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1.—Holland's future queen chooses Prince Sigurd of Sweden as prince consort-to-be. Photo shows Prince Sigurd, 22, second son of the Crown Prince of Sweden; and Crown Princess Juliana of Holland, who has chosen the Swedish prince to become her Prince Consort, according to report in court circles.

2.—Winning the International Regatta at San Remo, Italy. Photo shows a beautiful view of "Aile VI", owned and piloted by Mme. Virginie Heriot of France, winning the eight-meter event in the International Regatta.

3.—Lindbergh inaugurates Mexico—U. S. air mail. Photo shows Col. Lindbergh in the pilot's seat of the giant all-metal Ford plane of the Campania Mexicana de Aviacion, just before he hopped from Mexico City to Brownsville, Texas, inaugurating the air mail service. He carried nine passengers on the first trip.

4.—First woman air "traffic cop". Mrs. F. S. McQueen, wearing her badge which singles her out as the first woman air "traffic cop" in the world. Complaints by numerous residents of Beverly Hills led to the passage of a city ordinance which specifies a minimum altitude of 1,000 feet and prohibits stunt flying above the city. Mrs. McQueen's duties are to enforce these municipal laws. She is an accomplished flyer and is president of the California Women's Aeronautical Association.

5.—Huge porpoise puts up game fight. Jim Farrar with the giant porpoise which he caught when it swam into shallow water in Myrtle Grove Sound, Wilmington, N. C. He struck at it with a rake, but the fish put up a game battle for its life and was finally killed by a blow on the head with an anchor. It weighs 650 pounds, is 10 feet 2 inches long, and 8 feet around the girth. The porpoise is a mammal of the same family as the sperm whale.

6.—"Open plumbing" 1900 years old. A view of the city entrance at Segovia, Spain, with the old Roman Aqueduct built during the reign of Emperor Augustus (27 B. C. to 14 A. D.). The water was conducted on it from a basin on the mountains east of Segovia over the deep valley to the upper part of the city. It is 2,683 feet long and its greatest height is 92 feet—when it crosses the entrance to the city. The structure is the largest fully-preserved monument of Roman colonization in Spain.

TIGHT BINDING TEXT CUT OFF



You can't go *half-way* with orchard pests!

Half a chance is all they need. And the ordinary spray that is deposited in spots or streaks leaves plenty of room for insects and diseases to do their damage. That is exactly the condition that Kayso prevents.

Full coverage with Kayso

Successful orchardists and government experts have found this new way of spraying 100% effective. Kayso spreads the spray in a heavy mist that gets it into every crack and crevice and *thoroughly* covers.

The adhesive qualities of calcium caseinate from which Kayso is prepared, make the spray *stick* through the heaviest dews and even rainstorms.

One pound to 100 gallons

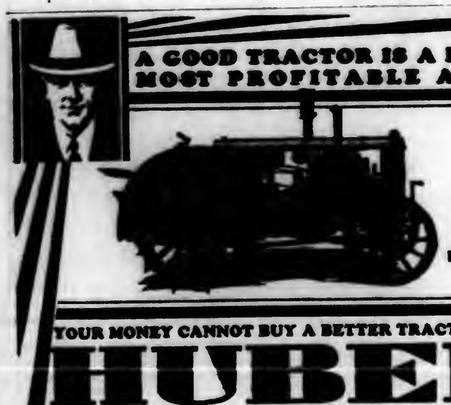
And the cost of using Kayso is just 2% of the total cost of spraying! A mighty small rate for insurance against the orchard pests and labor wasting rains.

Make your next spraying *profitable* with Kayso! Your dealer can supply you. Or write directly to us for full particulars.

GOLDEN STATE SALES CORPORATION
175 Franklin Street, New York

KAYSO

SPREADS THE SPRAY AND MAKES IT STAY



A GOOD TRACTOR IS A FARMS MOST PROFITABLE ASSET

THE NEW HUBER 20-36 LIGHT FOUR TRACTOR

YOUR MONEY CANNOT BUY A BETTER TRACTOR THAN

HUBER

The Huber Light Four Tractor is the ideal Farm Tractor — heavy and powerful enough to do every power job—light enough to get over plowed ground quickly. Hook it to the Huber Light Weight "Supreme" Thresher and you'll have a real money-making rig. Be sure to send for complete information today.

THE HUBER MANUFACTURING CO., 72 E. Center St., Marion, Ohio

Read the advertisements for devices which will help you with the household chores that you dislike most.



Mr. Fox and Son Using Electric Current in Milk Room

Farm Machinery

By R. U. BLASINGAME

New Lighting Plant

THE accompanying illustration shows a new four-cylinder 1,500-watt air-cooled farm electric lighting plant, which is now in use on the farm of Mr. W. H. Fox near Dayton, Ohio.

Last summer I had the pleasure of visiting Mr. Fox and talking with him about this plant. He is highly pleased with its performance and says that he has no difficulty with the use of this large plant to operate his milking machine, light the house, barn, shop and premises, and also run a water pump and the milk bottle washer.

Where high line current is not available this large plant will supply most any farm needs except for the operation of large motors such as are required for silo filling, feed grinding, etc.

In the other illustration is shown Mr. Fox and one of his boys working in the milk house. It will be noticed that this machine has a belt pulley which can be used for operating belt machines.

The early lighting plants, which have given in most cases such excellent satisfaction, were largely one-cylinder. And in many cases the one-cylinder plant is capable of supplying all of the current needed. However, it is the same with the lighting plant as it is with farm tractors. Many farmers who own comparatively small tractors find a larger machine would be more satisfactory.

The company manufacturing this plant has designed and developed this four-cylinder plant to supply the demand for more electric light and power wherever needed.

Danger Season Is Here

WE all forget. When a few bright, sunny, warm days come in early spring we proceed to lose all ideas about the cold snap which often comes and cracks the gas engine cylinder. There stands the automobile, truck, tractor and one-cylinder gas engine about the farm which must be protected. I have a friend who has used kerosene in his car for several years with fine results. He does not hesitate to recommend it for cooling gas engines of all kinds. This man works for one of the big farm implement manufacturers and he is thoroughly acquainted with internal combustion engines.

There is one thing to bear in mind—when kerosene is heated it will expand and some will run out of the radiator overflow pipe. When one looks in the radiator filler cap the kerosene seems to be low. It is no use to fill it up to the top level again, for some will run out again as before. Of course, one has to see that the cooling medium does not run away through a leak in the pump or elsewhere. Keep the eye on the cold snaps in early spring and late winter for that is one of the dangerseasons. Alcohol is an old standby which is hard to beat but it will evaporate from the cooling water. R. U. B.

Lift of Suction Pumps

IN the February 23rd issue of the Pennsylvania Farmer, I answered an inquiry regarding water systems, stating that most of the pump manufacturers recommended their shallow well or suction pumps to lift water only 20 to 25 feet. Recently another pump manufacturer, seeing this statement, has written us that their pumps will lift water 31 feet. He inclosed a report by the Cleveland Electric Illuminating Company which showed that they lifted water with this new type of pump 31.47.

We are always anxious to keep up with the times and we thank the company for calling our attention to these facts. It is difficult, indeed, to keep pace with the new developments which are taking place in farm operating equipment.



The Air-Cooled Lighting Plant on the Fox Farm

Why Fence the Farm?

I OFTEN wonder as I pass along the highway just how many farmers have fenced as they have become [illegible] fathers and neighbors also [illegible] and how many have worked out a definite fencing plan and actually know why the fence is where it is and what kind of type, and know just what that fencing costs them per year and what the [illegible] costs are as low as they can be made.

Originally the primary purpose of fencing was no doubt to keep one's own [illegible] livestock and to keep it from [illegible] stock in, but now most farmers [illegible] have found that keeping out [illegible] is comparatively a minor [illegible] there are more important reasons just about as much [illegible] as when the highways were [illegible] grazing grounds.

Necessary for Good Appearance

The fences and the way they are [illegible] is one of the first things about a farm that impresses visitors and [illegible] prospective buyers, and [illegible] climate is favored most [illegible] are, but of the owner as well. [illegible] well built and well kept [illegible] show that the owner took [illegible] and thought in his [illegible] that he considers his farm [illegible] proper attention. A well-fenced farm has a better appearance and a higher market value. Hence from this value alone good fencing should be considered as an investment rather than an expense; but like other investments, it should be planned and kept [illegible] and for in such a way as to yield the greatest returns at the lowest annual cost.

Good fences make a farm more attractive and profitable. They [illegible] of [illegible] more livestock, especially hogs and sheep, since all stubble and [illegible] crop residues can be pastured and [illegible] at the proper time [illegible] kept free of weeds, and waste land along creeks and ditches made to [illegible] some profit. Quite frequently a [illegible] of oats or wheat must [illegible] from [illegible] or rain, so that [illegible] part of it can be harvested in the regular way. With good fences, the rest of it [illegible] be a total loss, but by turning in [illegible] hogs and sheep, practically [illegible] would be turned into [illegible] at little or no cost for labor.

Soil Improvement

A well-fenced farm is more productive, since this allows of the proper crop rotation. Soybeans and rape can be sown in the corn at the last cultivation with practically no additional labor and their nitrogen-fixing bacteria given a chance to build up the soil fertility, provided the fences allow of turning in the hogs and sheep. The fertility dropped by the livestock is always better than when kept in bulk and then hauled out, and the labor is very much reduced.

Many illustrations could be found where fences have paid in an indirect way. For instance, one farmer had about ten acres of oats, half of which went down so he could not cut it. He turned his hogs and sheep in and they cleaned it up. The other half of the field he harvested, getting 30 bushels per acre. The fence helped him salvage the fallen crop.

With good fences livestock will be pastured rather than breaded, the chances for loss and serious injury will be far less, the mating of blooded stock with scrubs less likely, and the handling of livestock can be carried on more smoothly and with less cost for [illegible] labor.

Finally the builder of good fences will be a better manager, since he can operate more flexibly and take better advantage of labor and market conditions; he will be a better neighbor, since he will have far less chances for quarrels and lawsuits; and he will be a better citizen, since he will have a pride in his farm and in his calling and more leisure for community and civic affairs.

I. W. Dickerson



POWER

IT'S the most power delivered to belt or drawbar at the lowest cost for the longest time that makes your tractor investment profitable. It's power you buy in a tractor—plenty of power wrapped up in tireless steel. Hart-Parr has it, as has no other tractor, and will gladly prove it to you in demonstration wherever you say.

POWER

THE Hart-Parr 12-24 can furnish you the most power of any tractor in its class. On official test it pulled **2950** drawbar pounds at 2.77 miles per hour and 2192 drawbar pounds at 3½ miles per hour. On the belt it developed 32 horsepower and the entire test was run on the cheapest of low-grade tractor fuels. It's plenty of power that will make you money on your tractor investment. The Hart-Parr 12-24 has it.

POWER

THE Hart-Parr 18-36 is the most powerful tractor in its class. On official test it pulled 5535 drawbar pounds at two miles per hour and 4075 drawbar pounds at three miles per hour. On the belt it developed the amazing total of 63 horsepower. This test was also pulled on the cheapest of low-grade tractor fuels. In many competitive field demonstrations it has pulled successfully five to seven 14-inch plows against similarly rated competitive tractors that pulled only three or four 14-inch plows successfully. Everywhere the Hart-Parr 18-36 tractor has proved its power—proved that it has more pounds pull per dollar of cost than any other tractor in its class. It's pounds pull at low cost that makes your tractor investment most profitable. Hart-Parr has it.

POWER

FOR the big jobs, in the field or on the belt, in road work or custom work, the great Hart-Parr 28-50 has the power. In official test it pulled 7347 drawbar pounds at 2½ miles per hour and 4940 drawbar pounds at 3½ miles per hour. On the belt it delivered 64½ horsepower, and this test, like all other Hart-Parr tests, was run on the cheapest of low-grade tractor fuels and not expensive kerosene or gasoline. (It's power delivered to belt or drawbar at low cost that is most profitable for you. Hart-Parr has the *most power at the lowest cost for the longest time.*) See these powerful Hart-Parrs on dealers' floors everywhere. Ask a Hart-Parr owner for facts, or your Hart-Parr dealer will gladly demonstrate. The coupon below will bring you our free booklet "Profits Thru Power." Send for it.

FOUNDERS OF THE TRACTOR INDUSTRY

HART-PARR COMPANY, Charles City, Iowa

Dept. 104 NAME..... ADDRESS.....

Eureka Potato Planter



OPENS FURROW, DROPS FERTILIZER, DROPS SEED AND COVERS — ALL IN ONE OPERATION



MORE bushels per acre and less cost per acre result with use of Eureka One-Man Planters. This double profit increase pays for the machine many times. Over 22 years of success.

One man and team opens furrow, drops seed at distance of depth, drops fertilizer if desired, covers, and marks next row. Plants one acre an hour—or more. Plants right. Better start, bigger yields. Operates in any soil.

Write today for catalogue describing largest line of potato planters made. 2-row, 1 and 2 man, with or without fertilizer attachment. Special attachments for unusual soil or field conditions. In stock near you.

Eureka Mower Co. Box 755, Utica, N. Y.

A POWER Team That Never Tires



Put CULTOR to work anywhere—it plows, plants, cultivates, harvests, pulls any implement usually handled by two or three horses, and does the work better, cheaper and faster.

CULTOR

Because it is so compact, convenient and easy and economical to operate, CULTOR is ideal for small acreages, yet it fits any farm. Successful farmers everywhere use it to cut crop costs. Write us for full particulars. Good openings for more live dealers.



Continental Manufacturing Co. Dept. 242 Springfield, Ohio



Frick Saw Mills

Efficient — Durable

Frick Saw Mills are made in five sizes a size for farm use —a size for custom sawyers, and larger sizes for use in lumber camps.

Frick Saw Mills are equipped with Timken Roller Mandrel bearings, Hyatt Roller carriage axle bearings, headblock ells with separate adjustable racks, improved patented belt feed, etc.

Frick Company, Inc.
347 W. Main St.,
Waynesboro, Pa.

WOODCHUCKS— Trap and kill them. Humanely. Send 1 Trap. Kills Traps. Humane. Trap. Book. Learn. Where and How Trap. Send for a photo and [illegible] W. A. GIBBS & SON Dept. [illegible] Pa. Natives at the most complete [illegible] and Land for Sale in Southern [illegible]

Certified Seed Potatoes

Green Mountains, Irish Cobblers, Smooth Bursts and Russet Burbs. Certified inspected, [illegible] first generation. We pay the freight. [illegible] New York Co-Op Seed Potato Ass'n Inc., Utica, N. Y.

STRAWBERRIES $2.95 per 1000 and up.

Our 16th Annual Bargain Book of guaranteed berry plants, fruit trees, ornamentals and bulbs including MASTODON everbearing strawberry, and free. Wholesale prices. SPECIAL—50 Mixed Gladiolus (bulblets) postpaid for $1. J. N. Bakes & Son Box 4, Bridgman, Michigan

TIGHT BINDING TEXT CUT OFF

Old Rhiney

By CHARLES ADAMS

Copyright, 1901, By Perry Mason Company. Originally Published in The Youth's Companion

THE Fourth of July came on Sunday the year I was thirteen, and was a lost holiday; but my father promised me that if I would work well through haying time I might go to Uncle Sydney Payson's for three days, to visit my cousins, Fitzroy and Egbert, and go blueberrying on "Old White Crop" Mountain. Uncle Sydney's farm was near the foot of White Crop; and the distance from home was twenty-seven miles.

At the outset I expected to make the journey alone, on foot, and was glad of the chance to go on those terms; but as it turned out, I had the company of a boy neighbor, Leland Flint.

The Flint farm was just across the road from ours, and except for an occasional falling out, Leland and I were very good friends. No holiday had been offered him, and he became so down-hearted when he learned what had been promised me, that his mother came over to ask that he be allowed to share my holiday trip; and eventually his father was led into consenting to our taking their white mare and chaise.

We set off at five o'clock on Wednesday morning, July 30th, in joint command of the old mare, and reached Uncle Sydney's during the afternoon. My story, however, is not of the fine time we had there, playing with Fitzroy and Egbert, but of what befell us on the way home.

We started on Saturday afternoon, directly after the midday dinner, with two ten-quart pails of blueberries in the old chaise. We had gone as far on our way as the intervales, near the ferry over the river, when a thunder-shower, which had been threatening for some time, overtook us. The first hard gust dislocated the old chaise-top, and we were soaked before we could gain the shelter of the meeting-house sheds at the little village by the ferry.

Meanwhile, first hail, then rain, fell copiously for an hour or more. It must have been past three o'clock when we escaped, and we had then to go to a blacksmith's shop and wait for an hour or more until the iron frame of the chaise-top was welded. The charge for this and the ferry toll took all the money we had except three cents.

"It never rains but it pours," the proverb says. Still another heavy shower, coming on not more than a mile beyond the river, forced us to take refuge at a farmer's barn. There were two farms here close together, and a thunderbolt struck a large elm-tree by the other farm house, just across the road from the barn door where we stood. The tree was literally rent to pieces.

After the storm the farmer's wife, who was in a thankful mood, insisted on our remaining to supper. Rain continued to pour for two hours, and night came on before we got away from this second kind harbor.

The people wished us to remain overnight; but the moon came up after the shower, and as we had received strict orders to return Saturday night, we drove on at about seven o'clock, having still eighteen miles to go, over hilly roads.

It had been an afternoon of adventures, but worse were ahead. Haste was out of the question, even if the old white mare had been fast; for the violent shower had gullied the road down the hills, and the flats and meadows were one continuous puddle. We found two small bridges gone, and saw what we thought was a bear go across the wheel-track ahead of us; but we finally reached the top of Powder-House Hill some time between eleven and twelve o'clock.

ABOUT half the time until then we had been afraid that we were lost, but now we knew where we were. Powder-House Hill was only three miles from home. There were acres of bare, flat ledges here, and the first settlers of the county had stored their "war supply" of gunpowder in a little log house on the ledges, out of reach of forest fires.

The moon was still somewhat obscured by the clouds; but we recognized the place, and could dimly distinguish below us the valley of Stony Brook, along which ran the main county road. I could see better in the night than Leland, at least I thought that I could, and had been driving. But now he wanted to take the reins.

"Wait till we get down this hill," I urged, loath to give them up. "This is a bad hill. Most likely it's gullied, and you can't see."

"I can see just as well as you can!" retorted Leland. "Anyhow, I shall drive the minute we get down to the main road! It's my team!"

The hill was a long one and steep in many places. We came to washouts and had to get out, Leland going ahead to explore for bad places and I leading the mare by the bit. At the point where the road joined the main road there was an open tract, where some farm-buildings had burned several years before. Here we could look along the main road for some distance where it skirted the west bank of Stony Brook, and we immediately discerned several moving lights approaching from the southward.

"It's teams coming," said Leland. "Heavy teams, too, and loaded. You can hear the axes go clinck-er-clincket!"

We both wondered greatly what the wagons could be, and why and whither they were going at that time of night. Since the railroad had been constructed, three miles to the eastward, there had been little heavy teaming on this road.

As many as five swinging lanterns were in sight, and from the sounds we knew there was a long procession of ponderous carts or wagons.

"We had better stay right here where we are till they get by," said Leland. "What in creation do you s'pose 'tis?"

This query was cut short by a strange noise, a kind of deep chest cough, or bark, several times repeated, ending in a cacophonous yawn like roar that nearly brought our hearts into our mouths and set tired, staid old Nance to snorting and pulling to get away from me.

Leland nearly whimpered outright; he was so frightened, and grabbed the other side of the old mare's bit. "Wha-wha-what was that?" he cried, his voice shaking.

I WAS equally alarmed. We led old Nance into the yard where the farm buildings had stood and where there was a large stone wall with tall blackberry bushes growing beside it.

The light of the foremost wagon was now close at hand. It alternately appeared and disappeared, and immediately we perceived that this was occasioned by some large object ahead of the wagon. It was not the horses, for we could see the lantern-light shining on their harness.

What this large, black object ahead could be we were unable to make out. It was not a wagon apparently, yet it moved steadily forward, and not until it had come up nearly abreast of us did we discern that it was an enormous animal.

With that we crouched still lower behind the wall, and for a moment were on the point of bolting for dear life and leaving old Nance to her fate. But the monster and also the wagon were now passing by us in the road below; the lantern-light shone on the latter's creature's flank, and immediately the real nature of the nocturnal cavalcade dawned upon us.

"Leland, it is a circus!" I whispered.

"Yes, sir-ee!" he whispered back. "It's a circus, and that's the elephant!"

Neither of us had ever seen an elephant before, and strange as it may seem, had never attended a circus performance. We had read about such exhibitions, however, and now remembered hearing a rumor that a menagerie was traveling through this part of the state. Evidently this was the "show" on its way by night.

Recovering from our alarm a little, we were both seized by a great desire to see more of the animals; but we now felt sure that the great carts were cages, containing lions, tigers and leopards. Leaving old Nance fatched to a post we stole down near the road. It was light enough that we could see. Now and then a wavering ray from a lantern gave back tantalizing gleams of gorgeous red and yellow paint.

As it chanced, however, we were to witness a performance that night of a sort not down in the playbills. For presently, as the procession of jogging wagons and drowsy drivers moved on, there came a loud hallon from the rear.

"What's the matter there?" hailed back a gruff voice from far up the road.

Broke down!" yelled the first voice. "Old Rhiney's cage!"

Thereupon, from all the drivers along the whole line of vehicles, there burst forth a tremendous volley of imprecations. Leland and I were dumfounded. Never in our lives had we heard anything like it.

The procession had come to a standstill, and many of the drivers went back with lanterns. A man who, as we concluded, was the manager, roused up in one of the dark wagons, and began to give orders to the others. Soon, too, we heard a woman's voice berating the road, the country and everything in it. Then a droll falsetto voice rose from another wagon, and crowed like a rooster, to our great amusement.

"I guess that's the old clown waked up," said Leland. "Wish I could see him!"

In the meantime a row had broken out at the hindmost wagon. The boss was abusing the driver for neglecting to lubricate the axles; the driver retorted that there was no axle-grease, and that he—the boss—was too stingy to provide any. The other drivers roared forth the same accusation, one of them adding: "Where's our pay, too, that ye've been promisin' us in ry day for three months back, an' niver a cint of it in sight?"

The difficulty quieted down at last, and the broken axle having been repaired in some way with the aid of a chain, the caravan started forward, the drivers still grumbling to each other. They had proceeded for no more than a couple of hundred yards, however, when something went wrong with the axle again, and another outcry rose the whole length of the line. In the midst of it the queer falsetto voice drawled out:

"Cock a doodle-doo!
What's the matter with all of you?
Here's a pretty how d'ye do!"

Soon the drivers were pottering about the broken axle with their lanterns. The moon shone hauntingly through masses of watery cloud. Its dim light, falling upon the gaudy wagons and cages, rendered them unearthly; and this effect was heightened when the hitherto quiet animals began to yawn and leap, and a muffled roar burst forth and echoed through the valley.

The uneasy mutterings of the caged beasts were presently drowned in a far angrier outburst from the boss and his teamsters. They were, it seemed, unable to repair the axle; and after many hard words over it, the boss ordered the cage to be hauled a little out of the wheel track and left there till morning, when a smith could be procured and sent back to mend the axle.

The teamsters attempted to execute this order, but had difficulty on account of the narrowness of the road, the encroaching bushes and the broken end of the axle. After much to-do and shouting, they drew the cage partly off the road into the brush.

"Farther out!" the manager shouted angrily.

They started it again, when on a sudden the off wheels went over the bank, and with a crash the cage upset and rolled completely over through the bushes, down to the bed of the brook below. Leland and I took to our heels, for there was no knowing what terrible beasts might have been spilled out. We unhitched old Nance, turned in haste, and started up the Powder-House Hill as fast as the mare could go.

Below, another row was in progress. We could hear the boss and his men reviling each other savagely. The woman, too, was taking a part.

(To be continued.)



The Cheerful Plowman

SPOILING THE MEETING

SAY, our convention was a joke! Forsooth, my heart is nearly broke. We didn't do an earthly thing, except to visit, gaff and sing. We all went there with good intent, with purposes all fixed and bent, determined that good business ways would rule the meeting through its days. We had a task in mind, we thought, a task that should be quickly wrought. We had a remedy in mind for grave abuses, we opined, and we were sure we'd thresh things out, and fix things up without a doubt.

No matter now to give details, explain brass tacks and shingle nails; sufficient just to say that we went there with minds exalted, free, determined that a cure for ills would be put through our grinding mills. But, when we got together there with social feeling in the air, ta hundred fellows, don't you see, all jolly, friendly, happy, free] that great convention soon became a social club, a sort of game.

We sang "America" with zest, and "Annie Laurie" at its best; we toasted Jim and John, and Hank, Napoleon, and Fritz, and Frank. We said nice things about the guy who started swatting of the fly; we lauded Washington and Grant, and Henry Ford and half his plant.

We had nine banquets, I am sure; each day a new sight-seeing tour; we visited a woolen mill, observed a tunnel through a hill, we saw the city hall and jail, heard lectures on the comet's tail. We had an airplane ride, you bet, and other things I can't forget, such as a breakfast on the grass, a boat ride through the Devil's Pass, but when adjourning time was come we felt like people stricken dumb, for we'd not done a blessed thing except to visit, gaff and sing. J. E. T.

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Clark

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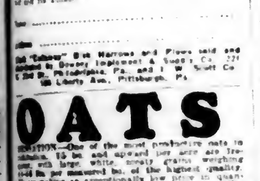
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Kentucky Bluegrass

... In the middle of the ... section of Pennsylvania ...

... pasture ... Kentucky ... at least two ... to ... This method ... of the grass ... to revive ... cropping. It ... to ... that held cured Kentucky blue ... as it occurs late in the fall is ... by grazing stock and serves ... of feed until snow. Ken... grasses in this respect. In regard ... kinds of grazing the readers are ... to be attacked by Dr. J. T. Lip... in his "New Methods of Pasture Management in England" published in this paper November 24, 1928.

Pasture Seeding

The chief value of pasture feeding ... supply an abundance of easily digestible protein, the most expensive ingredient in animal feed. It therefore seems logical to use the grass crop for ... protein. The usual recommendation ... to seed a variety of grasses many of which contain only one-third the protein contained in Kentucky bluegrass. One correspondent suggests the following mixture of grasses: orchard grass, Italian rye grass, English rye grass, meadow fescue, tall meadow oat grass, brome grass, white clover and alsike clover. With the exception of the two legumes these grasses contain an average only 58 per cent the digestible protein contained in Kentucky bluegrass.

It has already been proved that Kentucky bluegrass will thrive in Pennsylvania or any northeastern state if soil conditions are made suitable. Why retard the growth and development of the most valuable of all pasture grasses by introducing a variety of grasses of low feeding value? In order to use the land for grazing before the bluegrass develops it is usually recommended to sow a mixture of red and alsike clover. The writer offers no objection to this method except that the bluegrass development will be somewhat retarded by the clover plants.

The following method of pasture seeding is recommended which will give a crop the same summer. To oats or barley seed one bushel of Kentucky bluegrass and two and one-half pounds white Dutch clover seed. Also bluegrass may be seeded to wheat. The Kentucky bluegrass and white clover may also be seeded alone. Since the writer recommends that the seed bed be well prepared it is more economical to include a grain crop.

o

Care of Peonies

(Continued from page 9)

sized handful about the plant, being careful not to get it directly against the stalks. Then not as the buds form this spring use a highly nitrogenous fertilizer, such as sulphate of ammonia or nitrate of soda. Use about two tablespoons to a pail dissolving it in warm water, and then sprinkling the plants over with clear water which will wash some of the solution on the stalks or leaves, and will help to carry the fertilizer in the soil down to the roots. The homemade is slow in action while the nitrate or sulphate is readily available and will bring increased vigor and size in a week or two.

Be especially cautious in using the ... fertilizers to feathers that you do ... get it on the leaves or that you do ... wash it off.

Another way to produce larger blooms is to cut off the little buds on the ... leaving only the central buds.

L. L. R.

o

Mayor (presenting a clock and a purse)—The contents of the purse will inevitably disappear, but—laying his hand on the clock—here is something that will never go.—Tit-Bits.

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"IT PAYS TO USE THEM"

An Old Timer

AS we sped over the paved road from Erie to Corry, Pa., or as we flit over in the latest type airplane, we little dream of conditions as they were at the end of the eighteenth century. My great grandfather, James McCray, Sr., came to this country from Ireland in 1796 and settled in Westmoreland county, Pa.

Three years later my grandfather, James McCray, and his wife came to Erie county by way of Pittsburgh, where grandfather bought two horses. This was before the days of covered wagons, so they packed their goods on one horse and rode the other. Most of the way the trail led through the woods, as this part of Pennsylvania was practically all forest land.

In 1799 they settled in Concord township, Erie county. In those days the question of railroads, paved roads, schools or churches did not enter into the selection of a home. The only consideration was [illegible] and water. [illegible] the hunting and fishing was good.

Bear Takes Pig

At that time the woods were very full of wild game. One day [illegible] father found [illegible] and ran out to investigate. He saw a bear walking off with a pig. Not having time to load his gun, he grabbed a pitch fork and attacked the bear which dropped the pig after a short fight.

Sometime later a grist mill was built near Elgin. One day my father, then but a boy, was carrying grist hung across his horse's back, when he spied two cubs at the foot of an old hollow tree. He had an empty sack with him and boy like he jumped off his horse, put the cubs in the sack and started home. He rode on feeling pretty rich with his pets, but he had not gone far when the scene changed.

Old mother bear came home and finding her cubs gone she tracked the boy and soon overtook him. Lucky for him there were two good dogs along, and they fought off the bear and my father got home, but one of the dogs was bitten and torn so badly that it died the next day.

In 1820 my father, John McCray, took up 240 acres of land in Concord township. He cut down trees near a good spring and built his log house. There were no public roads at that time.

Stage Coach Days

I do not remember the old log house where my mother reared sixteen children, teaching school in her home a part of each year. In 1836 my father built a modern frame house near a public road. I was born in that house and my eldest son was born there. My father had the farm nearly cleared at the time of his death in 1855. In 1892 I built a new brick house near the old homestead, and lived there until I sold it a year ago and moved to Corry.

I have lived in Concord township all my life with the exception of a few boyhood years in the oil country, at Foxburg, 42 miles below Oil City. That was in the early seventies, and oil at that time was worth $4 a barrel and business was booming.

While there I tended a toll station between Foxburg and St. Petersburg on a pike road. Often there were as many as seven stage coaches a day paid toll.

A man by the name of Dunk Carr [illegible] a ferry across the Allegheny river. It was there in the oil country that I cast my first ballot, voting for U. S. Grant for president. One man challenged my vote, thinking that I was too young to vote, but I proved I was of age. Since that time I have voted for a president every four years, my last vote being for Herbert Hoover.

I was the youngest of eight boys. Five of my brothers were in the Civil War. One died on his way home after



Henry McCray, Age Eighty

serving his time out in the army. Another died in Anderson Prison and is buried at the National Cemetery there. One brother, Captain of Company A, 145th Regiment, Pennsylvania Volunteers, was wounded at the battle of [illegible] but stayed till the close of the war.

[illegible] The oldest colored [illegible] in Corry last [illegible]

[illegible] old oil fields [illegible] and saw some [illegible] is now a [illegible] automobile [illegible] to [illegible] the old stage [illegible] a nice iron bridge [illegible] Allegheny river, doing the work of Dunk Carr's old ferry boat.

I remember when the Erie and Sunberry railroad was built through Concord township now known as the Erie and Philadelphia. I also remember the laying of the Atlantic and Great Western now called the Erie. The two railroads formed a junction where the city of Corry now is. I came down to the junction with an older brother who hauled a load of oil up from Titusville. Corry was nicknamed the City of Stumps later.

Some years ago they had "old home week" in Corry and my boy Vance, who is now in Cedar Rapids, Iowa, was a lad. He had a yoke of steers broke and the committee for the night parade got him to drive them. They placed an old stump on a boat and the steers led the parade drawing the boat with a sign which read "The Last Stump Removed." Henry McCray.

Why a Farmer Left Home

JOEL EDWARDS was a sturdy scion of pioneer stock. He had inherited an abiding thrift and industry. The lure of the soil was deeply imbued in his blood. The soil responded to his affectionate culture. Conservation with him was more of a habit than convention. He had many friends. One especially, who joined him in the age-old cooperation of marriage. The years passed on, he prospered, but worked too hard to wax and grow fat.

He bought a rolling eighty of good dirt. Bought before it got so high he couldn't ever buy it. He rolled up his sleeves and worked harder than ever. His children needed education. A fine new high school appeared in the center of his township. The buses demanded better roads, and the voters granted them. Gray hairs mounted on Joel's brow faster than the mortgage dwindled. And taxes rolled up like a tidal wave and threatened to engulf all.

Two crop failures brought the realization that the debt was increasing faster than the cost of living elsewhere. Joel discovered that he was neither eating his cake nor having it.

One morning the little gray farm house was empty, a spider web [illegible] the kitchen door. A brawny man was [illegible] fenders on a dusky city. There's an ache in Joel's heart that will never be entirely eased 'till once again he owns a portion of the Great Footstool, whereon he can toil for his daily food. And his ache is in the hearts of thousands of other cityites, who long for the fertile green spaces; for independence, but not for slavery.

S. H. Green.

A Pennsylvania Pioneer

THE pioneer spirit still lives in Berks county, Pennsylvania. It took the courage and stamina of a pioneer for C. R. Bashore, a farmer near Bethel, to plow up three hundred acres of land two years ago, then lime, fertilize and seed this acreage to permanent pasture.

Good productive shale land in this section is relatively cheap but there is a scarcity of good farm labor. Mr. Bashore figured that it would pay him to make a good pasture and let his stock harvest more of their feed. He wanted to take things a little easier on the farm, and decided to invest some hard earned money in pasture improvement.

He plowed the land in the spring, limed with fifty bushels of stone lime, and fertilized with 300 pounds of a complete fertilizer. About six quarts of a pasture mixture was sown with a very light seeding of oats for a nurse crop. The oats were cut green and allowed to rot. The stock was not turned in the pasture until early fall after a crop of hay was cut. The pasture was fenced into two sections so as to alternate the cattle and prevent overgrazing.

Dairy calves were bought up the first winter and well started by spring. They had good pasture all season and now Mr. Bashore has a large herd of young stock for public sale that will bring him as he says "some real money". That pasture improvement pays this pioneer in Berks county is shown by the fact that he has taken fifty acres of plow land on another farm and put it into permanent pasture. The rest of the farm has been put into more intensive cultivation with a short rotation of wheat, sweet clover and potatoes.

The pioneer spirit of this man is further shown because he is not satisfied with his methods of pasture fertilization. He intends to make some fertilizer tests starting this spring to compare the results of 500 and 1,000-pound applications of three fertilizers, an 0-10-0, 0-10-10 and 5-10-10. In this way he intends to observe the responses of his pasture to each element, phosphate, potash and nitrogen in the growth of clover and bluegrass.

E. K. Walrath

Not How Big, But How Good

FARMERS' WEEK was over and I was sitting in the railroad station waiting for my tram. At my left sat a middle-aged farmer who was talking vigorously to a man on his left.

Then his voice came nearer, and I realized he was talking to me. He was pointing to a picture on the front page of my newspaper—a picture of the girl whose baby beef animal had won first honors during Farmers' Week.

"I know that girl," he said. "Have known her since she was a baby."

The conversation soon veered around to the man on my left—which was what I wanted. Yes, he lived on a farm—a dairy farm. No, he kept only a small herd—sold butter. Yes, it paid better than selling cream—he always had more people wanting butter than he could supply. A man had just told him the other day that the only way to get on the preferred list was for a customer to die.

"There are customers on my list I have had on for 18 years—I've got four of 'em," said my new found friend.

"And the farm pays you pretty well?" I ventured.

"Yes, sir, it does," he replied.

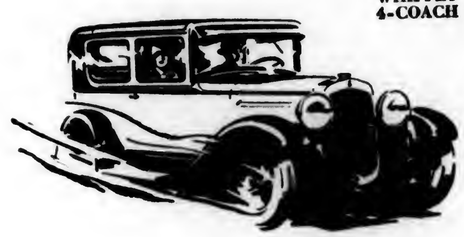
"Do the cows keep you busy all the time?"

"Well, I raise hogs and sell pork, and keep a flock of chickens, all pure-bred—everything pure-bred on my farm. I want the best."

So, there you are. A small herd—five cows; a 25-acre farm. And this man was making money. Three sources of income—dairy cows, hogs, poultry.

It isn't the size of the farm, but the way it is managed. E. A. Kirkpatrick.

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The quick way to market. Trucking potatoes from the farm of William G. Mendenhall, Master Farmer of Chester county, Pa.

The Question of Production

By W. D. ZINN

SOME time ago the writer had occasion to say about increasing the production per acre: "I took the position that the only way to bring about economical production is to increase the yield per acre. West Virginia is producing on the average 26 bushels of corn per acre and 13 bushels of wheat. That is to say the state is losing money growing both corn and wheat. The same is true with adjoining states. Every one who has ever kept an account of the cost of producing either corn or wheat knows that we must have larger yields than those if any profit is gained."

A good friend writes: "I always read your contributions to Pennsylvania Farmer with great interest and pleasure. For knowledge, logic, common sense and clarity of expression they are unique." One who would not appreciate a compliment like that must have a heart of stone. He goes on and says, "But in your letter of February 2nd I think you slipped a little," and then he gives me the worst lambasting I have had during the last quarter of a century because I had insisted on farmers increasing their production.

"The time was when production problems were vital, when the farmer's income was measured and limited by his capacity to produce. Not so now. The problem now is to keep production within demand and cheapen its cost."

I would like to ask my friend how he is going to cheapen production except by increasing the yield per acre. Let us take a concrete example. Mr. Marshall of Hardin county, Ohio, produced 176 bushels of corn on an average on ten acres of land and Mr. Smith produced 30 bushels per acre. Were not the incomes of each limited by the production? I have the first farmer to know who did not succeed if he grew maximum crops all the time. There is no better proof that farmers are interested in production than that they write me hundreds of letters asking how they can increase their yields. As I see it many farmers must increase their yields per acre or go out of business.

• • •

Spring Wheat

I had about five acres of bottom land that I wanted to sow to wheat last fall but I did not get it sowed. Would spring wheat do well on this field?

Do you put any lime on your potato ground. The field I mentioned was in corn last year. John Burk.

THE wheat question has been answered above. Lime will not hurt potatoes. On the contrary it will be a benefit. The reason why so many farmers think it harmful is that potato scab thrives best in a sour soil and if lime has been applied the scab germ develops more rapidly.

• • •

Japan Clover

Would like to know if Japan clover would grow in Bedford county, Pa. How when and how much should we sow per acre? Would it be all right to sow on land sown to winter wheat. Will it grow if sown on pasture land without plowing or harrowing the ground? J. F. Smith.

JAPAN clover is an annual and must ripen the seed each year if the culture is perpetuated. I fear that Bedford county, Pa., is just a little too far north for the seed to ripen. We only sow it about in spots and it ripens seed and continues to spread. There is only one suitable place to sow Japan clover and that is on permanent pasture. It should be sown in February. It does not require inoculation, lime or a prepared seed bed.

• • •

Spring Wheat

Do you think it would be advisable for me to sow spring wheat in corn stalk ground? I live in the lower part of York county, Pa. Jacob A. Jess.

IT HAS not proved profitable to grow winter wheat in this section in recent years and spring wheat, when tried, has not been yielding as much. The Ohio Experiment Station does not advise the farmers of Ohio to grow spring wheat. A crop of oats, barley or oats and Canada field peas is likely to be more profitable.

• • •

Sweet Clover and Oats

I have a field I want to put in oats this spring and seed to sweet clover and I want to know what kind of fertilizer to use. This field was in corn last year and raised a poor crop. I had the soil tested and it doesn't need lime. I guess it needs humus. I want to turn the sweet clover down for an improvement if I get a catch of clover. When will be the best time to turn it down? John Sweet.

OUR correspondent is fortunate if his land does not need lime. The farmer who has thin land that does not need lime and will keep it thin deserves nothing better, for he can soon have it very productive if he will grow a few crops of sweet clover and turn it down. When this is done it should be sown in the spring with oats and the oats cut when in the milk stage for hay, but no other crop should be taken off that year if the land is thin, and the next spring it should not be turned down until the first of May or a little later. If turned very early in the spring it will sprout from the roots and become a weed in the next crop. If left until first or tenth of May no trouble of this kind will be had. It will pay to apply 200 pounds superphosphate per acre to this land when sowing the oats.

• • •

Barley, Oats and Peas

We have read where a certain writer advised this mixture: Seven pecks of oats, three pecks of barley and one peck of Canada field peas. Would this yield well in northwestern Pennsylvania on good land and would it be practical to grow them together?

Can alfalfa or sweet clover be sown in the spring in wheat, as well as clover and timothy? A Penn'a Reader.

THE writer is slow to recommend a thing he has not tried or seen tried, and it is that way with the mixture recommended. One thing is true, we will grow more tonnage on our land by growing a variety of plants than we will if we grow but one, even if we grow the one that produces the largest tonnage. That is to say, if we grow timothy and clover we will produce more tonnage than if we grow clover alone.

If a heavy seeding of Canada peas was made there would be danger of choking the oats and barley, but one peck per acre would not do it. There is some danger of the three not ripening together if they are cut to be threshed for the grain, but no danger if cut for hay.

All three of these are cool-weather plants and should be sown as soon as they can be got in after the first of April. Some farmers sow oats and soy beans or cowpeas together and these two are not companionable. One is a cool-weather plant and the others are warm-weather plants. Millet and Sudan grass go well together with soys and cowpeas.

Many farmers sow alfalfa and sweet clover with their wheat and succeed. I have done it myself.

• • •

Fertilizer for Oats

I have recently bought a farm that has not been worked for two or three years. I have a field I want to plant in oats that now has a light sod on it. It had been in oats at the last planting, but I do not know if it was seeded to grass or not.

This is fair ground and I would like to know what sort of fertilizer you would recommend so that I would be reasonably sure of a crop, without having weeds smother out the oats.

T. C. Reichard.

WE usually apply fertilizer in proportion to the profitableness of the crop. One can afford to make a heavy application of a complete fertilizer when planting because the crop usually pays well, but oats are not a very profitable crop and I would be inclined to apply only superphosphate and put on from 200 to 300 pounds per acre of a 20 per cent goods since the land is fairly good. The phosphoric acid will be there for the wheat if the oats do not use it all. The Ohio Station has found that wheat does better following oats than it does to follow soy beans.

• • •

Paper Mulch

What do you think of this mulch paper? Do you think it is worth while to try it or is it a fake? I raise tomatoes, cabbage, beans, beets, carrots, etc., for market and would like to try mulching if I thought it would do any good. J. L.

I HAVE not tried a paper mulch, but I have a good deal of faith in it because not only some of our experiment stations recommend it but some good farmers have tried it and got good results. I can hardly see how it can be profitable for field crops, but I can see how the truck grower can be benefited by its use.



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BUY QUAKER FEEDS IN STRIPED SACKS

Farm and Dairy

By L. W. LIGHTY



A little stream of these letters comes to me in letters all the year and some individuals bring their personal [illegible] so I cannot forget that a lot of our older people consider simple and easy is a most difficult and complicated matter to those with less experience.

The Ancestral Home

[illegible] the roving bee-hoist persuasion it must seem ridiculous that any one should become so attached to the 'old home' that it is next impossible to leave unless by compulsion but there are many such. I have a letter from a man's lady who has become discouraged on an old homestead, as they are known a little distance south of the Mason & Dixon line, which came by way of several generations.

There is a block of land making a good sized farm and the nice old buildings and the trees, shrubbery, flowers, paths, glens, woodland brook and scores of things to love and revere. Unavoidable conditions put this land into a condition that must be corrected. Fences and other items at the same time have placed a considerable debt on the property. This owner has struggled hard to repair these conditions with such help as she can get, but this help is ignorant and unsympathetic and no headway has been made.

The central question of the letter is: "Can you send me a man who would help me build up this farm and at the same time make some money." I had to tell her I could not because all such men are tied up solid on farms of their own or on tenant farms where they are a permanent fixture as long as they wish to stay. I wrote out a few hints as to what might be done, but such a situation is entirely too delicate to venture direct advice on definitely.

Different Lines of Production

"My father made butter and took it eighteen miles to market. That was slavery as I saw it, so I changed to selling milk and delivered it at the station almost four miles away. The roads were bad and soon my little truck was knocked to pieces and I sold the cows, concluding to do something else. My income has dwindled and my land does not produce as well as formerly and I am thinking of getting cows again and making butter, as we have a good market where father sold his butter. What do you think of this plan?"

Shifting around from one thing to the other is like the rolling stone. You do well to consider seriously before you make another move. To go to a good market you must have good butter, if you want to command a good price. To make good butter you must first know how to do it and you must have the equipment to do it with. This equipment costs money which should not be spent unless you mean to continue in the business.

Possibly your father bought a dash churn at the auction for two shillings and some crocks for several more shillings and the rest he made himself. You need a cream separator and a cream [illegible] equipment and a good [illegible] cream and butter worker and [illegible] the same. You [illegible] cream and butter paper [illegible] and also a carrier [illegible] dairy.

[illegible] 56 miles a [illegible] looks you will have [illegible] delivering the [illegible] consideration. The [illegible] broken day is [illegible] instead of six [illegible] one, and that [illegible] Then you can [illegible] every time you [illegible] that may pay [illegible] cost of delivery. [illegible] good enough an [illegible] you may sell it a [illegible] A neighbor, and trim [illegible] cents a pound [illegible] better. Again it is possible [illegible] cost of the skimmilk 25 to 2[illegible] cent as much as you were getting [illegible] the fluid milk but all of this [illegible] a real big lot of know-how and [illegible] bugger but of stick-to-it-iveness and [illegible] hard work. The possibilities before [illegible] are big but you have to grasp [illegible] and use them intelligently.

Pleasure and Pests

My field crops and livestock are [illegible] business proposition and it may [illegible] necessary with those to worry [illegible] and fight pests. My flower garden [illegible] and always was a pleasure proposition [illegible] as much as I see a plant in it [illegible] looks sickly it is promptly dug up [illegible] and branch and cast into the [illegible] dump. For some years we have been at work selecting field crops that [illegible] immune to pests and in a measure have succeeded. I will assure you I have insects succeeded in my flower garden because ruthlessly I remove [illegible] that are not immune.

I have tens of thousands of flowering plants on my garden and in the spring season I have masses and beds of enchanting color, as those of my folks will testify who visited my garden. Often they ask me what I do to keep my plants so healthy. The answer is manure and a strong hoe.

Let us see this in a practical way. If we destroyed all the plants and animals not immune to pests we would sustain a great loss, nevertheless not much of it right now in the hope of establishing immunity. But in the flower garden, which is not a business proposition, I sustain no loss when I destroy plants that invite all the [illegible] insects, fungus, bugs and [illegible] of the territory.

I will admit there are some [illegible] plants I do not have in my garden to have them and hover over them would be to me an unbearable irritation and exasperation.

Feed for Calves

Please give me information on the correct quantity to be fed of the following feeds:

Rations consist of calf meal gruel, one high protein calf meal mixed in a gallon of lukewarm water, two times a day, on top of this one and a half quarts grain, for a Holstein heifer two to six months old all the mixed he or she will clean up. This is fed three times a day.

Am feeding two dozen heifer calves three to four month's old on following ration: About one-fourth pound of meal to two quarts of water, one and a half pints meal or grain and all of hay they want.

One Jersey [illegible] calf ten [illegible] one and three-fourth quarts [illegible] weighs about 300 to 350. This calf is very neat and in good condition [illegible] fear if I should increase ration it would get rather fat.

The meal or grain is a dairy ration consisting of bran, gluten, hominy or corn chop, linseed meal. C. W. Bee.

MOST companies putting out a meal give directions as to the amount of feed throughout the [illegible] when calf meal is usually supplied [illegible] usual rate is about one pound of calf meal to a gallon of water at a temperature of about 90 degrees. I should feel that the Holstein heifer calf, five to six months old, might increase the allowance of calf meal one-fifth pound per gallon so as to make the total allowance of calf meal one pound to a gallon of water.

The amount of grain to feed will depend on the size of the calf. A fair allowance is one pound of grain for the first hundred pounds of live weight and half a pound additional grain for each additional hundred pounds live weight. In other words a calf weighing two hundred pounds would be entitled to one and a half pounds of grain daily in addition to skimmilk, calf meal gruel and hay. A three hundred pound calf should receive two pounds of grain daily. A four hundred pound calf, two and a half pounds of grain. A five hundred pound calf, three pounds of grain daily.

The Jersey heifer might have her allowance of calf meal increased a half pound daily in two quarts of water.

The Jersey bull calf apparently is being fed more cream than he needs in accordance with the foregoing rules. If he is getting fat I would advise cutting down somewhat the grain allowance.

A. A. Borland.



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Roots for Cows

I am writing to ask you what I can substitute as just producing food to take the place of turnips which I have been feeding to my milk cows since last November. They have produced very well this winter, but our turnips will be gone about April 1st and I have thought of feeding beet pulp to take the place of turnips when they are gone. We have been feeding about eight quarts of turnips per day to cows that are giving milk. How much beet pulp would I have to feed to take the place of the turnips? E. W. Bumbaugh.

DRIED beet pulp will make a satisfactory substitute for turnips but it is expensive as compared with roots or silage.

About three to six pounds of beet pulp dry weight will take the place of eight quarts of turnips. Soak the beet pulp in three times its own weight of water for about three hours before then mix the grain allowance with the soaked beet pulp.

A. A. B.

Dried Malt

[illegible] dried malt [illegible] grain? I would [illegible] part of the grain ration I feed to my [illegible] grain and [illegible] Archie Heiland.

DRIED malt is palatable and nutritious feed for dairy cattle. It will take the place of wheat bran in the grain mixture since it is a rather bulky feed and has approximately the same analysis as wheat bran.

Dried malt contains 18 per cent protein, 60% per cent carbohydrates of which 9 per cent is crude fibre and 6.6 per cent is nitrogen free extract. Dried malt contains 2% per cent fat on the average.

A good [illegible] to go with clover hay [illegible] silage could be made up of [illegible] corn meal or corn and oats meal or [illegible] parts of each. Add 100 pounds of dried malt sprouts, 100 pounds of cottonseed meal or gluten meal or portions of each, 100 pounds of linseed meal or soybean oil meal or peanut meal or soybean oil meal or portions of each.

The grain mixture should be fed to [illegible] of [illegible] cows at the rate of one pound of grain for [illegible] to [illegible] and a half pounds of milk. To Holsteins, Brown Swiss or Ayrshires at the rate of one pound of grain to [illegible] pounds of milk.

A. A. B.

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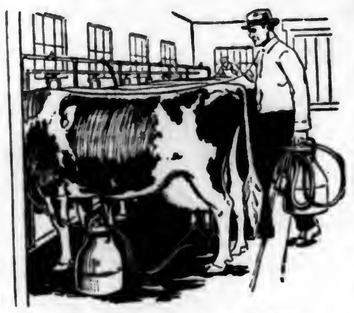
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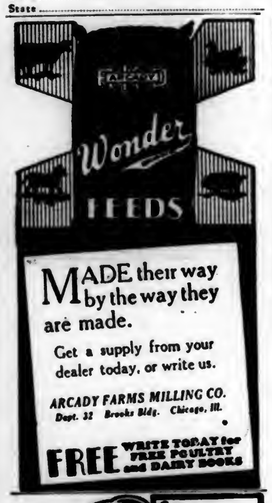
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2013 Corona Bldg. KENTON, OHIO



Calf in packing box as recommended by the Department of Dairy Husbandry of the New Jersey Agricultural College. The inexpensive box may be burned when its tenant outgrows it.

Sanitary Measures Insure Strong Calves

THE Department of Dairy Husbandry of the New Jersey State Agricultural College has recently hit on a novel method of growing calves. It would seem from this method that the apartment house scheme of growing young calves may be a possibility in dairy cattle farming as well as in poultry raising. Surely it has been proved that sanitary measures will usually overcome many types of disease that threaten the success in raising young calves.

The Agricultural College feels that it is not alone in its difficulty in raising calves where housing facilities make it necessary to keep the young animals in more or less crowded conditions. It is felt that probably there is some germ prevalent which is peculiar to the College herd, and no doubt this condition exists in many other herds where there seems to be difficulty in getting young calves successfully started.

Trouble with Scours

The College herd for the past five years has had considerable trouble in raising calves even though good facilities were available. The trouble seemed to begin when the calves were about two weeks of age. First each animal seemed to scour, then followed in many instances calf pneumonia, and if the animal did live there was a lack of thriftiness for at least two months before the young animal began to take any amount of feed at a time and grow. During 1927 several epidemics of this calf distemper broke out among the youngsters and it seemed not to matter whether it was during cold weather or during the summer months.

Some parasite was apparently at work in the digestive system of nearly every calf born in the herd. While there were few fatalities there was nearly 100 per cent disease among each new arrival as it was placed in the calf barn. It was thought that the calves were suffering from the lack of some vitamin or element necessary to growth. Several calves that died were sent to pathological laboratories, but no specific organism could be located. Several calves were immunized with bacterin against infectious scours.

Finally a few calves were placed in an old shed some distance from the dairy barn and apparently were able to take a normal amount of milk and grew well. This tended to show that the trouble was due to an organism which was being passed from older calves to each new one as it was placed in the calf barn.

Methods of Isolation

Several methods of isolation were attempted, one being to tie each calf in the barn at some distance from the other. The second method was to keep the calves in individual pens, separated by a panel, and a third method used was to completely isolate the newborn calf by a tight panel so that it could not come in contact with another calf or even receive the breath of other calves which usually had a cough. The latter method proved so successful that the idea of growing calves for the first four to six weeks of their lives in the isolation of a packing box was adopted.

Since January 1, 1928, over twenty calves have been started in boxes and to date there have been no losses and only two calves have any distemper. There seems to have been no difficulty in getting each young animal to take a normal amount of milk and like healthy calves each one seems always hungry and thrifty. The packing boxes are usually at least four feet long and three feet wide and high enough so that the calf cannot jump out.

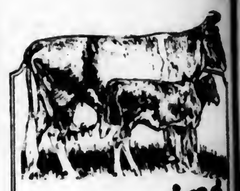
Box System Worked

The boxes have been placed in the pens where previously several of the young calves were allowed to run together. A space is left between each box great enough so that the calves cannot get their noses together or reach each other in any way. By carefully arranging the boxes about as many calves can be raised in a given space as could be grown in the same space previously. When the calves reach four to six weeks of age they are taken out of the box and allowed to run together. Up to this age the calves do not seem to suffer from lack of exercise. Even most of the healthy youngsters play while in the boxes.

These results seem to show that if calves are given the proper start in life they can throw off disease after four to six weeks of age. While it is true that few dairymen have distemper among their calves, there are often reports of trouble in raising the little fellows when several calves must run together. The authorities at New Jersey Experiment Station do not recommend the packing-box method as being a substitute for barn equipment, but do feel that success in calf raising is dependent on sanitary conditions and careful management. Furthermore they do offer the wooden-box method because of the fact that the initial cost of the box is very small and after each calf has outgrown his early pen, it may be burned, thus getting rid of any germ that might have got into the bedding.

J. W. Bartlett.

N. J. Experiment Station



Freshening time is DANGER TIME

THE modern dairying pace leaves the average cow with little reserve vigor to enable her to go through calving with ease and safety. Sluggish organs should be toned up. Appetite, digestion and elimination should be normal and regular.

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During barn-feeding, when heavy, dry feeds place an added burden on the digestive and milk-making organs a regulator is needed to maintain the health and vigor that insures full milk pails. Kow-Kare is a scientific compound of Iron, the great builder and blood purifier, blended with potent medicinal herbs and roots. It enables cows to thrive on natural foods, milk profitably, resist disease, maintain breeding vitality.

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KEEPING ABREAST OF THE TIMES

THE old "bone shaker" bicycle was well enough in its day. Reckless youths of fashion were frightening horses with it all over the land in the 'eighties. Ten years later saw it improved almost beyond recognition—chain drive, brakes, pneumatic tires—and it appeared on the highways in fleets.

And now the improved bicycle has been driven from the roads by its more efficient successor—the high-powered, eight cylinder motor car. Which leads us to wonder, What does tomorrow hold forth?"

DURING the last twenty-five years the change in poultry and dairy feeds, feeding methods and results has been just as marked as in the field of transportation. Only the change has not been so apparent because the physical aspect of feeds has not altered greatly.

Twenty-five years ago wet mash feeds, home mixed, were the order of the day in the then infant poultry industry. Incomplete dairy rations, also home mixed, were preferred by dairymen.

And then came progress. The dry mash system of feeding, originated by The Park and Pollard Company, revolutionized the poultry field. The economies in labor and results that it effected have produced flocks of 5,000 birds where but 500 were before.

With dairy cattle the development into present day methods has been more gradual. Advanced knowledge of nutrition has resulted in feeds that produce more milk by meeting every one of the animal's dietary needs. The addition of Iodol Fish Meal to dairy feed by The Park and Pollard Company is one of the latest advances that are responsible for greater profits to the dairyman.

The experimental farms and laboratories of The Park and Pollard Company, under the supervision of scientific authorities on animal nutrition, have always been on the alert to test and originate new ideas in feeds. It is an expression of the firm's policy of keeping abreast and a little ahead of the times. It is also an insurance of the purity and greater profit results of Park and Pollard feeds.

Abreast of the times yesterday, today—and tomorrow.

To be sure of profit-making feeds—look for a Park & Pollard Dealer!

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P & P Horse Feed
Pocahontas Table Corn Meal

TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

A BIG Monday run gave the hog market a bad start this week and conditions at the close were very unsettled. Demand shut down during the closing days of trade, packers and shippers buying only moderately and speculators expressed confidence in the future by holding hogs off the market; in fact, many hogs were not even offered for sale on orders from the country and some country shippers bought hogs in the market, holding for a rise. Easter hurt pork trade to some extent, loin prices dropping off, as at this season dealers stock up with more popular Easter supplies.

Receipts for the week were a little below last week, but much smaller than the same week last year.

Export of lard and pork the first two months of this year was practically the same as for the same two months last year.

For the four winter months, November to February, inclusive, 67 markets received 17,827,904 hogs, against 18,418,003 during the same months a year ago. However, federal slaughter during this period was 20,452,679 this year against 19,815,885 last year. The difference between receipts and slaughter figures is due to increase in direct marketing, more shipping to slaughtering establishments without being included in receipts at terminal markets. The slaughter totals given compare with 15,911,625 in 1926-27 and to 630,950 in 1925-26, and help to explain the low hog prices of the past two winters.

Cattle Trade Weak

It was a rather dull, slow week in cattle trade, with receipts at 46,600, largest since the third week of January and comparing with 43,800 last week and 45,400 the same week last year. Steers in general showed a decline for the week of 25 to 40 cents, with tops at $14.25 against $14.50 last week. Only a few steers sold up to $14.25 this week against over 300 head at that price or higher last week. Average price of steers this week at $12.65 compared with $12.35 last week and $13 the same week last year. Bulk of sales this week at $11.85 to $13.40 compared with $12.25 to $13.65 last week, $12 to $14 the same week last year and $9.30 to $12.50 two years ago. Otherwise cattle are now higher than at any time since 1920, for the time of year.

Steers averaged $12.70 in March, highest of the year and within 15c of the highest March average since 1920. Only three March average prices were ever higher. Cattle in February of the present year averaged $11.90 and in January, $12.55. Cattle receipts at 175,000 were second smallest at Chicago for March since 1895. There have been only two smaller March totals since 1887. Calf receipts were 74,000. There are only five larger March totals on record.

Lambs Lower

The supply of sheep and lambs was a little larger than a week ago and prices showed a net loss of 25 to 50 cents on lambs, and 25 cents on sheep, as compared to a week ago. Top lambs sold at $17.75 on Monday, dropped to $16.85 at midweek and came back to $17.25 at the close. Average price of lambs for the week was $16.70 against $16.95 last week and $16.25 the same week last year. Feeder trade alone was strong this week, up to $16.75 being paid. A few native springers appeared, selling up to $22 a cwt. At the Omaha market 1,000 California springers sold at $19.25, averaging 72 lbs.

Chicago sheep receipts at 265,000 were smallest for March since 1920, barring a year ago. Three years ago the March total was 410,107, the third largest on record for March. Lambs averaged $16.85 in March, highest for any month since February, 1925, and high for March since 1920. These facts are rather surprising in view of the reported expansion of sheep production.

Decrease in Grain Prices

The grain market took a jolt on Thursday when the stock market collapsed, but came back some later. For the week May wheat showed a net loss of about two cents, and May corn and oats a cent and a fraction each.

Wheat prices are now about a dime below a month ago and some are guessing that they are low enough in spite of the unfavorable statistical situation. The only hope of the bulls seems to lie in reports of crop injury, and so far they have not been appearing to the extent usual at this time of the year. Never before has the visible supply of wheat been as large as at present, and the prospect now is for a much later carryover into the next crop season than is usual.

The movement of corn from the country is moderate, stocks are 100,000,000 under a year ago, and there is a steady commercial demand. In general, the position of corn is regarded as rather strong.

During the eight months ending with February this country exported 52,640,000 bushels of barley, against 32,184,000 during the same period a year ago, 31,511,000 bushels of corn, against only 9,435,000 a year ago; 12,617,000 pounds of hominy and grits, against 8,504,000; 74,986,000 pounds of oatmeal, against 48,865,000; 9,240,000 bushels of oats against 4,688,000. On the other hand, the exports of wheat and rye during this same period took a big drop as compared to the like period last year. The wheat total for the eight months was 79,350,000 bushels this year against 120,033,000 last year and the rye 8,584,000 this year against 20,758,000 last. The reason for this, of course, is that other exporting countries have had liberal supply of the bread grains to offer at a lower price than [illegible]

Horse Trade

[illegible] were [illegible] and the week ending with February 16 [illegible] Note [illegible] sales [illegible] Some [illegible] sales [illegible] and high [illegible] sales this year. One [illegible] fifty new tractors going on farms this year.

Farm Machinery

Another farm equipment company reports a good year's business. This is the Advance Rumely Company. The consolidated net income after all charges on the year ending Dec. 31 1928 amounted to $2,041,142 as compared with a net of $380,000 in the preceding year. This is the first earnings since 1920 when the company reported net earnings of $1,277,232. Last year's earnings were the equivalent of $6.75 a share on the $12,000,000 shares of no-par stock, after cumulative preferred dividends which carries accumulated dividends of about $21.25 a share.

Farmers Hire Accounting

The success of the Illinois farm accounting project in which farmers themselves pay part of the expense is evidenced by the fact that it is now after four years of experience, operating on a new three-year basis with 400 farmers enrolled. A considerable increase in numbers. The service is a development of farm management work carried on in the four counties for many years by the agricultural college. No such it is designed to [illegible] farmers in studying and analyzing their business. Complete records are kept [illegible] At the end of the year [illegible] report [illegible] and analyzing them [illegible] Dressed poultry was [illegible] [illegible] per [illegible] [illegible] per [illegible]

W. R. W.

Produce Market Review

GROWERS of late potatoes have apparently given up hopes for any material advance in prices and with the approach of spring work are pushing their remaining stores of old potatoes on the market. The low price level has taken away the incentive to grade close and the stock arriving at most markets showed a wide range in quality and condition. In Philadelphia Pennsylvania round whites were quoted at $1.10@1.25 per 120-pound sack, which is about 25@33c lower than a few weeks ago. This decline is not entirely due to a weakening of the market, as dealers report that good potatoes would bring around $1.50 or even a little more. This seems logical since Maine Green Mountains of fair quality brought $1.45 per 120-pound sack.

Shipments of new potatoes from Florida and Texas increased sharply and the price in the city markets was lower. The season is considerably earlier than last year and shipments are much heavier. In the Eastern Shore section of Virginia the first potatoes of the season are poking their heads through the ground. This, however, is true only in the most protected spots.

Reports from potato growers indicate that they intend to plant 3,418,000 acres or nearly 11 per cent less than that harvested last year. Allowing two per cent for usual loss of acreage from flood, hail, drouth, blight and other causes, this intended acreage would leave about 3,350,000 for harvest this year, compared with 3,825,600 harvested in 1928 and 3,476,000 in 1927. With average weather conditions, this acreage would produce somewhere around 390,000,000 bushels. This production would mean that after the heavy holdings of the 1928 crop are off the market, there would be only about the usual supply of potatoes.

The sweet potato markets were generally dull with slow demand. Ordinary sweets were almost at a standstill and the demand for fancy stock was not as active as a few weeks ago. New Jersey yellows brought $1@1.25 per ⅝ basket in Philadelphia, while reds sold at $1.15@1.40. The best yellows sold at $2.25@2.75 per bushel in New York with extra fancy stock as high as $3.

"Sweets" and Apples

Apple shipments showed a decline during the week and trading at most markets was rather quiet. Receipts are showing considerable variation in quality and condition but prices of fancy stock are holding firm. The best nearby Stayman and Romes brought $1.50@2 per bushel in Philadelphia while Yorks sold at $1.40@1.90. In New York City the market was quiet with Romes selling at $1@2 per bushel and Baldwin at $1@1.90.

The most interesting development in the fruit and vegetable market during the past week has been the increasing receipts of greens and other spring vegetables from New Jersey and the Eastern Shore counties. The season is fully two weeks earlier than last year and earlier than normal years. For instance one grower told me that he had harvested spinach earlier this year than at any time during the past ten years. The first New Jersey spinach of the season arrived this past week and in spite of the fairly liberal receipts from Virginia and Texas it sold well. There was considerable nearby spinach sold at 75c@$1 per bushel while shipped stock was bringing 30@75c. At the close of the week the market for spinach slumped as consumers were buying other products for Easter.

Eastern Shore Greens

Motor truck receipts of broccoli greens from the Eastern Shore were heavy and the market weakened. A number of growers in Delaware are bunching their broccoli and packing it in a flat crate. This stock when fancy sold at higher prices than that in bushel hampers. The prevailing price of broccoli was around 25@50c per bushel and 75c@$1.25 per crate.

Another interesting feature was the market for mushrooms on Saturday. As a rule Saturday's prices are lower than any day of the week, since the growers go over their beds more closely because of the interval between Saturday and Sunday when there is no market. This is responsible for the heavier receipts on Saturday and the lower prices. A special Easter demand developed Saturday and the market was very erratic. Early in the morning mushrooms sold at about the same level as the day before but later when the supply was smaller dealers still found buyers looking for mushrooms and the price was pushed up. In New York City early sales of whites ranged from $1.40@1.50 per three-pound basket but later sales were reported as high as $1.75. Prices in Philadelphia were lower but the same situation existed. Early in the morning $1.35 was the top but later some dealers were able to obtain $1.50. Poorer grades sold as low as 30c on both markets.

Butter and Eggs

The butter markets fluctuated during the week. Prices advanced early in the week but prices dropped later due to a lack of buying demand. Prices at the close were about one cent lower than on Monday. The weakness of the market was not due to heavier receipts since arrivals were lighter than last week and considerably lighter than during the corresponding week last year. The fact that production is increasing was one of the weakening factors. The majority of the supply consisted of butter scoring 90 points or above and grades below this were quite closely cleaned up on all markets.

The egg market in Philadelphia was [illegible] despite the Easter demand. Prices were [illegible] declines to sharp increases in the receipts from the south by rail and boat. There was a fair demand for [illegible] eggs but buyers were very conservative and bought only for them most [illegible] needs. Dealers generally are looking for somewhat lower prices since the trade has somewhat to absorb present receipts at prevailing prices and feel that [illegible] receipts would force prices lower. At the close of the week extra firsts sold at [illegible] per dozen, firsts at 37½c and [illegible] at 37c.

The best nearby [illegible] were steady in New York. Medium [illegible] undergrades sold from 32c down [illegible] of expectation, operating on a new three-year basis with 400 farmers enrolled. A considerable increase in numbers. The service is a development of farm [illegible] agement work carried on in the four counties for many years by the agricultural college. No such it is designed to [illegible] farmers in studying and analyzing their business. Complete records are kept [illegible] At the end of the year [illegible] report [illegible] and analyzing them [illegible] Dressed poultry was [illegible] [illegible] per [illegible] [illegible] per [illegible]

W. R. W.

Oscar E. Bradfute Dies

O[illegible] E. BRADFUTE, Xenia, [illegible] president of [illegible] Bradfute Bros. [illegible] the American [illegible] Medical Hospital in [illegible] Asia, becoming an operator [illegible] more than three decades Mr. [illegible] was [illegible] identified in livestock [illegible] associations and farm [illegible] Thirty years ago he served a [illegible] member of the executive committee [illegible] organized the International Livestock [illegible] position at Chicago, and served as a [illegible] for at the board continuously until [illegible] death. Among other offices in livestock organizations he held were president of the Aberdeen Angus Association; president of the Ohio Livestock Association; member of the executive committee of the National Livestock Association. He was appointed by President Wilson a member of the industrial commission and served from President Coolidge appointment as American delegate to the International Conference of Agriculture in Rome in 1927. He also served as a trustee of the United States Agricultural Experiment Station and of the Ohio State University.

Mr. Bradfute is graduated in 1887 from Indiana University and later returned to the home farm where he built up a herd of Angus cattle which became widely known. For many years Bradfute Bros. carried away coveted honors at the leading national and at various state fairs.

Mr. Bradfute is survived by his wife, two sons, one daughter, a sister, Mrs. F. B. Turnbull, and his mother, Mrs. Martha Bradfute. His son David has been operating the home farm in recent years while, John E., the second son, is in the agricultural agent in Hancock county, O.

BOSTON WOOL MARKET

THE wool market was very quiet during the past week, says the U. S. Department of Agriculture Market Service. A little interest was shown in a few lines of the finer quality of grown wools, but actual sales have been small and the demand very spotty. Most purchases were for immediate requirements.

The quotations on fleece wools are lower. Most offerings of Ohio delaine delaine wools were held at [illegible] steady asking prices although sales were small and there were few transactions reported. Small lots of Ohio and similar [illegible] strictly combing wools, were moved in the range 53@54c, in the grease, for [illegible] shrinking wools. Demand was very [illegible] on the grades below 56s and values were inclined to ease.

Domestic Wool Quotations

Grease Basis Ohio and Similar

[illegible]

LIVESTOCK

PITTSBURGH

Cattle

[illegible] receipts, only 18 carloads. [illegible] trade was active and prices [illegible] higher. Weights 1at steers [illegible] better than last week those [illegible] so good as those which [illegible] same figure then. Hands [illegible] were generally a quarter [illegible] light steers were also. The [illegible] fair butcher steers looked [illegible] compared with better kinds [illegible] to sell below $12 and those [illegible] were very ordinary killers. [illegible] went around $12.75 all [illegible] very high as compared with [illegible] opened $13.25. There was [illegible] of light steers and [illegible] [illegible] that rather than according to [illegible] fat fodders of best choice [illegible] cattle could be [illegible] [illegible] were scarce and [illegible] [illegible] better but the [illegible] [illegible] $12@13 with somethings [illegible] selling up to $13 [illegible] $12.25 largely, some [illegible] especially the [illegible] [illegible] bulls selling closer to [illegible] Not many load to sell [illegible] fair kind brought [illegible]

[illegible] steers, 1,250 [illegible] $12.50@13.75
[illegible] 13.25@14.00
[illegible] 12.75@13.25
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Nominal
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[illegible] bulls 8.00@8.50
[illegible] bulls 5.50@6.50
[illegible] bulls 50.00@150.00

[illegible] fair butcher heifers
[illegible] choice heifers
[illegible] fair heifers
[illegible] fair cows
[illegible] good cows
[illegible] fair cows
[illegible] cutters
[illegible] bulls
[illegible] bulls
[illegible] bulls



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Clean oil flows from the filter back to your engine

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CHANGE YOUR

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every 10,000 miles

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AC Spark Plug Company

FLINT, *Michigan*

AC-SPHINX Hersing-Hanau ENGLAND

AC-TITAN Clichy (Seine) FRANCE

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Sheep raising is only one of the several interests in the widely diversified operations of Master Farmer E. S. Ferry of Bedford county, Pa. He is also a well-known Jersey breeder, keeps pure-bred swine and finds profits in poultry and a well cared for orchard.

Horse Talk

TRACTORS are becoming more common every day and not a few farms are to be found where no horses at all are kept. I must confess that when the tractor men came out with a machine for cultivating four rows of corn at a time, and doing a good job, I had to back up a little. Even at that I am far from convinced that the day of the farm horse is past or even endangered. The increase in heavy labor-saving machinery which requires fewer men, whether pulled by a tractor or a big team, is a natural development.

Attending farm sales I notice several interesting things about the horse situation. Horses are selling at farm sales for about double what they did a year ago, and most, in fact nearly all, are the plain smooth-mouth kind. A young horse is the exception rather than the rule. The same might be said for mules offered.

The country seems full of plain old horses and as long as this is the case it is not any wonder that most farmers are indifferent to the cause of the horse. Some men are breeding a few mares if the right kind of a horse can be found. These are for replacement rather than sale, although the city trade and other markets want some good big sound horses of the right type.

Horses for Slaughter

It has been far cheaper to buy a horse at farm sales than it has been to raise one and with the prevailing good price for beef cattle it is no wonder that the farmer would rather raise a good calf to sell at one year or less than to raise a colt that at three years of age would bring no more money than the calf. Further the calf is far less trouble to raise than the colt.

The element of danger to the colt is always present. A small injury may cause a blemish that will knock the profit from the colt as far as the city trade goes, and the tragic part is that these things sometimes occur just as the colt is ready for sale.

Thousands of western horses have been slaughtered for the canner trade, and also midwestern horses have gone the tin can route. This business has grown to rather generous proportions, and I notice with interest the account of a large tract of land which has been leased from the government in Montana for the purpose of raising horses under range conditions for the packer trade.

The Diminishing Supply

The horse supply is being rapidly diminished, and the same is true of mules. The South has always looked to our part of the country for a big percentage of the mules used on the southern farms, and it is doubtful if mechanical power will ever displace the mule and the horse under the majority of southern conditions, for many and obvious reasons. Even here in our own country of broad level fields and ideal tractor farming conditions, the horse and mule in spite of the ever-increasing popularity of the tractor, are still furnishing most of the farm power.

It will be hard to get along on the average farm without some horses, which can be made to fit very well into the farm program where a tractor is maintained. Many flexible jobs, not requiring the enormous power of the tractor, are still and always will be prevalent.

This year in Kansas we have had one of the old-fashioned winters and farm work is badly delayed. While at this time last year a good portion of the oats was in the ground, very little farming has been possible so far this year, and this means that spring work will be rushed and all kinds of power needed.

Old Vehicles Used

I have been over roads in the past six weeks which were impossible for motor travel. Feed lots were in such condition that no tractor or truck could have successfully been used in feeding the cattle. I have been thankful more than once in the past month that I was fortunate enough to be stuck and in distress in a community that did not boast of horseless farms but rather the old-fashioned farmer who still believes in his horses and is willing to lend a hand to the sojourning pilgrim on the road. Horses have saved the day for the farmers in our country this winter, and many and interesting are the carriages and buggies which have come to life after years of abandonment in the sheds.

My idea of an ideal situation, and one which I find with considerable satisfaction to myself is used by many successful and enterprising farmers, is a sort of cooperation between the tractor and the teams. Better time can naturally be made with the tractor in real hot weather on such heavy jobs as plowing and seeding, thus leaving the smaller and flexible jobs for the horses. The big-hitch idea helps considerable in this respect. Further these good farmers use the horses every available hour possible, as they state that the tractor eats while working and has a good appetite for feed which has to be bought for cash and hauled to the farm, while the horse does not eat while at work and when idle uses a lot of material which has little or no sale value, and returns a large part of the original plant food to the farm in the process.

Certain phases of the city hauling are still using some horses and no doubt will do so for many years to come. However, I do not look for any increase in this quarter in the demand for draft horses. There are jobs in the city as well as the country which are [illegible] and as long as these jobs last the trade will be there for the right kind.

Trade in Pure-Breds

Pure-bred breeders seem from all I can gather to enjoy a good business. Good pure-bred mares and stallions of popular breeds of draft horses are still commanding good prices and many sales are reported. A farmers' organization in a midwestern state recently

BETTER KEEP CAT

that pay a profit at the

You will if you tie up to the high record, great transmitting sire,



BERKS KING CHAMP

and the 18 of his get that make up attractive offering in the

Meadow Grove Disp

43 HEAD

tuberculin tested

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at MEADOW GROVE FARM on Wm. Penn Highway, 1½ mi. east

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Cows with records up to many 1,000 LBS. BUTTER IN 1 YEAR 23,000 LBS. MILK IN 1 YEAR Large number from high record dams. A few choice bulls.

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FENCING We manufacture Cedar Picket and Galvanized Fence Interwoven—Picket—Bird—or Plain—made in 15 ft. height. Used extensively for Snow Protection Highways.



Excellent for chicken, stock or any use for prices and catalog. Agents wanted. New Jersey Fence Co., 12 Logan St.

...porter better than $4,000 for ... stallion. If you price the ... good individuality at any of ... shows the figures will com... favorably with prices one ... decades ago.

...ere shortage has not ... yet ... felt, as there are still ... in the country, but by ... of them are old and will ... much longer. I attended a ... Saturday, with a venerable ... of mine. Smooth mouth ... pounds or less were sold ... $80 to $125. Commenting ... situation, my old friend ... with the wisdom of years, ... going to wake up one of ... and find that there ain't ... Then gasoline will jump ... and we'll all be up again' it.

David Gray

...er Contest Prizes

...TEST in Maryland's 1929 Lit... Contest will no doubt be stimu... ...ng the swine growers of the ... the announcement of a number ... prizes offered this year by a ... company of Baltimore.

... of the litter contest in the ... ...ll be awarded cash prizes as fol... ...irst prize for state, $100; sec... ...rize, $75; third prize, $50. In ... to these prizes for state win... ...e swine grower in each county ... state succeeding in raising the ... litter of pigs from one sow ... the contest will be awarded a ...rize of $25. These prizes are ... to the handsome silver lov... ...that has been offered as first ... the state contest for the past ... by the Maryland Agricul... ...-Maryland Farm Bureau ... and which must be won ... by an individual for perma...

... of this contest is the pro... ... a litter of pigs which at 150 ... will weigh 1,500 pounds. ...ers of litters in this ... be members of the Mar... ...y Association. Latter ... ...d before they are four ... and may be entered in the ... ...ough county agents or with ... of the Maryland Stockmen's ..., College Park.

Thomas H. Bartlett

...Grain for Lambs

...LAMB is about the only animal ...that will put on a pound of gain ...pound of grain. When lambs are ... plenty of milk and grass they ...gain in proportion to the amount ...ude that they will consume daily. ...C. C. Flanery, extension special... ...sheep husbandry, University of ...

...lambs are eating one-half pound ...daily they will gain about that ... if milk, grass or clover is ...in abundance and they are ...g the care they should have. The ...wants a lamb that has been ...within one hundred and twenty ... It in most cases takes gram to ...nish this. Another factor to ...der is the fact that fewer seconds ...produced where a supply of grain ...grass and milk is given in liberal ...nts.

Largest Bull

WHAT is believed to be one of the ...largest bulls in the country is ...ed by H. M. Gruber of Loeaston ...unty, Pennsylvania. The animal was ...rchased lately at the large Holman ...ivestock sale at Springdale farm, North ...anon township. At the sale it cre... ...d a great deal of interest and specu... ...n as to its weight among the hun... ...reds of attendants. A number of ...ppers were made. In order to see ...who had come nearest the true weight ...of the bull, Mr. Gruber weighed the ...mimal. It weighs 2,150 pounds.

R. I. W.

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Special Fall Prices on Baby ... Geese. Ducks and Guinea ... for mailing list. Pleasant ... Telford, Pa.

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Belgian STALLIONS for sale. Write your wants. Prices reasonable. OLIVER JONES. Jamestown, Pa.

DAIRY CATTLE

FOR SALE. 3 easy Bull Calf, dropped Dec. 11, 1928. by Reg. of Merit Sire Meridale Merry Boy 2nd. Champion Sweepstakes State Fair. Dam also sire's sire with R.M. record 7,500 lbs. milk. Sire. for inspection in dam from Isle of Jersey and daughter of Dam Golden Fern's Noble. This calf has large bone deep body and straight back a show prospect and blood tested. First check for $100 takes him. Fred Acre Herd. Reg. Herd. Highland Farms, Greensburg, Pa.

Fritzlyn Guernseys

Sons and Heifers from two to twelve months old. Richly ... blood lines with records up to 700 lbs. for 365 days and backed by herd ... tested sire. Herd tested. Write for description and prices. Fritzlyn Farm. Pipersville, Pa.

Holstein Bulls for sale from an accredited herd. Dams ... herd. Sires ... to service... able age. From K. P. O. P. 32 lbs. 1,100 lb. herd ... to 1 yr. old. Also females ... Crystal Spring Stock Farm. Littlestown, Pa.

PURE-BRED OR High Grade HOLSTEINS Heifers Springers. Tuberculin tested Springers ... on hand at all times. Farmed ... more than one ... STRUBLE & MARTIN. Newton, N. J. Milford, Pa.

THREE YEAR OLD GRANDSON of Langwater Eastern King 92042 and ... Guernsey bulls. Eastern King 92042 and ... Guernsey bulls. T.B. and Abortion free herd. Write for pedigrees. A. J. Fell. Indiana, Pa.

QUERNSEY BULLS. ... to eighteen months, from A. R. dams 508 to 606 lbs. fat. Heifers and cows ... to sell, from Langwater Bulls. E. N. Lydick. Fawnland Farm. R. 1, Lansdale, Pa.

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REGISTERED BERKSHIRE BOAR PIGS 10 weeks old. Money maker... W. F. McSPARRAN. Furnace, Pa.

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Registered Berkshire Pigs Superior Stock ... Write for prices J. P. HINDERLITER. R. 4. Mapport, Pa.

—REGISTERED HAMPSHIRE PIGS— ... spring pigs, either sex, ... ch J. J. KAILING. R. 2. Shippensburg, Pa.

REG. SPOTTED POLAND-CHINAS. Choice fa... sows and boars. Guaranteed to please. Write ... WM. H. JACKSON. Darlington, Pa.

Poland Chinas Breeding stock reasonable ... priced. Also ... pigs. Bull calf. T. W. Gans & Sons. Gans, Pa.

Reg. Berkshires Superior breeding stock ... All ages. Both sexes ... Choice ... WOLF CREEK FARM. R. 2, Slippery Rock, Pa

O.I.C's Spot and Oil sow pigs, ... type, quality, quick maturing. Sat guaranteed. C. B. BELL. Millersburg, Ohio

O.I.C. ... service boars, ... gilts, ... for spring pigs. Everything registered. Edward Ritter, Williamstown, W. Va.

SHEEP

FOR SALE 120 classy, young, Delaine-Merino ... ewes, Lambs due in April. W. O. MOORE. Neffs Mills, Pa.

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SEEDS AND NURSERIES

EARLY VEGETABLE PLANTS.—Prostproof Cabbage: Wakefields, Copenhagen, Golden Acre, Flat Dutch, Bermuda Onions, Beets, Lettuce. Postpaid: 100, 40c; 500, $1.25; 1,000 $2.25. Collect: 1,000, $1.60; 5,000 $5.25. Tomato Plants Earliana, Bonny Best, Baltimore. Postpaid: 100, 50c; 500, $1.50; 1,000 $2.50. Collect: 1,000, $1.75; 5,000, $7.50. Write for prices on Potato, Pepper and Egg Plants. Carefully Packed. Varieties Labeled, Delivery Guaranteed. Piedmont Plant Co., Albany, Ga.

CABBAGE PLANTS, NOW READY. My frostproof Cabbage plants will head three weeks earlier than home-grown plants. Varieties Jersey and Charleston Wakefield, Succession, Flat Dutch, Golden Acre and Copenhagen Market. Prices by parcel post (postpaid): 500, $1.25; 1,000, $2.25. Express: 1,000, $1.60; 5,000 $4.50; 10,000, $7.50. Bermuda Onion Plants same prices as Cabbage plants. Roots wrapped in moss and shipped promptly. Satisfaction Guaranteed. P. D. Fulwood, Tifton, Ga.

TIFTON'S RELIABLE PLANTS. Frostproof Cabbage, Bermuda Onion Plants. Wakefields, Dutch, Ballhead, Copenhagen, Golden Acre. Postpaid, 500, $1.50; 1,000, $2.50. Express paid, 500, $1.25; 1,000, $2.15; 5,000, $9.40. Early Tomato, Pepper, Cauliflower, Egg Plant later, write Tifton Plant Co., Tifton, Ga.

BUY GRIMM ALFALFA SEED NOW! Lyman's Seed traces to original Grimm stock. Hardiest of alfalfas and highest in feeding value. Yields for years without replanting. Seed scarified to increase germination. Also sweet clover and red clover. Order early! A. B. Lyman, Introducer, Excelsior, Minn.

NUT CROPS.—The north's future soil production. Progressive farmers are planting groves of improved grafted nut trees. Learn why. Read "Save America's Nut Heritage," and "Nut Grower." John W. Hershey, Nut Trees, Downingtown, Pa.

SET OUR "FROSTPROOF" CABBAGE and onion plants, and mature crop three weeks earlier. 500, $1.00; 500, $1.75; 1,000, $2.75, 10,000, $20.00. All delivered prepaid. Prompt shipments, good plants delivered or money refunded. J. F. Councill Company, Franklin, Virginia.

"FROSTPROOF" CABBAGE and Onion Plants—Special Wholesale Prices: 500, $1.25; 1,000, $2.00; 5,000, $9.00; 10,000, $17.50 all charges prepaid. The plants, good; delivery guaranteed or money refunded. Wholesale Plant Company, Thomasville, Georgia.

SURE-CROP SEED CORN.—Field selected, carefully dried, shelled and graded. Germination very good. First prize Doylestown, Bucks County, Fair. Express, $3.00 bushel; parcel post, first and second zone prepaid, $3.65 bushel. Direct from farm, not a dealer. Chas. L. Wilkinson, Rushland, Pa.

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100 GENUINE, SELECTED MASTODON Everbearing Strawberry plants $1.85. 1,000 postpaid $3.75. Catalog free. Cooper Gig Jr., $5.00, 100 Raspberry or Blackberry $2.00. Grape plants $12.50 up. Rollo Shrubs. Thrifty plants state certified. Catalog free. Westbrook's Nurseries, Sawyer, Michigan.

CABBAGE PLANTS. Early Varieties. Large and stocky. Also Bermuda Onion plants. 500, 75c; 1,000 $1.25; 5,000 $3.50, cash with order. Mailed or expressed, charges collect. Now shipping. Good condition arrival guaranteed. Progress Plant Co., Ashburn, Georgia.

HIGH GRADE PLANTS carefully packed, large well rooted, open field grown, leading varieties Cabbage, 75c postpaid. Tomato $1.00. Bermuda Onion, $1.00 and Porto Rico Sweet Potato $2.00. 1,000 Acme Plant Co., Quitman, Ga.

MILLIONS FROSTPROOF WAKEFIELD Cabbage plants that will start heading 3 weeks earlier this season. Set now and get best prices for the crop. 1,000, $2.00 postpaid. Express collect $1.50, 1,000. Ideal Plant Company, Franklin, Va.

FROSTPROOF CABBAGE PLANTS 75, 1,000 Bermuda Onion $1.00. Collards 75c. Tomatoes $1.00. Ruby King Pepper $2.00. Porto Rico Potato Plants $2.00. Quitman Plant Co., Quitman, Ga.

WILSON BLACK SOY BEANS. $2.00 bushel; Virginia Brown Soy Beans $2.00 bushel. Bags, 12c each. f. o. b. Milford, Delaware. New crop and recleaned. Joseph E. Holland, Milford, Delaware.

FOR SALE.—Lancaster County Sure Crop graded seed corn, germination 98, $2.00 at farm; $2.25 F. O. B. Gap. $1.75 half bushel lots, stored in wire crib. Wholesale prices on request. S. J. Stoltzfus, R. 1, Gap, Pa.

BERMUDA ONION PLANTS.—Grow Bigger and Better Onions. Prepaid mail: 500, $1.00; 1,000, $1.75. Transplanted Cabbage Plants: Three dozen, 40c; 1,000, $7.50. Port Mellinger, North Lima, Ohio.

TOMATOES, FROSTPROOF CABBAGE and Onions. Large strong plants. Leading varieties; Satisfaction guaranteed. 200, 60c; 500, $1.10; 1,000, $1.85, prepaid. Express: $1.00, 1,000. Modern Plant Farms, Ponta, Texas.

FROST PROOF CABBAGE PLANTS and Bermuda Onion plants, 500, 65c and postage; 1,000, $1.00 and postage; 5,000, $3.75 and express charges. Eureka Farms, Tifton, Ga.

FROST PROOF CABBAGE and Bermuda Onion plants. Prepaid mail, 500 $1.00; 1,000, $2.00. Expressed, 5,000, $3.75; 10,000, $7.50. Coleman Plant Farms, Tifton, Ga.

SEED POTATOES.—Irish Cobbler, Smooth Rural and Rural Russets. The Cross Farm, Fayetteville, N. Y.



"Are you the defendant?" asked a man in a court of justice when he encountered a goat.

"No, boss," said the nigger. "I've got a lawyer who does the doin's for me. I'm the goat."

• • •

Why Women [illegible]

Hubby: "Stop me if you've heard this one." Quiet.

• • •

Employer (to his clerk): "Is it true that when the clock strikes five you put down your pen and go, even if you are in the middle of a word?"

Clerk (indignantly): "I certainly not, sir. If it gets so near five as that I never begin a word at all."

• • •

Delayed

How old did you say you were?

I never mentioned my age, but as a matter of fact, I'm just trailed twenty one."

"Indeed, what detained you?"

Wall Street Journal.

• • •

It was a hot day. Seven cats were lined up in front of a busy filling station. Third from the end stood a leaking, steaming, rattling little five passenger. In due time the line unwinded and the little five-passenger trundled parallel with the gasoline pumps.

"How many," the man asked impatiently.

"One," answered Mr. Lhy.

Once. What else," from the cat. Wean it."

• • •

Often a word is better at the speaker were delayed for [illegible] to repel demanding the [illegible] action.

• • •

Stable Sergeant: "Did you ever ride a horse before?"

Rookie: No."

Sergeant: "Ah here's just the animal for you. Never been ridden before. You can both learn together."

• • •

A man gets his rating from the things done and not from those great things that he dreams.

• • •

A distinguished astronomer tells of a visit paid by several young western women to his observatory.

"I had done my best," said he, "to answer with credit the running fire of questions which my fair callers propounded. I think I had named every important constellation for them, and was congratulating myself upon the outcome when one of the younger members of the party interjected:

"But, all that has never been proved that stars are inhabited; how do the astronomers ever find out their names?"

• • •

"There's a woman peddler at the door. Shoo him in and tell him to bring his samples with him."

• • •

When some people pay a compliment they act as though they wanted a receipt for it.—Imperial Type Metal.

• • •

A Fool There Was

Mary had a little mule, one day it foolhardy [illegible] to wade. The mule like a great big fool, went right in behind the mule and bit him squarely with a rule.

P. S. Now there isn't any school.

• • •

Sandy was fishing. Donald, passing, asked: "How are the fish today, Sandy?"

"I dunna ken," answered Sandy. "I've dropped them a line but so far they've made nae reply."—Young Folks.

• • •

"I heard some one say that Johnny's on his feet again."

"Yes; his creditors took his car."

• • •

"Uncle Eph, it's time you quit drinking. It will kill you sure."

"Majah, I'se afeard I'se been too long at it an' cain't stop."

"Nonsense! It's never too late to mend."

"Well, majah, if dat's so, I reckon I'll jes keep on a while longer."



INTERNATIONAL PAPER [illegible]

The Board of Directors have declared a quarterly dividend of one and [illegible] per cent (1¾%) on the Common Stock of this Company, and a quarterly dividend of one and [illegible] per cent (1¾%) on the Cumulative Preferred Stock of this Company, for the quarter ending April 15th, 1929, to holders of record at the close of business March 30th, 1929. Checks to be mailed. Transfer books closed.

OWEN SHERRERD, Vice-Pres. & [illegible]

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PLANTS.—Plants, the kind that grow. Frostproof Cabbage, Onion and Tomato plants. Leading varieties. 100 40c; 200 60c; prepaid. Hoch Plant Co., Texas.

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FROSTPROOF CABBAGE and Onion Plants. Strictly first class, large, well rooted. $1.00 per thousand f.o.b. Quick delivery wanted. Guarantee Plant Co., Quitman, Ga.

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MILLIONS CABBAGE ONION and Tomato plants. $1 1,000. Pepper and Eggplant $2 1,000. Clark Plant Company, Ville, Ga.

HARDY ALFALFA SEED, 90% germination, $6.00 bushel; sweet clover, 95% germination, $3.00 bushel; not scarified. Geo. Berman, Kansas.

PAY THE POSTMAN.—Send No Money. Postpaid Cabbage and Onion plants, 500 65c; 1,000, $1.00. Live delivery guaranteed. Albany Plant Co., Albany, Ga.

CERTIFIED SEED POTATOES.—Grown according to Pennsylvania State College standards among the very best. Catalog free. Kenneth Longenecker, Gap, Pa.

FROST PROOF CABBAGE PLANTS. Leading varieties. Open Nurs. Early Jersey Wakefield, Copenhagen Market, Succession, Flat Dutch, Golden Acre, Charleston Wakefield. Bermuda Onion plants. Prompt shipments. Prices reasonable. Satisfaction guaranteed. Tifton Plant Co., Tifton, Ga.

CHOICE DAHLIAS.—Circular now ready. Free. Penn's Floral Gardens, Langhorne, Pa.

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CERTIFIED SEED POTATOES. Cobbler and High Yielding Rurals. Grown from Connecticut stock. Growers Cooperative Exchange, New York.

SEED POTATOES.—Cambridge Cobblers, Rurals, eighty cents bushel. J. F. Wilson, Manager, Pradtville Junction, Pa.

CLADIOLUS 60 mone alike, $2.50 per 100. 25 evergreen trees, roots, $2.50. Catalogue. Valley Farms, Chincoteague, Virginia.

IRIS. The world's most beautiful flower. Write for list. Hall Perlis, Pa.

CERTIFIED SEED POTATOES. Cobbler and Rural. Montcalm County Seed Growers Association, Stanton, Michigan.

FOR THE HOME

100 ASSORTED dishes packed in crate, $5.00. Also odd pieces, platters, etc. All good dishes. Send for price list. Send $5.50 prepaid. Send $5.00 and pay postage shipment. Home China Co., Canton, Ohio.

MALE HELP

SINGLE MEN to work in mine. Must be good dry-hand to help per month and board. Send for first letter. Winterthur Farms, Winterthur, Del.

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EXTENSION LADDERS for every use to 60 feet, light strong and safe. Write for circulars, prepaid today and name of nearest dealer. Fry Patton, Jewett, Ohio.

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PURE BRED TOGGENBURG Goats. Best milkers for lowvilles. Goldenrod Farm, Millerton, Pa.

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$10 AUCTION COURSE $1. 300 page book. Methods $1. American Auction College, Kansas City, Mo.

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WANTED.—Hay, Straw, Grain, Potatoes, Apples, Cabbage, etc. Quote us your best market prices. The Hamilton Co., Inc., Pittsburgh, Pa.

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CHICKS, EGGS Blue Andalusian, Thompson Barred Rock, Hollywood White Leghorn. Hogan tested egg producers. Reibert Bros., Elizabethtown, Pa.

QUALITY BABY CHICKS from a single flock, free range $10.00 per 100. Special prices on lots of 500 and 1,000. Thompsontown Hatchery, Box 2, Thompsontown, Pa.

CHICKS—Barred Rocks, April, $12.00 per 100; May and June, $10.00 per 100. Postpaid. 100% live delivery guaranteed. West Denton Hatchery, Denton, Maryland.

HUSKY BARRED ROCK CHICKS, 14 cents. White Leghorn 12 cents. Paul Clark Sunbury, Pa.

CHICKS—ROCKS AND REDS, 13c. Brown and White Leghorns, 12c. Harry E. Kauffman, Mattawana, Pa.

BABY CHICKS. Leading strains of Barred Rocks and Reds. Kulp's famous Brown and White Leghorns. Catalog free. W. W. Kulp, R4, Pottstown, Pa.

KEISER'S SINGLE COMB BROWN LEGHORNS are producing Eggs. Excellent matings. Catalogue. P. Keiser, Grampian, Pa.

BEST WHITE LEGHORN CHICKS. Tancred record. Satisfaction guaranteed or live loss replaced free. Catalog. Rissell, Pa.

BABY CHICKS. White Rocks, Barred Rocks, Reds. Contest winners in Wayne County. Write for prices. Beaver Valley Hatchery, Beaverdale, Pa.

PENNSYLVANIA STATE SUPERVISED chicks. Barred Rocks, White Rocks, Leghorns. Write for prices. Penn Hatchery, Bellefonte, Pa.

QUALITY CHICKS. Satisfaction guaranteed. Barred Rocks, Reds. Hatchery, Reynoldsville, Pa.

MY BARRED PLYMOUTH ROCKS are big, vigorous, high producing birds. Eggs, 100 per 1c, $5.00 per 45 and $10.00 per 100 postpaid. Mrs. Jesse Spencer, Ind Town, Pa.

JERSEY BLACK GIANTS Chicks, 25, $5.00; 50, $9.00; 100, $17.00. Eggs, 15, $2.00; 50, $4.50; 100, $8.00. Pure Eggs. The Free Poultry Farms, Huntingdon, Pa.

BUFF ORPINGTONS, PARTRIDGE ROCKS, Silver Spangled Hamburgs, 15 eggs, $1.75; 100 $10. Spring-water Farm, Kunkel Chicks by the Town, Pa.

LARGE WHITE CHINESE GEESE HATCHING Eggs from free range stock 50 cents each, or $20 per 100. Mrs. Ella Shaffer, Ellwoodville, Pa.

REDS BOTH COMBS Eggs $1.50 15; $3.00 50, postpaid. Bred to win 30th year. Circular free. Line Roberts, Pottstown, Pa.

EGGS Scotch, Red Caps, Mammoth Buff Rocks. Satisfy Breeders Supply, Box P, Coldwater, Ohio.

BUFF ROCK EGGS for hatching, 15 for $1.25; 50 for $2.25 prepaid. Mrs. Hough & Son, Smithton, Pa.

SINGLE COMB RED STOCK. Hatching eggs $3.00 per 15. Brookside Mercer, Pa.

BARRED ROCK EGGS. Pleasant Layers, also brown record L. G. Eisenman, Seed Ron, Pa.

GOLDEN BUFF ROCKS 15, $1.00; 50, $3.00; Mrs. Vida Wise, R. 2, Renfrew, Pa.

DUCKLINGS and GEESE

12 MAMMOTH TOULOUSE GOOSE EGGS $5.00 postpaid. $23.50 per 50. From large old breeders. Valuable instructions with each order. Satisfaction guaranteed. Hatch early for size. Highland Farm, Sellersville, Pa.

DUCKLINGS Mammoth White Pekins, 1,200 weekly, 26c each, 1c less in 100 lots, 2% Discount. Full remittance with order. Bucher Bros. Hatchery, Dept. B, Barrens, Ohio.

VERY FANCY WILD DUCKS (Mallards) raised on free range. Very tame, easy to raise, delicious eating, $5 a trio; eggs $1.50 for 11. C. E. Cassel, Hershey, Pa.

WHITE PEKIN DUCKS. Eggs and ducklings reasonable. Flocks headed by mammoth 8 to 10 pound drakes. Catalog free. H. A. Souder, Sellersville, Pa.

MAMMOTH PEKIN DUCK EGGS for hatching, ten cents each delivered. J. G. Kennel, Algica, Pa.

TURKEYS

12 MAMMOTH BRONZE TURKEY EGGS $6.00 postpaid. Fertility guaranteed. Valuable instructions with each order. Breeders. Catalog. Highland Farm, Sellersville, Pa.

TURKEYS Direct from our famous flocks. Broad Breasted Bronze, Bourbon Red, White Holland, Narragansett. Special prices Eastern Ohio Poultry Farm, Bradford, Ohio.

MAMMOTH FARM MAMMOTH BRONZE, Bourbon Red, Slate Eggs. Prices reasonable. Mrs. Wm. Woodlawn, Va.

MAMMOTH BRONZE TURKEY EGGS. Bourbon Red, White Holland, Narragansett. Leg. Breeding Farms, Paris, Mississippi.

MAMMOTH BRONZE TOMS and yearling hens. Mrs. Jesse Sell, Ohio.

MAMMOTH Bronze Turkeys. Toms, 35 lbs. up. Hens, 20 lbs. up. Eggs, 75c each. Mrs. Lehman Ainsworth, Pa.

POULTRY

SINGLE COMB BROWN and WHITE LEGHORN Pullets, $2.00 each. Vera Fulton, Linesville, Pa.

BARRED ROCK COCKERELS. Big bone type. Certified stock, hatching eggs and baby chicks. Eugene A. Groat, Lime Kiln, Md.

SITUATION

DO YOU NEED FARM HELP? We have Jewish young men, able-bodied, some with but mostly without experience, who want farm work. If you need a good, steady man write for an order blank. Ours is not a commercial agency. We make no charge. The Jewish Agricultural Society, Inc., Box C, 301 E. 14th Street, New York City.

TOBACCO

GUARANTEED HOMESPUN TOBACCO. Chewing, 5 pounds $1.50, 10 $2.50. Smoking, 10 lbs., $1.50. Pipe free. Pay Postman. United Farmers Association, Bardwell, Kentucky.

LEAF TOBACCO direct, sweet chewing, 3 lbs., $1.00, 5, $1.25; 10, $2.00. Smoking, 3 lbs., $1.00, 5 lbs. 10 $1.50 United Farmers, Mayfield, Kentucky.

DOGS

FOXHOUND PUPS, from parents that found. Males $8.00 females $5.00 Toy fall description write Earl Hall, Confidence, Pa.

REGISTERED OLD ENGLISH SHEPHERD Pups. Natural heelers. Excellent watch dogs. Dr. H. Loucks, Vermilion, Ohio.

RAT TERRIERS, FOX TERRIERS, Bela Tobe, Pete Slater, Box D-F, Penn, Ill.

FOR FOX TERRIERS, write R. E. Pope, R. 2, Salem, Ohio.

SMOOTH FOX TERRIER PUPPIES, Wm. J. Helmke, 1224 Reisenstein Avenue, Utica, N. Y.

COLLIE and FOX TERRIER PUPS. Handsome and intelligent. London Kennels, Grove City, Pa.

MISCELLANEOUS

DO NOT EXPERIMENT with Your Cows, Horses, etc. John Hosack of Hartstown says:—"Your remedy was recommended to me for sly." "Your remedy was recommended to me for sly." Successful dairy-breeders. Enclosed find check." Successful dairymen can recommend our remedies. If they are not successful, they would not do so. Cow Tonics, Heaves, Bag Remedy, Remedies for Failure to Breed, Stanchions, etc. Information and Booklet Free. Breed-O-Remedy Co., Box 2240, Bristol, Conn.

FARMERS SAVE, MAKE OWN SPRAYS. House, barn, chicken house, animals, flies, bugs, garden Mixtures cost 5c-25c gallon, by our formulas. We sell six formulas for $1.00. Quaker City Products Service, 2304 Hamilton St., Philadelphia, Pa.

WHY BLAME THE BULL when your cow does not breed? Use Cow Catch 1 hour before service. Results or your money back; 85 cents for one cow, $2.00 for five cows, postpaid. Woodstock Farm, Route 2, Box 59-C, Renton, Washington.

TRACTOR PLOWS.—Oliver, Rock Island and Vulcan, new 1 and 2-bottom complete with power lift, $50.00 each Philadelphia. All highest grade equipment. Bargains of real merit. Post office Box 1104, Philadelphia.

WATER PUMPS WATER night and day with Rife's Hydraulic Ram. No attention, no expense. Write for free catalog. H. T. Olsen, 15 Park Row, New York.

ROOFING PAPER.—3-ply, $1.85 per roll, 100 square feet. Prepaid. Asphalt shingles, roof coating, paint. Send for price list. Winiker Bros., Millis, Mass.

DON'S SALVE.—Sold on its merit for 64 years. For sore and scratched cow teats. The great healing compound. Send 25 cents to P. W. Lerch & Company, Honesdale, Pa.

FOR SALE.—Six Vulcan 2-bottom Tractor plows, $60 each. Inquire Michel Brothers, Wexford, Pa.

FOR SALE.—Huber Traction Engine. Also steel thresher. Box 112, Penn'a Farmer, Pittsburgh.

FARM LAND

PENNSYLVANIA

$1,000 GETS 300 ACRES.—Tractor, auto truck, 3 horses, 5 cows, bull, 75 hens, furniture, crops; equipment; half hour to city and large lake; 100 acres tillable, est. 4,000 cords. Firewood; 100 acres timber, valued $8,000. Price only $6,000 with $1,000 cash. Details and pictures all; attractive 8-room house and big-roof barn (pg. 54 Strout's Spring Catalog, 134 pages, 1,000 bargains, 253 pictures. Write today for free copy; state size farm you want. Strout Agency, 1422 BE, Land Title Bldg., Philadelphia, Pa.

LOOK HERE. 50-acre Poultry farm, Warren County, good buildings, only $2,000. C. C. Corpman, Harrisburg, Pa.

MISCELLANEOUS LANDS

IN THE SAN JOAQUIN VALLEY of California general farming is a paying business. Feeding cattle, in terms and cities. Alfalfa, millions of people in terms and cities. Alfalfa, combined with dairying, hogs and poultry, yields a good income. A small one-family farm, with little hired labor. Income assured. The climate's all the year. Newcomers welcome. The Santa Fe Railway has no land to sell, but offers Santa Fe Railway has no land to sell, but offers a free service in helping you get right location. Write for illustrated San Joaquin Valley folder and get our farm paper—"The Earth" free for and get our farm paper—"The Earth" free for six months. C. L. Seagraves, General Colonization Agent, Santa Fe Railway, 818 Railway Exchange, Chicago.

LIVE GOOD WHILE MAKING A GOOD LIVING on the Del-Mar-Va Peninsula. Low priced growon the Del-Mar-Va Peninsula. Low priced productive land, town and waterfront markets by motor to ten hours to largest Eastern markets by motor or Pennsylvania Railroad. Very little snow for or Pennsylvania Railroad. Very little snow, highways. Good and freezing. Finest concrete highways. Good schools, low taxes. Handsome descriptive book let. Free. Address 163 Del-Mar-Va Building, Salisbury, Md.

AGENTS

BIG OHIO CORPORATION wants county manager $50 weekly commission. Earnings start immediately. Good for $5,000 yearly. We furnish everything, deliver and collect. Capital or experience unnecessary. Fyr-Fyter Co., 1880 Fyr Fyter Bldg., Dayton, Ohio.

COUNTY SALES MANAGER.—If you can sell farm trade, own car, furnish references, will consider your application. No capital needed. Happy Home Washer Corporation, Sycamore, Ohio.

INLMET POLISHING CLOTH cleans all metals like magic. Gets enthusiastic attention. Sells fast at 25c. Sample free. F. C. Gale & Co., 80 Edinboro St., Boston, Mass.

$12.00 DAILY SHOWING NEW LINEN-LIKE Tablecloth. Washes like oilcloth. No laundering. Sample free Besterer, 681 Irving Park Station, Chicago.

WANTED: Farmer or farmer's son or man to travel in country. Steady work. Good profits. McClellan & Company, Dept. FA2504, Winona, Minn.

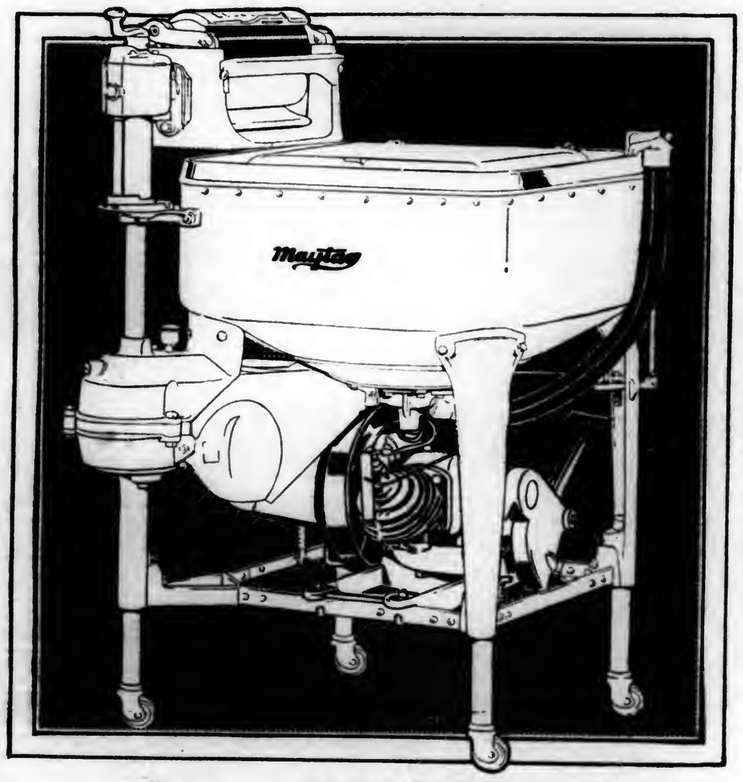
WANTED: Middle-aged man who knows farm to travel among farmers in the country. Steady work. Write Otho Whipple, West Salem, Ohio.

MEN WANTED TO CANVASS FARMERS, $160 monthly salary and expenses. Write for particulars A147 Bigler Co., Springfield, Ill.



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The MAYTAG is a help to the farmwif



FOR years and years, the May
has been the favorite farm
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with or without electricity. Its
cast-aluminum tub and gyra
washing action changed the
washday to an hour or two of pl
employment. The grimiest
clothes are washed perfectly
without hand rubbing. The
Water Remover makes wringing
easier and more thorough.
Maytag enjoys the largest farm
of any washer.



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The washer that holds world lead
ship in both farm and city homes,
offers you a high-grade, three-gall
aluminum churn attachment.
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washes your clothes churns the but
Water placed in the washer tub
the churn keeps the cream at the
desirable churning temperature.
takes but a minute to get it ready.
is simple, durable and easily cleaned.



Interchangeable Power

The Maytag Gasoline Multi-Motor is now in its fifteenth year and Maytag is the world's largest producer of single-cylinder, two-cycle gasoline engines. By removing only four bolts, the gasoline Multi-Motor is interchangeable with the electric motor. High-grade Bronze Bearings, flood-proof carburetor, Bosch high-tension magneto and speed governor, give it a steady flow of reliable power. A step on the pedal starts it.

Free Trial Washing

Telephone the nearest Maytag dealer. Use a Maytag for your next washing without cost or obligation. If it doesn't sell itself, don't keep it. *Deferred payments you'll never miss.*

THE MAYTAG COMPANY, *Newton, Iowa*
Founded 1893
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The Maytag Co., Ltd., Winnipeg, Canada
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John Chambers & Son, Ltd., Wellington—Auckland, N.Z.

Maytag
Aluminum Washer

MAYTAG RADIO PROGRAMS

WBZ-A, Boston, KDKA, Pittsburgh, WCAU, Philadelphia, WTAM, Cleveland, WLW, Cincinnati, KYW, Chicago, WCCO, Minneapolis, KOIL, Omaha, KMBC, Kansas City, WBAP, Fort Worth, KGW, Portland, KFRC, San Francisco, KNX, Los Angeles, KLZ, Denver, KSL, Salt Lake City, CFCA, Toronto, KMOX, St. Louis, WJR, Detroit.

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PENNSYLVANIA FARMER

Published Weekly

Established 1877

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PENNSYLVANIA STOCKMAN *and* FARMER

April 13, 1929

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Now . . . *time to think about*

TOP DRESSING small grains

You can decide right now—while you are reading this paper—whether or not you want to make extra money this year from your small grain crop.

This advertisement is a friendly suggestion. Follow its recommendation. Top dress oats, wheat, barley, with Chilean Nitrate of Soda, as soon as spring growth begins. This amazing nitrogen fertilizer will give an increased yield per acre that will pay you back its cost many times over.



HERE'S ACTUAL PROOF!

An increase of 23½ bushels of wheat per acre due entirely to Chilean Nitrate. Bags on left represent acre yield (16.7 bushels) using 200 lbs. mixed fertilizer and 150 lbs. basic slag per acre. Bags on right show acre yield (40.2 bushels) using same fertilizer plus 200 lbs. Chilean Nitrate per acre. Farmer E. F. Pickslay.

Chilean Nitrate is the only natural nitrate fertilizer. 800,000 farmers used it last year to increase their yields and profits.

Now is the time to buy Chilean Nitrate for top dressing. If you don't know how or where to get it a letter from you will have prompt attention.

FREE—Fertilizer Book.

Our new 44-page illustrated book, "How to Use Chilean Nitrate of Soda," tells how to top dress small grain and how to fertilize all other crops too. Free. Ask for Book No. 1 or tear out this ad and mail it with your name and address written in the margin.

Chilean Nitrate of Soda
EDUCATIONAL BUREAU

Chilean Nitrate of Soda — For Profitable Crops

511 CITIZENS' BANK BLDG., COLUMBUS, OHIO
67 WILLIAM STREET, NEW YORK, N. Y.

In writing please refer to ad No. 1-23

DIBBLE'S *mammoth* Yellow Flint Corn



The largest growing and most productive Flint Corn grown, and matures here in the Genesee Valley country of Western New York in around 100 days. Ears 10 to 15 inches long. Stalks 10 to 15 feet high. A customer in Oswego County raised 460 bushels from two acres. One in Connecticut, 400 bushels from a Half Bushel. A New Hampshire farmer 243 bushels from a peck. Scores of farmers have written us that it was the best Ensilage variety they had ever grown.

Average germination above 95% and the price is only

$2.75 PER BUSHEL

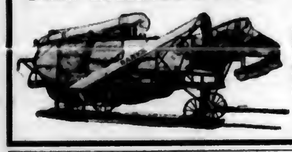
We also have full stocks of the standard varieties of Ensilage corn, several as low as $2.25 per bushel and a complete line of Alfalfa, Clover and Grass Seeds, Oats, Barley, Corn, Seed Potatoes, etc., at prices you can afford to pay. Dibble's Farm Seed Catalog giving accurate descriptions, all illustrations in color. Samples for testing and Price List FREE.

Address
EDWARD F. DIBBLE SEEDGROWER
Box F. Honeoye Falls, N. Y.

"EVERYTHING FOR THE FARM"

THE BAKER STEEL GRAIN THRESHER

BUILT IN STANDARD SIZES



Hyatt Roller Bearing equipped. 15 bar 5 tooth track cylinder. Three distinct motions in clean. Double belted. Reasonably priced and generous terms. The purchase price of a Baker is not an indebtedness—only an investment. Visit our factory. You are welcome. Complete tractor and thresher catalogs free.

THE A. D. BAKER COMPANY
Swanton, Ohio

AT YOUR SERVICE is the attitude of every advertiser in this paper. Write them about your needs. Mention Pennsylvania Farmer.

Farm Facts and Fancies

By ALVA AGEE

GROWING prosperity is not a conservative business. However, I know a good many people in several states who depend chiefly on the potato crop for their income, and I think that the great majority of them would have been considerably prosperous if there had not been abnormal loss two or three years since. Probably the most of them are better off anyway than they could have been in a more conservative line of farming. Two serious dangers are such unprofitable years as we had last year with over-bulky top production and poor yields due to bad weather conditions and disease. There is no arguing with Jack Frost himself and the loss has to be taken.

A lot of headway has been made by certain farm papers against loss through poor seed, but there are still many troubles in every locality that cause heavy loss of profits every year. This spring they have their returns on probable prices received but would take their risks of disease and bad weather in the ground as a matter of course.

Sixty to Forty

The U. S. Department of Agriculture figures that we shall be back to the 1927 acreage basis this year. Allowing on average weather it included that prospects were that many of those who grow early potatoes and would have to sell in competition with our old crop surplus.

Now, there is another mixed factor that would have no place in the scientific analysis of a situation made by the Department and yet it has a lot of weight with growers. Disregarding all statistics it would not be unusual to have a bumper crop and naughts discouraging prices immediately following a season of that sort. It has happened but the average grower doesn't expect it. He may drop acreage because he is plumb disgusted but if it was some other person's problem I would say that the chances favor higher yield per acre on a smaller acreage.

I reckon the chance are sixty to forty against a bumper yield per acre this year. The big obstacle right now is that surplus of old potatoes that will start the new 1929 crop off on a discouragingly low level.

High Cost of Ill-Health

Monthly bulletins and magazines come to us from organizations that are trying to promote the public welfare. Some of the projects do not interest me because I do not think the organizations are getting anywhere in particular. Now an organized movement forward that can make a strong appeal to our interest as we come to understand what it is trying to do.

Some leading men in private medical practice in public health work, in medical and like institutions and homes and in public life have been constituted a committee on the cost of medical care and its program of research is adequately financed. I start out with the proposition that the one great outstanding problem is that involved in the delivery of adequate scientific medical service to all the people, rich and poor, at a cost which can be reasonably met by them in their respective stations in life.

The public is represented in the committee by such representative men as William J. Schieffelin of New York, Vance McCormick of Harrisburg, Pa., and Mathew Woll of the American Federation of Labor. A study of the whole situation will continue for five years, and the results doubtless will have inestimable value.



The cost of treatment in hospitals when the patient has only a small income, but is unwilling to go where charity is free, is appalling in thousands of instances and especially if the illness is prolonged. All that will be studied and nowadays concerns communities people because the most of them cannot have adequate care in critical illness except in cities or towns, but especially interesting subject of study will be the possible ways of remedying the shortage of good doctors in country districts.

I wonder whether the cause lies so much in the ambition of young doctors today as in the liking for specialists whenever anything serious is the matter that takes their patients to them. The result is that in many rural sections have no one to take care of ordinary ills and accidents all their expense or [illegible] ability to pay. We [illegible] advances in medical science available to all [illegible] big problem.

Honest Interest in Agriculture

President Hoover told us something [illegible] that deserves to be kept in mind. We do not have a farming problem in this country as a [illegible] problems. It is [illegible] that we want to get away from [illegible] all. Many things [illegible] as time goes along.

I am not knocking, but it is a fact that agriculture was not interesting to such statesmen as available to most statesmen of the last generation and our other leaders had the center of the stage while national policies were being considered. Otherwise the policy of the utmost extension of our farming area at public expense could not have been a matter of course. I use the [illegible] as a basis and there were many others.

The present [illegible] Statesmen are wanting farming to be [illegible] profitable. There will be great many things found possible to do when the public attitude is friendly to those interested. They will be doing [illegible] our interests are too [illegible] to be patchworked together. The special session of the Congress will make certain important [illegible] but I count most on the [illegible] that means to farming interests will be watched and served just as many [illegible] interests have been in the past and in place of a cure-all [illegible] we can expect to work a series [illegible] look for the beginning of [illegible] farming as a result of [illegible] helpful legislative acts.

Mexicans in the Southwest

The South has machinery to take the place of much farm labor in the production of staple crops. The [illegible] and vegetable growers have [illegible] their cities to draw [illegible] reasonable work. The South has the negro for its cotton fields. The Southwest depends on Mexican labor in front and [illegible] growing.

It occurs to me that the Mexican [illegible] make the most desirable [illegible] citizen and that there should be a [illegible] quota regulation under the immigration act, and that [illegible] that many people admitted [illegible] under the special rule for seasonal work [illegible] tail very often to go back home, but [illegible] turning interests of the Southwest [illegible] would break down if there were no Mexican labor. What is the answer to that?

News and Notes

Testing farm fence posts and other farm timber by the project methods gives their useful life five or ten years over the U. S. D. A. The simple pole rot system is described in Farmers' Bulletin No. 744-F, "The Preservative Treatment of Farm Timbers." Only with such durable woods as oak and cedar is the treatment with coal tar creosote a paying economy.

• • •

For every 100 deaths among girl babies under one year of age there are about 130 deaths among boys of the same age. However, more boys than girls are born every year, birth registration statistics show.

• • •

On October 21, 1929, the world will celebrate the 50th anniversary of Edison's invention of the first practical incandescent electric lamp, the foundation of the great electrical industry. Illustrating just what this lamp and its improved successors means to mankind, the committee arranging for the golden jubilee celebration makes the following comparison: Light one room with a modern, efficient 100-watt lamp for 1,000 hours. Light another room to the same degree of brightness with replicas of the first commercial incandescent lamp. Pay seven cents per kilowatt-hour for current. Now, to light a third room just as bright with candles, and keep replacing the candles for 1,000 hours. Here would be your light bill at the end of that time:

Room 1—Modern 100-watt lamp	$7.35
Room 2—Original incandescent	808.75
Room 3—Candles	$1,500.00

• • •

When Florida growers shipped 645 carloads of celery in one week early in March they decided that was too much celery for the health of the market. So by agreement among themselves they stopped virtually all cutting for a week, with the result that shipments dropped from 645 carloads one week to 55 the next. According to market reports "City prices strengthened slightly" as a result of this drastic reduction in shipments.

• • •

The European corn borer has been found on (or in) more than 200 different kinds of plants in New England where it made its first appearance in the United States.

• • •

Citrus fruits that are "ripened" by the use of ethylene gas really are not ripened at all. The process merely gives fruit the color of ripe fruit without increasing the starch or sugar content or making the other internal changes that characterize natural ripening. The citrus process is now widely used in the citrus fruit industry and has been applied in an experimental way on other fruits, with varying results.

• • •

Imports of red clover seed for the period July 1 to November 30 amounted to 512,800 pounds in contrast with no imports of red clover seed for that period last year. In addition 519,300 pounds were to be permitted entry after attaining. Of the quantity permitted entry, 218,400 pounds were of Russian origin with the remainder composed chiefly of seed from Poland, England and France. During the week ended December 8 about 275,000 pounds from France, Germany and Great Britain were received at one Atlantic port subject to the Federal Seed Act.

• • •

During the first few days of March shipments of strawberries from Florida averaged about 50 carloads a day. Celery shipments in one day total 160 carloads.

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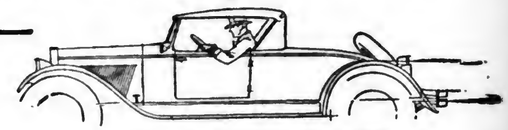
The Baltimore and Ohio Railroad again this year offers a $100 scholarship to the best 4-H Club worker in the Pennsylvania counties traversed by its lines. In recent years the railroad has awarded 90 scholarships and 50 of the winners are attending or have graduated from some college or university. George Fox, Greensburg, was last year's winner in Pennsylvania. He was a strawberry and dairy calf club member. Other Pennsylvania winners are: William O. Kerns, Emaline Passmore, West Chester; John A. Benson, Mahoningtown; Donald M. Snook, Oxford; Carl Kline, Spangler; Evelyn Krumenacher, Carrolltown; Harry Frodline, Boswell.

• • •

There is a faculty member for every ten students now attending the Pennsylvania State College. The resident teaching staff numbers 424. In addition there is a college research staff of 42, an administrative staff of 43, and an extension staff of 160. The latter group includes the county agents, extension specialists in agriculture, home economics, engineering and [illegible]

Suppose someone offered to—

add 10% to 30% more power to your engine—



lower oil consumption 15% to 50%—
reduce your repair bills 25%

You'd want to know how and why
The "how" is the amazing New Mobiloil
The "why" is told below

In spite of our scientific prejudice against superlative language, we are prepared to make some very strong statements about the New Mobiloil. We assure you that, compared with the actual test facts, they are conservative.

For example: We are willing to assure you that use of the New Mobiloil in your car, truck or tractor engine, provided you use the correct grade as specified on the Mobiloil Chart, will help it develop 10% to 30% more power than other oils generally supplied for the same purpose. Our road and laboratory tests have bettered the higher figure.

Thousands of miles of rigid speed tests on the Atlantic City Speedway have shown that the New Mobiloil consumes more slowly than other high-grade oils of equal body. And it is an established engineering fact that the oil which lasts longest at high speed also lubricates best at any speed. This amazing wearing quality of the New Mobiloil means a saving of 15% to 50% in oil consumption, fewer repair bills, and less time lost through costly breakdowns.

Substantial quantity discount

For a season's supply we recommend the 55-gallon and 30-gallon drums with convenient faucets. On these large containers your Mobiloil dealer will give you a substantial discount. His complete Mobiloil Chart tells the correct grade for your car, tractor and truck.

VACUUM OIL COMPANY
Makers of high-quality lubricants for all types of machinery

Make this chart your guide

It shows the correct grades of Gargoyle Mobiloil for certain prominent cars. If your car is not listed here, see at your dealer's the complete Mobiloil Chart, which recommends the correct grades for all cars, trucks, tractors, etc.

MAKES OF PASSENGER CARS	1929 Engine Summer	1929 Engine Winter	1928 Engine Summer	1928 Engine Winter	1927 Engine Summer	1927 Engine Winter	1926 Engine Summer	1926 Engine Winter
Auburn, 6-66	BB	Arc.	BB	Arc.	BB	Arc.	A	Arc.
" 8-cyl.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
" other models	BB	Arc.	BB	Arc.	BB	Arc.	A	Arc.
Buick	BB	Arc.	BB	Arc.	BB	Arc.	BB	Arc.
Cadillac	BB	Arc.	BB	Arc.	BB	Arc.	BB	Arc.
Chandler Special Six	...	...	A	Arc.	A	Arc.	...	...
" other models	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Chevrolet	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Chrysler, 4-cyl.	...	...	A	Arc.	A	Arc.	A	Arc.
" Imperial	BB	Arc.	BB	Arc.	A	Arc.	A	A
" other models	A	Arc.	A	Arc.	A	A	A	A
De Soto	A	Arc.	...	...	...	...	...	...
Dodge Brothers	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Durant	A	Arc.	A	Arc.	...	...	A	Arc.
Erskine	A	Arc.	A	Arc.	A	Arc.	...	...
Essex	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Ford, Model A	A	Arc.	A	Arc.	...	...	...	...
" Model T	...	...	...	...	E	E	E	E
Franklin	BB	Arc.	BB	Arc.	BB	BB	BB	BB
Gardner, 8-cyl.	BB	Arc.	BB	Arc.	BB	Arc.	A	Arc.
" other models	...	...	...	...	...	...	A	A
Graham-Paige	BB	Arc.	BB	Arc.	...	...	...	...
Hudson	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Hupmobile	A	Arc.	BB	Arc.	A	Arc.	A	Arc.
La Salle	BB	Arc.	BB	Arc.	BB	Arc.	...	...
Marmon, 8-cyl.	A	Arc.	A	Arc.	A	Arc.	...	...
" other models	...	...	BB	A	A	A	A	A
Moon	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Nash, Adv. & Sp. 6	BB	Arc.	BB	Arc.	BB	Arc.	A	Arc.
" other models	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Oakland	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Packard	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Peerless, 72, 90, 91	BB	A	BB	A	BB	A	BB	A
" other models	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Plymouth	A	Arc.	...	...	...	...	...	...
Pontiac	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Reo	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Stearns Knight, 6-80	BB	Arc.	BB	Arc.	...	...	...	...
" other models	BB	A	BB	A	BB	A	BB	A
Studebaker	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Velie, 8-cyl.	BB	A	BB	Arc.	...	...	...	...
" 6-cyl.	A	Arc.	A	Arc.	A	Arc.	A	Arc.

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NESHAMINY GARDENS

By R. P. KESTER

THE last ten days of March found the soil and temperature fit to do some work and get gardening started. Peas, radishes, onions and lettuce may be sown just as soon as the ground is fit. Oats and grass seed sown the latter part of March usually gets the jump on that sown later. We



are having a few acres sown to oats this spring, mainly to get it back into grass. The grass seed is two parts alfalfa, two parts timothy and one part alsike clover. All these do well on our soil, and they make a good sod-forming combination for turning down two years later.

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Labor seems to be more plentiful this spring than has been the case for several years, but the wages asked are as high as ever. But when one knows the cost of living in these times it is readily seen that the necessity for good wages is as great as ever. Farming near the industrial and commercial centers is influenced by conditions prevailing in the cities both as to hours and wages. In addition to this land values and taxes are also higher and any branch of farming must be conducted more intensively if the farmer is to make both ends meet.

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I know of many instances where farms are being held by the owners not in the hope of making a profit from operation, but because of the rise in land values due to metropolitan influences. The building of permanent highways in every direction from the big cities and the almost universal ownership of automobiles is tending to spread the growth of cities outward. Except for certain races who are still gregarious by nature, most city dwellers want to get away from the congested areas. That is true also of some industries, and even big stores are building out where there is space enough to accommodate the automobile traffic. As a matter of fact, the influences in city building now are centrifugal instead of centripetal as in former years.

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Not only does the influence of the cities affect farmers from an economic standpoint, but it affects them from the social side as well. Probably nine-tenths of the boys and girls from farm homes in the metropolitan areas drift or are drafted into other lines of business and into the professions. At least that proportion holds for the families with which I am acquainted. Father and mother may hold on to the old farm while they live, but the young people take up other vocations.

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I wish to recommend the articles on home adornment which have been appearing in Pennsylvania Farmer from the pen of L. L. Rummell. I know that Mr. Rummell writes from personal experience and practice. If once a farmer and his wife start to fix up their home surroundings attractively they will wonder why they did not start before. There is no excuse for the neglected and dilapidated appearance of so many farm homes. Flowers, trees and shrubbery, when well chosen and properly set, add value and beauty to a home. A very modest home may be converted into a beautiful place in a short time if there is the desire to do so.

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We have not taken the mulch off the strawberry plants yet,—April 1. Although grass has started to grow, and I want to be sure that the strawberry plants will not get in too big a hurry and come out too soon. By leaving the mulch on blooming time will be retarded. Plants bloom very early with us, and last year the berries came on before the Delaware crop was off the market. This is the first time we have had them covered effectively.

Give Them Room

HUMANITY has paid an enormous toll in life and suffering for its knowledge of sanitation. Varying methods of existence and many housing conditions, in addition to superstition, kept sanitation well in the background.

But today we appreciate knowledge of the value of light and air, or sunshine and ventilation. "Cleanliness next to godliness," is accepted as a fact.

We often do people who are so careful about personal sanitation some five hundred chicks to thrive in a proper space of, say, three hundred? Even from a smelly oil stove or gas brooder stove or coal stove are not recommended as fumigators. If you're raising a fair percentage of mature birds remember that "clean" is the best motto to cling to in the poultry house. S. H.

Friendly Talks

By Edgar L. Vincent

NOT far from forty per cent of the farms of this country are managed and operated by men who do not own them. Why this is so, we will not stop to discuss now. But there is a side to it that does greatly concern us. A large part of these tenant farmers every year move to a new location. The spring of the year is usually the time when these changes are made.

Why do we see so many changes this kind every season? Some of them doubt buy farms of their own, and some is due to efforts quit the farm and go to town. Last year 1,500,000 folks left the farm. And then a great percentage of changes is due to the lack of a square deal somewhere. On one side or the other there has been a lack of fairness, and that always leads to trouble. Most of this difficulty might have been avoided if everybody had been actuated by a determination always to be fair and just and honest.

The ability to step over into other fellow's shoes and see how things look from his standpoint is one of the most desirable things in all this world. But changing places in spirit is not enough. It we find that there is a peg sticking up in the other fellow's shoe and making his foot sore, it ought to be our first job to help get that peg out, so that traveling will be better from this time on.

In fact, all life is more or less a matter of give and take. It never pays not to get all the advantages on our side. Self-interest, if nothing else, would lead to this conclusion. There are higher considerations, however, if ever the old world gets over its pull and haul, its grabbing and its grafting. It will be when everybody works for the other fellow's good will as well as his own. Selfishness never pays. It is the rust that eats out life's most delicate bearings.

A world without selfishness would be ideal. Is that what we say? All right. Are not we all working for the ideal world? If not we ought to be, and we ought to begin this very

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The Combine Saves Soy Beans for This New Jersey Farmer

Relief for Soy-bean Growers

By ANDREW E. CORDIAN

EVERY farmer who has grown soy beans for ripening knows the various difficulties connected with the harvest. Particularly the best kinds ripen pretty late, when the best time for drying is gone. Cutting them a little earlier with the mower or reaper, when the leaves become yellow and the pods are only partly ripe, is dangerous, because rainy weather sometimes prevents a perfectly dry harvesting and a part of the beans contracts mould. It seems to be better to let them well ripen until leaves are off and all the beans are hard. Then they can be cut with the binder, but a loss of beans is unavoidable in this way.

In every case there is a lot of "moving the beans": raking, turning, putting them into heaps or shocks, hauling into the barn or stacks. And at last the worst task has to be done, the threshing, toilsome enough from the stalks in the field, worse in the barn. The whole task requires much labor, most of it by hand. I grew soy beans for seed here in northern New Jersey the past four years and in three years of experience I learned all about the troubles mentioned above.

I grow two kinds, Yellow Manchu and Black Wilson, the latter ripening two weeks later than Manchu. They thrive well on our red shale loam when fertilized with superphosphate (acid phosphate) and lime, reaching a height of three feet; the Wilson often developing long vines. I have learned that any applying of potash in my soil is waste of money, by drilling a strip of potash across the field fertilized with superphosphate. Not any effect could be observed.

I plant the beans in rows 20 inches apart not more than half a bushel to the acre and cultivate one or two times. I always plow in the fall if possible and harrow in the spring several times in proper spaces of time in order to air the soil, thereby furthering the growth of the soil bacteria, and to kill the weeds. The lime burned lime ought to spread before the first harrowing, the superphosphate before the last, if the beans are grown the first time and therefore have to be inoculated. I never inoculate beans planted the second time on the same field and in this case I spread the superphosphate together with them. Never apply lime or inoculated beans together with superphosphate, because the phosphoric acid would become ineffective and the nitrogen-gathering bacteria killed.

In the last cold and wet summer the beans were poor and ripened three weeks late. In order to lower the cost of wheat and oats growing I had purchased a harvester-thresher or combine and, now, in this emergency, I tried to harvest my 23 acres of soys by this wonderful machine. It was in November and the beans were perfectly ripe. I started on bright days, but was forced also on a day when it snowed a little. The beans were all fine and dry, not any mouldy and only a few cracked beans. They keep well, even when heaped up high. At all events it was a full success and I think the combine to be a real relief for any grower of soys for ripening. It saves all the toilsome labor mentioned above and, if the straw is not needed for feeding purposes, it saves the extra labor to haul it back to the field and spread.

The straw of the soys contains a considerable amount of nutritious matter better for grain and corn than many a commercial fertilizer. Therefore, any waste of the straw by rotting or burning should be strictly avoided. So long the farmer with his poor help often could not avoid it. Since the combine has made its appearance, he can avoid it, he saves very much labor and the straw too without cost. The straw is left on the field in rows. If needed for feeding, one cuts the beans low like by the binder and can harvest the straw most easily by hand or hay loader. I do not want it, I cut the beans as well as grain as high as possible and plow the straw under.

Two men were necessary for harvesting, one operating the combine, the other hauling the beans either loose in a wagon box or bagged as soon as the bin of the combine (containing 30 bushels) was filled.

For Shorter Hours and More Pay

WITH the above as its objective organized labor has in the past quarter of a century gained concessions both as to reduced working hours and increased wages that far surpass the most sanguine dreams of their erstwhile radical leaders. From a twelve-hour day to one of eight hours with the miracle of wages doubling and tripling on the one hand as the hours of work diminished on the other is one of the curious developments of our wonderful age.

And this end is not yet. The recognized five and one half day week is under fire and organized labor is now systematically planning for the general adoption of the five day week of forty working hours. Leisure, an experience little known to the industrial worker of twenty five years ago, has now become a problem. As more leisure is gained the problem will increase.

What has often caused the writer to meditate is whether some of this "shorter hours and more pay" doctrine that has worked out so amazingly for men in other walks of life might not be applied to the American farmer as well. All sorts of farm relief are being advocated but to date the results are somewhat less than nothing. Any brand of legislation which assures a better price than now exists for any farm product will defeat its own purpose by creating a vast surplus and no amount of law making can permanently replace the time-honored law of supply and demand.

We already have too much farm produce, too much capital invested and too many hours of productive labor spent at farming. If all farmers worked less, production would go down but the inevitable increase in price would more than take up the slack. The principle of "shorter hours and more pay" certainly wasn't meant for every other class of society to the exclusion of that class which engages in agriculture, "the mother of all industry and the maintainer of life."

Go to town on Saturday afternoon and try for instance to buy a sack of feed. The warehouse doors are closed and the office deserted. Possibly you recall that the bay mare has lost a shoe and think to salvage the errand by having the shoe replaced, but when the blacksmith shop is reached it too is found deserted, for Saturday afternoon is a general half holiday. On Saturday afternoon a carpenter will not drive a nail, a bricklayer jacks his job, a plasterer ceases to plaster, a banker locks his bank and so on ad infinitum. True the barber goes on with his shaving, but he collects an extra fee on Saturday.

Now I am inclined to think that all this is as it should be, for every man is entitled to a respite from work other than brief marginal periods night and morning. I propose a Saturday half holiday for the farmer, his family and his employes. Impossible? Not at all. Most of us find it possible to stop everything but the chore work from Saturday night until Monday morning and having demonstrated our ability to stop some time it is quite possible to stop a few hours earlier or at noon Saturday.

There are any number of ways that one might improve his time during this weekly half holiday. In developing the subject one evening at the local store box club I was surprised at the range and variety of proposals made in regard to how these leisure hours might best be utilized. Whether they should be spent in recreation or otherwise is for each to decide for himself but the one hard and fast rule must be that nothing shall be done that will in any way contribute to the production of food. If a man has a flower garden, and they are becoming popular, it would be all right to slash around in it with a hoe on Saturday afternoon but all wrong to wield the same instrument in the truck patch.

As to the hired help, they shall be paid off at noon Saturday the same as their brothers, uncles [illegible] who work in town and sweet for Saturday evening chores, the feeding of livestock, milking, etc., the afternoon is theirs to use as they see fit. Few of us who employ him would care to exchange places with the hired man and in view of the fact that his working day is the longest of any laborer we know it would seem only fair to grant him Saturday afternoon off with no reduction in pay.

Just how this plan shall spring into being is a matter for study. Pennsylvania farmers should lead and having

(Continued on page 37.)

TIGHT BINDING TEXT CUT OFF

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BY TRANSPORTATION

THIS year the six "early" states are expected to produce 71,427,000 quarts of strawberries, the largest crop on record. Here is an interesting example of crop development as a result of transportation, for without that there could be no great commercial berry industry in the South.

AN ILLINOIS PLAN

ONE of the problems in taxation is to get from the citizen who has wealth and income but no visible property his fair share of the public funds. Illinois is now considering a measure which is intended to do this. It is an income tax payable only by those who do not make their contribution to public revenue in the form of property tax. If a man pays no property tax and has income he pays income tax. If he pays property tax he is relieved of a corresponding amount of his income tax, or all of it if his property tax equals or exceeds his income tax. This looks like an equitable plan and some state will probably try it so that we can see how it works.

AN EXTREME CASE

THOSE who think that "the government" can and should attend to all kinds of business might get a little information by glancing at the financial statement of the United States Shipping Board. This body has spent $3,635,000,000 and has taken in about $400,000,000, including receipts from sale of ships. It has ships on hand to an unknown value and a deficit of over $3,000,000,000. Nobody is blaming the Shipping Board for all this; but everybody should know that the Board can't operate profitably even when its ships cost it nothing, and that is a pretty fair example of government in business.

A VICIOUS ONE

GENTLE bulls are the most dangerous because they are trusted, but now and then a bull known to be vicious gets his chance and hurts or kills somebody. March 30th Samuel Brillhart, Thomasville, Pa., was gored by a bull which was known to be dangerous. Mr. Brillhart was bedding the bull's stall when it suddenly attacked and injured him so severely that he was taken to the hospital. His life was saved by his wife, who drove the bull away—another example of a woman's courage in facing an infuriated beast. Some day we are going to review these bull cases to see just how many times a woman has bravely rescued the victim of the bull. Beware of the gentle bull, the vicious bull, every kind and breed of bull!

THE SECRETARY'S PLAN

LAST week Secretary of Agriculture Hyde submitted a statement to House and Senate Committees which is understood to express the Administration's ideas on farm relief, though he said that he spoke for himself alone. That statement proposes a Federal Farm Board, "armed with resources and authority," to work out farm problems, some of which he enumerates thus:

"Our farm cooperatives are in need of capital with which to acquire further facilities and to expand their activities. The agricultural industry is in need of finance in supplement to the established financial institutions by which they will be enabled to hold their commodities until they themselves can place them in the market and not be forced to sell immediately upon completion of production. Capital is needed with which to purchase a portion of the occasional surplus or seasonal surplus and assure its orderly distribution over longer periods. The progress of many commodities from the producer to the consumer is most disorderly and wasteful; and especially in perishables, the terminal markets are flooded in one week and starved in the next. The result is undue fluctuation in the price and waste of the commodity itself. An enormous amount of unnecessary transportation takes place in the cross hauling of commodities in search of immediate market. There is a great hardship upon the consumer, for with some perishables, the price is almost doubled after the arrival of these commodities in terminal markets because of inadequate and wasteful terminal distribution. There are a minority of dealers and shippers of farm commodities, particularly in the perishables, whose business practices are unfair—a great hardship upon the producer. There is entirely an inadequate grading and standardizing of certain commodities, with the result of uncertainty in prices and opportunity for advantage to be taken over the producer and for speculation against the consumer. There is an inadequate development of processing for disposal of occasional surpluses of many commodities into by-products. There are, in fact, great wastes in the whole chain of distribution which act as a tax on both the producer and the consumer. Our warehouse acts need amendment in order to facilitate more perfect action in the establishment of credit. We have need for a larger study and for action in the inauguration of further irrigation and reclamation projects so as to prevent increased production until such production is required for national purposes. We have need for a larger study and for action in the determination of better use of marginal lands and their devotion to either forestry or pasturage. We have need for a better understanding of the national requirements of each commodity from season to season, and more active instruction of the farmers as to the volume of production required. We have need for a more exhaustive and accurate study of the different problems and wastes in distribution and the determination of their solution. We have need of a larger cooperation between the producers and distributors for the elimination of waste and more orderly marketing of products. When you consider that these needs and these difficulties arise, not in one commodity, but in scores of different commodities, and that the economic setting of each of these requirements and these problems is different, it is easy to realize the necessity of creating a broad authority rather than detailed plans."

Perhaps we should defer comment on this strange mixture of fact and fallacy until the plan appears in definite form as a bill in Congress. Then we may have some idea as to the functions of the Board and the extent of its authority and resources. Just how it can "feather in" on some of these problems is not very clear to our untutored mind, but maybe the bill and its discussion will enlighten us. The Secretary's discussion of farm problems before the Committee was more interesting than illuminating.

THE REGULATOR

OIL producers who proposed to unite to restrict production find several snags in the channel. They can't get the approval of the Federal Oil Conservation Board because that body has no authority to sanction such an agreement. They can't get around the anti-trust law by which such agreements are illegal as in restraint of trade. The only thing they can do is to appeal to Congress for exemption from the provisions of that law or its modification, and both are doubtful in one way or another. Now Congress proposes to set up an agency which may do for agriculture about what the oil men propose to do for themselves but do it in a different way. The difference is not so much between oil and agriculture as between the methods of achieving the same thing, the adjustment of production to consumption. After more years of experience, nobody knows how many more, we may reach the conclusion that the only correct regulation of such things is the automatic one of prices, or profits and losses. Thus far in human experience no other real and constant regulator has been found.

THREE PAGES

TO LOCALIZE Pennsylvania Farmer and better to serve the readers in each region we have established three sectional news pages which appear each week opposite this page. Mr. Horst writes as usual about Pennsylvania affairs for Pennsylvania readers. Before the papers for New Jersey, Delaware and Maryland are printed Mr. Horst's page is taken off the press and replaced by a page prepared by Mr. Harris. Likewise still another page is devoted wholly to West Virginia. Besides enabling us to give more local news of interest in each state, this plan gives the equivalent of two additional pages in each issue for material of interest to all readers.

This word of explanation is due the reader who has looked in vain through his edition for the comments of Miles Horst on Pennsylvania agricultural affairs, or for the reports of G. W. Harris on farm events in New Jersey, Delaware and Maryland. The West Virginia page is a recent addition, being only three weeks old.

WHERE ARE THEY?

LAST year an English business man traveled a good deal in this country, mainly in the northern states east of the Mississippi. We saw him on his way home and asked him for his impressions of our country. He said that one thing had much impressed him, the absence of the marks of strong drink on the faces of our people. We had never thought of that then but have been making a few observations since. Take a look at any assembly and see how many, or rather how few, of the faces therein bear evidence of drink. Where are the rummy faces so common everywhere thirty or forty years ago?

FLUNG IN

LAST week a conference was held by a state banking commissioner, a committee of a city real estate board and a committee of a league of building and loan associations. Their object was described as "a constructive effort to relieve a distressing situation"—the foreclosure of mortgages on homes and the sheriff's sales "which have continued now for many months." This has no connection with agriculture. We just fling it in to indicate that not all the financial distress is in the farming country.

GET ACQUAINTED

HOW many farmers do not know their county agricultural agent? How many do not know that he has an office at the county seat and a telephone in that office? We can't answer these questions, but judging by our correspondence too many persons are unacquainted with their county agent and his work. That is not his fault but theirs. For it is their business to know him and his work. It is their privilege, the privilege of all citizens, to avail themselves of his service. For that service is for the public, which pays for it by county, state and federal appropriations. Our questions are prompted by a few recent letters, one of which asks by whom a county agent may be consulted while another asks what his charges are. Get acquainted with the county agent and his work.

Pennsylvania Farm Comment

By MILES HORST

CROP acreages in Pennsylvania as a rule vary little from year to year. In spite of the low prices ruling on potatoes in 1928, the acreage as indicated by the State Department of Agriculture will be cut only two per cent. On the other hand, the good price ruling on the 1928 crop of tobacco is not going to cause a large number of farmers back into tobacco growing in those sections where this crop is grown. Corn, oats and wheat acreages for this year show a slight increase over last year according to intended plantings, but the change is very slight. We have arrived in this state at a stage of a diversified agriculture which is based on a rotation and a system of livestock raising and in a system of this kind changes are made very slowly.

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A NUMBER of electrical companies in New York state have adopted a simple rural plan for determining minimum guaranties on extensions built into the open country. The plan which has been approved by the Public Service Commission of that state consists of the assumption of a minimum revenue of $24 to $30 per month per mile of line. It is taken that this amount will support the future upkeep of the line properly. Any person may make application for rural service. The method is simply to prorate the $24 or $30 per mile per month according to the number of customers desiring service. This eliminates all requirements that the customers make a contribution toward the cost of the line. Of course if any customer desires to make any payment the minimum monthly guaranty required of such consumers is reduced in accordance with the amount of his contribution.

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THE right to exercise the privilege of eminent domain on the part of telephone and telegraph companies is provided for in a bill now before the Pennsylvania Legislature. It is not likely that this bill will become law and it should not, for we already have this right given to a number of Public Service Utilities whose lines are continually extending. This right is affecting the value and the convenience on thousands of farms in this state today and when once secured remains a permanent right regardless of conditions arising thereafter from the farmers' standpoint. Our telephone and telegraph lines now follow our highways. There is little danger to the traveling public by having them do so, and the economy brought about by shortening lines will not compensate for the inconvenience and the unsightliness of lines extending hither and yonder through our beautiful agricultural sections.

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THE progress of the sheep industry in this state seems to tend toward the small farm flock. The latest census report of our State Department of Agriculture shows a decrease in the sheep population in the two "sheep counties"—Washington and Greene—during 1928, the two counties in which the sheep industry is a major source of agricultural income, and sheep are kept in large flocks. This same report shows an increase in sheep population in such counties as Bradford, Blair, Crawford, Franklin, Indiana and Mercer, counties where dairying furnishes the main source of revenue and sheep are kept in small flocks simply as a supplementary source of income. Experience teaches us that diversity of income is desirable on the average farm and no doubt the introduction of small flocks of sheep on more and more farms is in line with this proven fact.

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IT PAYS to remind ourselves frequently of the ill effects of an experience like this. A prominent potato grower sold a potato chip manufacturer located at York six hundred bushels of potatoes two months ago. The potatoes were delivered, dumped into a large bin and paid for in cash. Last week the manufacturer started to use them. He found that ten per cent were frost bitten and hence unusable. We cannot here quote the forceful language this man used in giving his opinion of the grower. But he vowed that he would never again buy a bushel of potatoes out of that grower's "neck of the woods."

The number of potato growers who are as short-sighted as was this one is small. But the unfortunate thing about it is that all the potato growers in this "neck of the woods" will feel the effects of his dishonesty or lack of good business sense.

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DR. E. L. NIXON, now in potato research work at State College, Pennsylvania, has 5,000 potato seedlings which are growing in the greenhouses at the College and will be transplanted on the Potter county potato farm near Coudersport as soon as weather permits. Last year Dr. Nixon collected seed taken from the seed balls produced on the potato plants in various fields of this and other states to be used in this experiment. The purpose of this experiment being to try to find a variety of potatoes that will be equal or better in quality to those now commonly grown in this state and perchance immune to some of the diseases which are now costing us so much to handle.

The natural seed produced by a potato plant, like the seed of an apple, when planted will produce a variety of plant entirely different from the plant from which it was taken. In the great majority of cases the plant will revert to the wild state, but occasionally a new variety will come through which will have very desirable qualities.

Few of us appreciate the patience and the great amount of work and observation that an experiment of this kind involves. It may be that out of these 5,000 plants not a single desirable plant will come forth. The work may have to be repeated year after year, but should a variety be discovered in a series of these tests which would be equal to or better in quality than the Rural Russet, and be resistant to the various virus diseases now so prevalent in our potatoes, the results would be worth far more than all the cost we are putting into it. Such is the work of a real research man. For years he may work along patiently and laboriously without results and then suddenly a big find and all of us benefit by it.

• • •

NOTHING challenges our interest quite so much as successful achievement. It is just this that has brought so much public interest to the methods followed by our 400-bushel potato growers in the state of Pennsylvania during the past seven years. In these seven years 400 or more bushels of potatoes were grown on 802 separate acres of ground in this state.

Mr. J. B. R. Dickey of State College has performed a service to the potato grower each year during this period by summarizing the methods followed by these 400-bushel growers. He gathered his data from sheets filled out by each grower assisted by his local county agent.

Mr. Dickey's report shows that 400-bushel yields have been grown on every soil type in the state of Pennsylvania that was reasonably well drained. So then soil is not so important as many other factors which come under man's own control.

Seed.—Of the 377 400-bushel acres grown in the state in 1928, 92 per cent were grown with Rural Russet seed. All of the ten men who grew better than 600 bushels used Russet seed; 18 of the Club used White Rurals; ten, Cobblers, and one, Green Mountains.

Fifty-two per cent of the 377 growers used new seed coming from approved sources, nine of the ten men going over the 600-bushel mark used such seed and two-thirds of those going over the 500-bushel mark used new seed.

Mr. Dickey's report as compared to former years shows a gradual increase in the amount of seed used per acre. The average in 1928 was 24.3 bushels. The 500-bushel men averaged 26.4 bushels of seed per acre and the 600-bushel men 27.3 bushels of seed per acre. In this connection it must be remembered that it is useless to plant a large quantity of seed on poor soil. The fertility of the soil and the amount of seed used should be closely correlated.

The average distance between rows among these growers was 30.9 inches and the distance between plants in the row was ten inches. The higher groups planted somewhat closer than this, thus accounting for the larger amounts of seed they used.

Rotation.—In 89 per cent of the cases where the 400-bushel mark was passed the crop followed a legume. Five per cent of the yields were made on corn stubble ground and five per cent on timothy sod. About 50 per cent of the 377 acres was planted on a sweet clover sod. Sweet clover comes into greater favor each year.

Fertilization.—Manure was used on 80 per cent of these acres and the amount of it used per acre averaged ten tons.

All of the 400-bushel acres received commercial fertilizer. It is rather curious, however, to note in Mr. Dickey's summary that the higher yields were not produced with the greatest amount of fertilizer. In fact, the record yield for the state was made on an application of 600 pounds of a 4-8-7 fertilizer, and another 600-bushel yield was made on 500 pounds of commercial fertilizer. However, the average of the 377 yields was made with an application of 1,175 pounds to the acre. As to the analysis of the fertilizer used, the general tendency is toward three to four per cent ammonia, ten per cent phosphoric acid and five to seven per cent potash. Mr. Dickey's observations lead him to conclude that an application of 800 to 1,000 pounds of high grade fertilizer per acre is sufficient when manure is applied, or without manure 1,000 to 1,200 pounds of commercial fertilizer per acre.

Spray.—Only four unsprayed acres have made the 400-Bushel Club in this state to date out of the 802 on record. This leaves no doubt as to the value of spraying. Only one 400-bushel record was made last year without spraying and that acre was dusted. The general tendency during the past few years, according to Mr. Dickey's summary, is toward more frequent applications of spray per acre as well as an increase in the pressure with which the spray is applied. Last year the ten men who passed the 600-bushel yield sprayed 13.7 times with a pressure of 367 pounds, the 52 making the 500 yield sprayed 12.8 times with a pressure of 338 pounds and the whole group averaged in number of sprays applied 11.3 times at an average pressure of 300 pounds.

In keeping accurate records of these various yields and summarizing them, the Extension Service has given us a fairly accurate formula to use in potato growing. Of course this formula will be varied by the thoughtful and observing grower so as to fit his particular conditions. The inexperienced grower will find in these figures a safe rule to follow.



Above you see two rows of potatoes dug in Pennsylvania's champion acre which produced 696 bushels to the measured acre on the farm of H. J. Walton & Sons, Chester county, Pa., last year. Good seed, good soil, thorough spraying and absolute control of weeds made this record yield of well-shaped and clean potatoes possible. Mr. Walton, Jr., (standing near the digger) and County Agent Vandegrift seem to be well pleased with the results they have obtained by combining science and good practice in this field.

TIGHT BINDING TEXT CUT OFF

Ton Litters Prove Practical and Profitable

By L. C. MADISON

FOR five years the Keystone Ton Litter Club has been in operation, completing in that time a series of records and accomplishments that are outstanding, surpassing the results secured in any other state regardless of the fact that Pennsylvania ranks seventeenth among the states in hog population.

The first official ton litter, which as most farmers know is a single litter of pigs that weighs 2,000 pounds or more live weight at 180 days of age, was produced in the state of Indiana. At the time it was a spectacular event and attracted national attention In fact the idea was so unusual that when it was suggested by Professor J. R. Wiley of Purdue University eight years ago it was considered impossible by many farmers and hog raisers and impracticable by others. The records since then have been quite startling and have shown that not only was it possible to reach the goal set, but that it was far below the limit. The cost records which have been kept by a large percentage of those who have produced ton litters have also proved conclusively that not only is it practical but that the most profitable method to raise market animals is by the ton-litter system.

Some of the records made in the United States during the past seven years are very interesting and indicate that unusual weights can be attained with large litters and proper feeding and management. The heaviest litter to be produced so far in the United States was one of 17 pure-bred Poland-China pigs owned by an Illinois breeder which weighed 5,117 pounds at six months. The litter with the heaviest average weight per pig in the litter was produced in Texas last year. This was a litter of seven pure-bred Poland-Chinas that weighed 2,734 pounds or an average of 390 pounds each at six months.

Although in Pennsylvania the Ton Litter Club has been consistently used as an educational project with no contest feature connected with it, it is interesting to know something of the heaviest ton litter produced in the state each year during the past five years.

In 1924 Mr. T. M. Strong in Indiana county raised a litter of 15 pure-bred Chester Whites which weighed 3,461 pounds. This is also the heaviest litter to be produced to date in Pennsylvania. This litter was out of a sow called Petroleum Girl whose picture accompanies this article. In eight litters this sow gave birth to 106 pigs, an average of over 13 to the litter. Three of these litters weighed over a ton at six months of age, a record seldom if ever equaled.

The heaviest litter in the state in 1925 was produced by Donald Smith, a high school boy in Jefferson county. His litter consisted of 13 pure-bred Berkshires that weighed 3,182 pounds.

Cambria county carried off the honors in 1926 with a litter owned by Mr. A. A. Feighner. This litter contained 11 pigs that weighed 3,159 pounds. They were sired by a pure-bred Yorkshire and out of a Duroc sow.

The largest litter in point of numbers for the five years was heaviest in 1927. This was a litter of 18 pigs raised out of 23 farrowed. They were sired by a pure-bred Berkshire and out of a Chester White sow and were owned by Mr. J. A. Burr in Berks county. They weighed 3,299 pounds.

Mr. Everett N. Wilson of Mercer county had the heaviest litter in 1928. This was a cross-bred litter of 14 pigs that weighed 3,356 pounds. They were sired by a pure-bred Berkshire boar and out of a pure-bred Chester White sow.

Although these records are interesting, no effort has been made by the State College Livestock Extension Department, which has had charge of the ton litter project, to encourage the production of litters of extreme weight by making a contest feature of the project, as it is felt this would cause some to adopt impractical and unprofitable methods and exclude many others who would not enter a contest and thus be deprived of the benefits of this work.

During the five years the project has been carried on in Pennsylvania, 486 litters have been produced in 53 counties; 65 of these were produced in 1928 in 31 counties. Although 486 litters have reached the goal they were produced by 407 men, as a number of farmers have produced two or more ton litters S. B. & L. T. Conner of Clarion county and D. H. Strickler of Union county have produced one or more litters each year for five years. O. B. Savage, a vocational high school boy, produced six ton litters in 1927, which is the record for Pennsylvania for one year and was the record for the United States at that time.



Petroleum Girl Farrowed 106 Pigs in Eight Litters; Three of These Litters Weighed Over a Ton Each at Six Months of Age

About 80 per cent of those producing ton litters in Pennsylvania keep accurate cost records and furnish these and other details in regard to their methods of feeding and management. These have been tabulated and are the source of a great deal of valuable information. It is interesting to find that although the methods used by different men vary slightly in detail, the fundamental practices of the successful men are very similar and suggest the things which every farmer should do in order to produce pork at a profit.

It has been found that the average number of pigs in the 486 ton litters was 10.2 as compared with 5.5 pigs in the litter of the average sow in the state. This indicates that more prolific stock must be kept if a profit is expected, as cost records show that at present prices more pigs are required to pay the cost of keeping a sow for a year than the average sow in the state raises. It is also necessary to give the sows better care and attention during the gestation period and at farrowing time and provide more sanitary quarters so a larger percentage of the pigs farrowed will be raised.

The value of good breeding is also illustrated. Other classes of livestock have had production records for some time, such as milk records for dairy cattle, speed records and pulling records for horses, and trap nest records for poultry, but the ton litter has been the first measure of actual producing ability for hogs to be used in this country.

The records in this state indicate that 55 per cent of all the ton litters have been pure-bred and 94 per cent have been sired by pure-bred boars; of course this includes the pure-bred litters. The other 45 per cent have been high grade animals. One year the scrub litters were nominated but not a single one reached the ton goal. Similar results are reported from other states and prove conclusively the value of pure-breds in connection with profitable pork production.

No one breed has been outstanding over the other breeds in the production of ton litters; this is an indication that all of the breeds popular on the farms of the state are efficient pork producers if good type prolific breeding animals are selected and proper care and attention given the litters.

Feeding of course has been an important factor in the achievements of all who have been successful. With few exceptions pasture has been used providing a sanitary environment and a cheap maintenance ration, in addition to pasture a full allowance of a well balanced grain ration has been supplied. Over 80 per cent have fed for the first four months a ration consisting of four parts by weight of corn, three parts ground whole oats, two parts middlings and one part tankage and finished the pigs during the last two months on a ration of nine parts corn and one part tankage, or for the finishing period have used a self-feeder with corn in one compartment and tankage in the other.

Although during the past few months the price of hogs has been discouragingly low from a farmer's standpoint, it is possible to produce pork by ton litter methods at a profit as is indicated by the fact that every ton litter produced in the state so far has made a profit over feed cost. If these methods are used, some profit will be made even when conditions are unfavorable and a satisfactory profit where conditions are favorable.

The records indicate an average profit on the ton litters that have been produced during the five years of $161. In 1928 the 65 litters made an average profit of $98.64. This was not as large a profit as was made on the litters produced in previous years and was due to the low price of hogs, and the comparatively high price of feeds. However, it does prove that where hogs are efficiently handled they are profitable even under unfavorable conditions.

An interesting and valuable lesson was during from the marketing of the litters in 1928. Those litters marketed before October 1 brought an average of 13 cents per pound and made a profit of $114.62. The litters marketed from October 1 to December 1 brought an average of 11 cents and a profit of $64.92 or $49.70 less. In addition to this we have a record of several litters that were weighed up early before the price began to drop which were sold

(Cont'd, page 21)

Summary of Ton Litters Produced in Pennsylvania by Counties

	1924	1925	1926	1927	1928	Five years
Adams	3	2	6	3		17
Allegheny				3	1	4
Armstrong	1	1	1	1		4
Beaver				1		1
Bedford			2	1		3
Berks	1	1	1	3	2	8
Blair					2	2
Bucks	7	3	1			11
Butler				6	2	8
Cambria	1	4	4	1	1	11
Carbon			2	1	1	4
Centre	11	3	5	6		16
Chester		1				1
Clarion	1	2	3	1	4	12
Clearfield		1	4	3	3	11
Clinton		1	1	3	1	6
Columbia	1	3	4	8	1	17
Crawford			2	4		6
Cumberland		4	4	1		9
Dauphin		7	1	2	1	11
Elk		1		1		2
Erie	1				2	3
Fayette	4	2	4			10
Franklin	1	1		1	1	4
Greene		2			1	3
Huntingdon	2					3
Indiana	3	4	9	7	1	24
Jefferson	5	10	9	5	3	32
Juniata				1		1
Lackawanna					1	1
Lancaster	1	2	7	5	3	18
Lawrence				2		2
Lebanon	2	2	2	2	2	10
Luzerne	2	1	4	3	3	13
Lycoming				2	3	5
Mercer	1	1	7	11	5	25
Mifflin	1	3	1	9		14
Montgomery		2		1		3
Montour		1				1
Northampton		1	4	6		11
Northumberland		5	3	1	4	13
Perry		3	2	3	5	13
Schuylkill			1			1
Snyder	1	1	1	1	1	5
Somerset	2		3	1		6
Susquehanna		1			3	4
Union	1	9	4	4	2	20
Venango					1	1
Warren		1				1
Washington				2	2	4
Wayne			1	1		2
Westmoreland	2	7	4	3	2	18
York	11	28	4	8	1	52
Total litters	58	122	114	127	65	486
Cos. rep.	24	35	33	39	31	53
Farms rep.	55 men	110 men	108 men	117 men	61 men	407 men



A Corner among the Perennial Borders



Iris Excells as a Border or in Masses—the Plant Is Hardy and the Blooms Furnish a Riot of Color

When Laying Out the Flower Borders

Perennials and Annuals Lend Color to Landscape

By L. L. Rummell

FLOWERS along the border of the lawn add charm and grace and color to an otherwise somber picture, just as a colorful flower gives the needed touch of final beauty to a woman's dress or coat. Without the flower milady's gown looks plain, drab, unfinished. It is immediately brightened up by the addition of a single artificial flower, appropriately chosen, placed at the shoulder or collar.

So too will the landscape design be enhanced and improved in grandeur with well-selected perennial and annual flowers flanking the borders, cheering the corners and in all breaking the green monotony of a shrubbery planting. Picture the border of spirea in early spring heightened in beauty by tulips, and later by the stately iris, a soft purple or purple blending into the color of the shrub. Or in summer when the shrubs along the driveway present only a wall of green, how the picture is made enticing and inviting with delphinium before the green leaves, the golden of gaillardia and coreopsis at its feet, and maybe a clump or two of gay hollyhocks at the corner for emphasis. Anybody can plant shrubs or build a fence or mow a lawn, but it takes the hand of one with artistic taste to add the flowers to that picture of home.

Our first attention may logically be directed to a location for the flowers, then their selection and finally the preparation of the soil to receive them. First, here are some places where flowers should not be placed: in beds out in the middle of the lawn before the house; in beds made from discarded auto tires, whitewashed bricks or bottles; along the sides of the walk leading from drive to house; in a row along the roadside in front of the house. To place them in such position shows taste equal to putting the artificial flower on a woman's coat conspicuously in front, as a corsage might be worn on an evening gown.

A Distinctive Lawn

For the front yard the most pleasing appearance is attained by all lawn, trees of course to a degree; and the shrubbery about the foundation of the house, at the entrance and along the edge of the lawn in irregular, naturalistic groups. Then put just a touch of color to that picture by a judicious mingling of colorful flowers nestled before this shrubbery background.

Several years ago on the campus of Ohio State University I noticed a few beds placed before some groups of shrubs used about the main buildings. It looked like such a simple design and gave such a wonderful finishing touch in beauty of the planting, that I copied the idea in my own front yard. Today it makes my home planting distinctive because others had not used that type of border for the front yard. Here are flowers from tulip time till the frosts of autumn, not a flaming mass of color blazing forth and screaming for attention like a bed of salvias or cannas, but soft tones, more delicate tints, a succession of color throughout the season. It adds a charm to this planting not possessed by any other yard on our whole street. I have made flower friends of some who have stopped to admire and inquire, just as they passed.

For the rear yard several possibilities are open. If it is to be a lawn, with accessories like seats, swings, arbor, etc., then the only place for flowers is the same as in the front yard, namely, for borders. That is the type of rear yard that I have, all enclosed with shrubbery borders and perennials and annuals in borders before this line of shrubs. On the other hand, some will prefer a more or less formal garden, with neatly trimmed beds, paths, etc.; but for most farms this is impracticable unless you are rich enough to have a gardener. Then the third plan is to plow the garden each year and grow flowers there, not so much for beauty in landscape effect, but to have cut flowers about the home. In this last case one can grow such flowers as gladiolus, dahlia, sweet pea, etc., that do not work into a landscape effect very well.

For the rural home we believe it is possible to have a rear yard landscaped with shrubs and flower borders, with an open lawn—a service court where the clothes may be hung to dry, where the family may sit in summer afternoons and evenings, and then near it a garden where vegetables and flowers for cutting may be grown. It is of that type of yard that I shall write here.

What flowers may we consider for such borders, and how shall they be arranged? For most part dependence should be placed on the perennials because of their longevity, ease of care and general usefulness. The annuals require more attention, but they fill the gaps that appear in the beds, and tide over in between periods when not so many perennials are in bloom.

In a previous article on shrubs, I made up a score card, just to list in relative importance the things we should keep in mind in making our selections. Also I am submitting such a score card for judging perennials. It is purely of my own making, based on my few years in growing flowers, and represents my own opinions on what I consider merit in a perennial flower.

Now let us look at some of the more common perennials that deserve a place in any garden and see their merits and shortcomings on this basis:

1. Hardiness. Among the especially hardy plants we would place peonies, iris, columbine, gaillardia, Shasta daisy, lilies, chrysanthemum, sweet William, pinks, hollyhocks, lythrum, monarda, primrose, phlox. Those which we would class as not so hardy and frequently winter-killed are digitalis (foxglove), canterbury bells, delphinium, English daisy (bellis perenne), perennial flax, coreopsis, pyrethrum, tritoma (red-hot poker). Delphinium, coreopsis and pyrethrum are more in a medium class.

1 Hardiness, or vigor		10 points	
a. Able to withstand winters, not requiring special care. Adapted to most soils	5	"	
b. Ease of propagation: seeds, cuttings, division	5	"	
		25	"
2 Form, or habit of growth	15	"	
a. Good specimen plant, neat	10	"	
b. Fair in appearance after flowering			
		50	"
3 Bloom			
a. Length of flowering season	20	"	
b. Pleasing color	15	"	
c. Fragrance	5	"	
d. Service as cut flower	10	"	
		15	"
4 Longevity			
Lives many years, can well be divided.			

2. Plants of beautiful form, graceful, compact, neat and retaining a fairly good shape after their flowers are gone would include peonies, iris, columbine, delphinium, Shasta daisy, pyrethum, pinks, day lily and forget-me-not. For those with ugly shape and especially unsightly after blooming Oriental poppy is in a class by itself. Coreopsis, lythrum, veronica, digitalis, hollyhock, helenium and rudbeckia have little form to commend them after bloom, and should be cut close toward the ground after blooming. With all flowers it is a good plan to remove drying flower heads unless you want seeds; they are unsightly, sap the vitality of the plant to produce seed; and often if cut off the plant is encouraged thereby to produce more bloom. Delphinium, coreopsis, gaillardia and pyrethrum will often give a second bloom if old flowers are all removed and the plants cut back.

3. Bloom. Among the perennials grown for especially pleasing bloom, peonies, iris, delphinium and columbines have a class unto themselves, especially if you grow good named sorts, not mongrels and scrubs. Whatever flower you choose, insist on the best breeding; buy by name; and take only the improved sorts.

Consider Length of Season

Length of flowering season should be considered as well as quality of bloom itself. With proper selection of varieties iris can be chosen for a full month's grandeur, and the same is true of peonies. Columbines, gaillardia, coreopsis, Shasta daisy, delphinium and perennial flax are especially good long-season plants. An Oriental poppy, as a contrast, comes and goes as a brilliant flash.

4. Longevity. Some plants will increase in numbers year after year, and you have gifts for friends and need not worry about continual replacement in the garden. Iris, peonies, poppies, phlox and others that are propagated by divisions to retain their proper type are the outstanding examples. Pinks, Shasta daisies, forget-me-nots, lilies, day lilies, chrysanthemums, helenium, golden glow, monarda, primrose, lythrum, anchusa, phlox, sedums, boltonia, fever few and cone flower are old dependables. They will live for years and will do better for division each year.

On the other hand, you must count on annual replacement of the biennials, as foxglove and canterbury bells; and it is better also to start seed each year of coreopsis, hollyhocks, gaillardia, sweet William, California poppy and their kin. They cannot be expected to care for themselves over the years like some others, although if not molested by spading each one of the perennials named immediately above can be expected to produce its own seed that will start tiny plants about the feet of the parent.

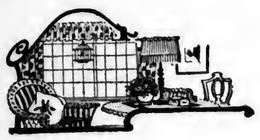
There are some flowers we may look on for special purposes. There may be shaded locations, as along a building or beneath a tree. Here day lilies, columbine, sedum, lythrum, phlox subulata, primrose, plantain lily (funkia), forget-me-not and monarda (bee balm) do well. For woods and dense shaded places, real spring enjoyment can be secured by naturalizing daffodils and narcissus, or even tulips, because they bloom before the leaves of trees appear.

Plants propagated by bulbs or tubers, like gladiolus (Continued on page 17.)



The Use of Flowers about the Front Lawn—a Border along the Drive

TIGHT BINDING TEXT CUT OFF



The Farm Home



A Rearranged Kitchen

By GERTRUDE S. STEWART

I RECENTLY stepped into a home where the kitchen was being remodeled. I should have said transformed, for the changes were so thoroughly thought out that it was hard to recognize it as the same place we saw but a few weeks ago.

There is no greater saving of energy and time for the busy homemaker than a convenient kitchen. Mrs. Black told me of how she set about to plan a convenient kitchen. She stood in the doorway leading from the dining room and there, facing the kitchen, she pictured how step-savers should be placed.

On her left she planned for the dish-washing unit, and here you find the sink, drain-boards and the dish-closet. Having ample space she had a built-in "pass closet" in the wall between the kitchen and dining room. This is an ideal working arrangement.

Now picture her right-hand wall. First is the work table or bench. Next to it, the stove and then the kitchen cabinet. And beyond that is the refrigerator. Who couldn't work there all day and be happy?

The walls were done over in a washable flat paint—a soft creamy tint. Our Master Farmer's wife, Mrs. Corkran, of Rhodesdale, Md., has a kitchen very much like this one. No two will be exactly alike but if the two main units—the cooking unit and the dish-washing unit are well thought out for your own environment, much time can be saved.

Farmers' Bulletin No. 1513, "Convenient Kitchens," is brim full of suggestions to help you. It is free from U. S. Department of Agriculture, Washington, D. C. And why not ask for No. 1087, "Beautifying the Farmstead", and No. 1171, "Annual Flowering Plants", at the same writing? The three are of great value and interest.



The kitchen in the home of L. Otis Corkran, Master Farmer, 1928. Notice the sink with drain-board and high stool, the shining kitchen cabinet and oil-burning range. The stove at the left is used to heat the room and to provide an incinerator for garbage. The warming-oven in the stove pipe is highly prized. In a corner of the room not shown is an oil-burning water heater with an asbestos covered tank which is very economical. The Corkrans do not have access to a rural electric line but have not used oil lamps for many years, thanks to their reliable home electric plants.

Mother Loves Her Job

By HEPSY NEFF

THE above signature to a recent letter is too good to be seen by only one person; it belongs to all our readers. There are always young mothers who may still have doubts about the value of the business of mothering. Studying the lives of men who have become famous and whose names are written on the world's Roll of Honor we find the beginnings of their success in great loves; love for all kinds of work as well as their own special work.

The explorers, Peary, Steffanson and our own Commander Byrd belong in that class. Florence Nightingale, who proved a woman's value under the terrible strain of war, was a tireless worker. Always, the idlers, the mere pleasure seekers, miss all the joy of life and leave nothing by which they can be remembered when they are gone. But a great love which expresses itself in real work, real service, brings daily reward as well as lasting honor.

The writer who loves her job of mothering says: "I think it is the greatest job on earth with rewards that no money can buy." She admits that a little more money in her pocket would help but has learned that a mother is so rich in joys that other women cannot know that she can afford to do without many things commonly thought necessary; which reminds me of another woman's way.

Mother's Day-a-Week

Just an ordinary mother who had neither money nor books but only a great love and a great hunger for knowledge for herself and her children. The fact that people who kept servants gave their help Thursday afternoon off may have prompted the idea that she might, without blame, take a day each week for herself and for study. A loan library did the rest. Along with the books came a correspondence course, which was possible only if something was subtracted from personal needs. Since one day a week from housework left other days more crowded, no club or social engagements were possible, a fact which cut off many small expenses. But the one-day-a-week brought a noticeable increase in interest and higher standards of home life; and individual habits helped independent thinking. When university extension classes were established she was ready for them and her children no longer needed as much of her time. Today there are few neighborhoods which are outside the reach of these special study courses for all who want to grow and keep company with their growing children.

There is nothing and no one who can take the place of the loving watchfulness of a mother during the first ten years of a child's life, and the coming of other children may ask for twenty years of a mother's life. That means only such planting, seed-sowing and protection as enlarges and developes the mind and personality of the mother.

Vocational training is the increasing demand of all educators and thinking people; but how to combine training with life, work with study, is the yet unsolved problem. The farm home and family helped by the extension courses now offered is far on the way to solving that problem.

Remember the Sick

By HILDA RICHMOND

ONE of the finest customs of country organizations from the church to the Grange is to remember sick and shut-in members with something dainty and something substantial from the suppers or dinners. If people live very close a whole hot meal can be delivered, but if at a distance the things will have to be sent cold either to be warmed over there or to be eaten as sent.

Usually a committee attends to the filling of small boxes before the meal is served, but sometimes it is done after the meal. At one of our class dinners a number of people were designated to fill small boxes right at the table when the food went round, and that worked very well. A relative or friend of the sick person selected from the bill of fare what was thought to be the best and most appropriate food for the sick person, and there was no delay or trouble. Usually it is a sandwich, a piece of chicken or meat loaf, cake and perhaps a helping of salad. Paper plates and cups are used so there is no bother of returning dishes. Children's shoe boxes are ideal to hold the food. It is not the amount but the thought, the remembrance, that counts.

Pie is seldom good to send as it is hard to digest and mussy looking, but cookies and cake carry well. Gelatin if solid can be used, and fruit that is fresh and whole such as bananas and peaches. Even if the patient cannot eat the food the ones who are caring for him can and nothing is wasted.

Rhubarb and Spring Meals

ONE way of curing the poor appetites that many persons have at the spring is to include rhubarb in their meals. Lucile Brewer, foods specialist at the New York State College of Home Economics says:

"Rhubarb may be canned in either of two ways. Pieces may be packed in jars and the jars filled with a heavy hot syrup made of twice as much sugar as water. The syrup should be cooked until it threads. The rubbers and tops should be adjusted, but not sealed, and the jars should be sterilized for fifteen minutes on a rack in a covered pan of boiling water with the water at least one inch over the top of the jars. Seal the jars, remove them from the water, invert them on a cloth and allow them to cool. Rhubarb canned this way makes a good sauce or filling for pies.

"A richer sauce may be made by placing a layer of rhubarb one inch deep in the bottom of a jar, then a layer of sugar one half an inch deep, and so on until the jar is filled, having a layer of sugar on top. Adjust the rubber and the lid and boil the jar in a water bath for twenty-five minutes. Seal the jar and remove it from the water; invert it and allow it to cool.

"Rhubarb juice is made by covering small pieces with cold water and simmering them until they are soft. Strain the juice through a jelly bag; add one cupful of sugar to each quart; heat it until the sugar is dissolved; skim it and boil it five minutes. Then pour it into clean hot jars and seal them."

Jaded Appetites

EARLY spring, as every mother knows, is the season for appetites. The tempting new green vegetables have not arrived and the members of the family are tired of winter rations. The good standbys like carrots, cabbage and onions have lost their appeal, yet vegetables are needed every day.

Here is a real problem for the homemaker. If she is wise she pays special attention to preparing and serving these winter vegetables as spring approaches. She cooks them so that they are tender but never over done and preserves both flavor and color. She is particularly careful about seasoning and serving them hot. Her boiled cabbage, for instance, comes on the table crisp white and steaming and made especially inviting by a dash of paprika over the top. Her beets, cooked in water containing a little vinegar, hold their attractive bright red color.

She prepares the vegetables in different ways. One day the carrots are simply boiled and served with butter. The next time they are scalloped, served with cheese sauce, or put into a salad. Some vegetables, like cabbage and carrots, make good salads either cooked or raw.

Cabbage salad may be varied by adding diced apple, green pepper, pimento, onion, diced celery or celery seed. The dressing may also be varied. Ask the members of the family are used to boiled dressing they will enjoy French, sour cream, or mayonnaise dressing for a change.

Vitamins are a more effective spring tonic than the molasses and sulphur used by our grandmothers, according to Helen Hubbel, home economics specialist in New York state.

For the best health proper amounts of all kinds of vitamins must be included in the daily diet. Vitamin A, which increases resistance to colds, is provided by dark green leafy vegetables, such as spinach and other greens, milk, butter and cod-liver oil. All foods in their natural state contain vitamin B, particularly important because it keeps the digestive tract in good condition. Both these vitamins are necessary for proper growth in children. The best sources of vitamin C, another food element which aids in the general health of the body, are oranges, tomatoes, grapefruit, cabbage and other raw vegetables. An egg or an egg yolk, and cod-liver oil or sunshine supply vitamin D, which keeps bones and teeth in good shape and aids in resisting colds.

I Save with Good Patterns

I CONSIDER the patterns sold by Pennsylvania Farmer one of my best savings in doing home sewing. The patterns have always been perfect, reliable and at a very low cost. A good pattern saves making mistakes, time in altering and frequently materials.

I like to make two dresses from the same pattern—first one of inexpensive material for home wear and then one of silk or wool. Having used the pattern once I cut into my expensive material with much greater confidence.

Making the right choice of pattern for dresses and undergarments will mean much work both in the making and in subsequent laundering. These are some points which I find worth considering:

A pattern without gathers is easier to make and the garment made from it can be ironed in much less time.

A night-gown without yoke, collar and cuffs is made in less time and may be ironed in half the time required by one possessing these superfluities.

A garment cut as nearly as possible alike both back and front irons and folds more neatly.

Bodies on garments that are to be laundered always add much to the work of caring for them.

Consider the number of buttons and buttonholes required before deciding on a pattern, particularly for a "wash" garment. Many buttons and buttonholes can almost double the work of making a little dress or pair of rompers. Little nighties—and big ones, too—can be cut so as to slip over the head and make all buttons unnecessary. On washing day don't you always enjoy the things that need not be examined for missing buttons.

The reason children object to wearing "made-overs" often is because the clothing has not really been made over. Rip the old garment apart, clean and press carefully then with a good pattern cut and make as neatly as if the material were new and the result will usually be highly satisfactory.

Fifteen cents spent for a well-selected pattern is, I consider, the wisest expenditure a home seamstress can make as a means of saving money and time and producing satisfactory results.

—Alice Margaret Ashton

Epsom Salts for Windows

YOU can treat window glass with a very strong solution of Epsom salts and no one can see through. Dissolve in one quart of hot water, as much Epsom salts as the water will take up. Keep stirring and using a large sponge (or cloth) pat the solution on the window. Let dry, and repeat the process until you are satisfied with the depth and strength of your Epsom salts "curtain". —F. S. S.

Timely Tips

TRY sausage in making your next pot-pie. It is delicious and a pleasant change from the usual pot-pie meat.

Sausage is as good as hamburg, made in similar fashion. Usually we need a bit of fat in starting hamburg cakes—but when making sausage in cakes, add no fat but start the cakes with a tablespoon of water instead.

Mrs. O. F. S.

Patterns for Early Spring



No. 977.—For early spring to wear without a coat. Designed in sizes 16, 18, 20 years, 36, 38, 40, 42 and 44 inches bust measure. Size 36 requires 3½ yards of 40 inch material with ⅜ yard of 27 inch contrasting.

No. 214.—Youthful in Line. Designed in sizes 16, 18, 20 years, 36, 38, 40 and 42 inches bust measure. Size 36 requires 3⅛ yards of 40-inch material with 3 yards of binding.

No. 3446.—Bloomer Outfit. Designed in sizes 2, 4 and 6 years. Size 4 requires 1⅞ yards of 27-inch material with 1 yard of 27-inch for bloomers.

No. 2640.—Slender Coat Styling. Designed in sizes 16, 18 years, 36, 38, 40, 42, 44, 46 and 48 inches bust measure. Size 36 requires 4 yards of 40-inch material with ⅝ yard of 9-inch contrasting and ¾ yard of binding.

No. [illegible]—Cover-All Apron. Designed in [illegible] size requires 2⅝ yards of 36-inch material with 4¾ yards of binding.

No. 2743.—A Gay Print. Designed in sizes 2, 4 and 6 years. Size 4 requires 2¼ yards of 40-inch material with ⅝ yard of 27-inch contrasting.

How to Order

Write your name and address clearly. State number and size of each pattern. Price 15c each, two for 25c. Our Fashion Magazine will help in preparing your wardrobe. Copy alone 15c; with a pattern only 10c. Address Pattern Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.



Don't Let a Sagging Bedspring Rob You

THE loss of money is a trifling thing compared with the loss of sleep. For, sleep is the very foundation of your vitality and health—the guardian of your nerves.

If you have the slightest suspicion that your bedspring sags—discard it. Get yourself a Foster Ideal Spring, and enjoy the body fitting comfort of 120 finely tempered upright spirals. Your health is far too vital a matter to trust to a worn out bedspring and the Foster Ideal will give you finer spine support, greater comfort and a more generous degree of real nerve rest and relaxation than you can afford to overlook. There's a practical reason for this. It is based upon the fact that the Foster Ideal is a modern bedspring—built from a scientific study and research into sleep.

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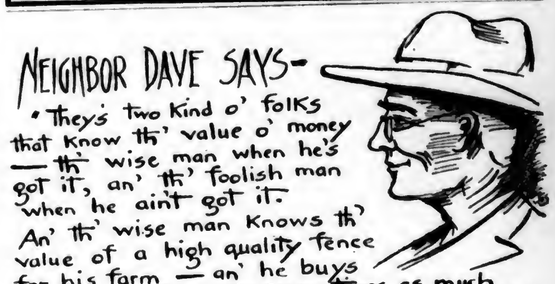
Foster IDEAL Bedspring

Important

Foster Ideal Springs are not sold in every furniture or department store and you may be urged to buy something alleged to be "just as good or superior" to a Foster Ideal. But—if you are interested in proper spine support and want real rest, you'll seek out the Foster Ideal Dealer in your city and you'll buy a genuine Foster Ideal Spring, that bears the Foster Trade Mark.



The Bedspring That Supports Your Spine

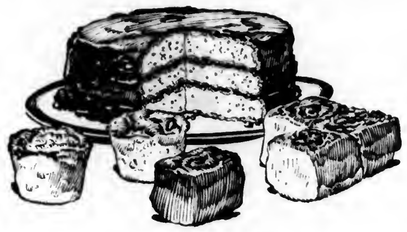


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TIGHT BINDING TEXT CUT OFF



You can have better flavor in everything you bake!

Everybody has tasted baked foods that were perfect in appearance, but flat and disappointing in flavor. Frequently this is caused by flour made from the wrong type of wheat. To get that delicious, delicate, unmistakable flavor that marks your truly perfect cake, biscuits, or pastry, use Pillsbury's Best Flour. It is made only from carefully selected, full-flavored wheat—you can depend on it for better flavor and more certain success in all your baking!

for better flavor, use this one fine flour for all your baking

Pillsbury's Best Flour

for bread, biscuits and pastry

New-fangled Contraptions

Grandfather came home from his annual visit to the Fair and said he had seen a plow with wheels and a driver's seat. He didn't think much of it. It was twenty-five years before anybody in that locality owned a sulky plow.

The first mowers, cream separators, sprayers and incubators, and the early sewing-machines and carpet-sweepers were treated in the same way. It used to take the neighbors in the next county five or six years to learn that a better implement had been made, and when they did find out they either laughed at it or ignored it.

Today, in half that time, people in all the forty-eight states have the new tool at work on their farms or in their homes.

Modern advertising takes an improved product, gives it a name and a trade-mark, builds it to a definite standard of quality, places it in every good hardware and implement store in the country, and tells you why you should own it and where you can get it.

Advertising has brought to you nine-tenths of the conveniences that make farming easier and living pleasanter in this new age.

Read the advertisements and you keep pace with progress.

Prices Cut!

PRICES on the well known National Fresh Water Systems have been substantially cut, without any sacrifice in quality.

You get, at greatly reduced cost, a water system that pumps from one or more sources at the same time—from well, cistern, lake or stream; that delivers 600 to 1200 gallons per hour from each source, under ample pressure, for any lift up to 150 feet.

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Women are literally throwing away their washboards on account of a recent discovery used in washing clothes. No rubbing, yet clothes are spotlessly clean. Will not injure fabric. Write for [illegible] Pittsburgh, Pa.

Gardening de Luxe

By ALICE MARGARET ASHTON

A GARDEN without weeds sounds like a rose without thorns! Hope of this state of perfection led us to try mulch-paper in our flower and vegetable garden last season. "Are you going to use again?" we are constantly being asked. "Decidedly yes!" we answer.

...

One season's experience cannot be wholly conclusive, but it did keep the weeds down and save cultivation. It did save the nightly watering of newly set plants. And the crops were as good, if not better, than the average Canadian thistle was the only weed we have which had the temerity to withstand it—a thistle did occasionally prick through the paper.

We handled the paper in this way. The prepared ground was made as smooth as possible. Then a strip of paper was unrolled and earth was immediately thrown along its edges so as to hold it firm to the ground and keep the wind from getting under it. Along the edge of the paper we then planted seeds or set our plants. The next strip of paper was placed so as to leave an opening of about two inches for the plants to grow. This was the only place where weeds bothered and we found it easy to keep them pulled by hand.

For small garden truck and flowers we used the eighteen-inch paper and with onions, head lettuce and early cabbage we made an extra planting down the center of the paper strip by cutting two crossed slashes with a small trowel, turning in the corners of the paper and setting the plant in this open space. When we desired but one row of flowers in a place we planted them in the center of the paper as described.

Because the starting of the garden comes at such a busy season on the farm, we did not make comparative plantings as it would have been interesting to do. We were content to learn that things grew at least as well as usual and that weeds and cultivation were a thing of the past where [illegible] was used. Onions and tomatoes [illegible] an exceptional success, the [illegible] being a week earlier than those [illegible] out paper.

Year after year have we started bed of strawberries to have them [illegible] or less of a failure because [illegible] of work, prevented keeping the [illegible] free from weeds. This year, my [illegible] berries shall be started under paper.

We have found it hard to give [illegible] fruits and shrubbery the care [illegible] to start and to keep in thrifty [illegible] tion. This spring we intend to [illegible] all neglected bushes and shrubs [illegible] fertilizer and then to cover the [illegible] about their roots with paper to [illegible] serve the natural moisture and to [illegible] the grass and weeds that hitherto [illegible] done the choking. Of course, [illegible] stock will be treated in the same [illegible]

Another way in which we [illegible] mulch-paper useful was in the care [illegible] occasional shrub, tree or berry [illegible] that is situated within reach of [illegible] hens. Every farm woman knows [illegible] the least disturbance about such a [illegible] invites the disastrous investigation [illegible] Biddy. Last year we rescued [illegible] neglected specimens by adding [illegible] sary soil and fertilizer and then [illegible] ing all securely with paper. Biddy [illegible] vestigated but found no encouragement [illegible] for her mischievous digging. This [illegible] means the possibility of flowers [illegible] shrubbery on farms where the hens [illegible] not and cannot be confined.

In fact I feel that we have only [illegible] gun to know the advantages that [illegible] be obtained in the home garden by [illegible] use of mulch paper.

WHAT an ideal place to eat in summer time! Screen in [illegible] back porch and try it! It is almost [illegible] eating out under Heaven's own [illegible] The light the sunshine, the [illegible] freely caress you as you eat. [illegible] relief to get away from the four [illegible] closed walls of the dining room.

Mrs. L. D. Kem

Pillows Painted in Colors

Our designer in originating the modernistic pillows as shown here has combined all the latest and most pleasing designs and brings a rare combination of color and beauty into each, a combination that will gratify every woman in the home and make it possible for her to add with the minimum of labor materially to the decoration of her living room or dining room. These pillows are of the highest grade silk rayon taffeta, with the modernistic designs already completed thereon in an oil paint that is washable, non fading and non deteriorating. The consequence is that the beauty and usefulness of the pillows has no limit.

To complete the designs all that is necessary is to quilt around the entire painted parts with a short darning stitch, using three threads of the black six strand cotton, or two threads of the four or six strand silk. The edges of the pillows are finished in either black piping or black silk cord.

These pillows are obtainable in the following colors only: Design 2051 comes on blue silk rayon; design 2052 comes on rose silk rayon; design 2053 comes on coral silk rayon. The size is about 14 by 16 inches.



2051 on Blue Silk

Price, including sufficient material for the top and back, $1.35 each, postpaid to any address.

For 25 cents additional we will send "Art of Embroidery" consisting of complete lessons and 70 illustrations showing all the principal stitches in use.

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Remember—it is a genuine economy to install new Champions once a year, thereby promoting year-'round efficiency on the farm.

Champion SPARK PLUGS

TOLEDO, OHIO WINDSOR, ONTARIO

Old Times

OLD friends are best. For well nigh forty years I have begun to read at the Household page, and I invariably turn to Hepsy first, then the other familiar names that are friends of years reading. But I am honest in my admission that "Neshaminy Gardens", with its versatile writer, is running parallel to the list of the tried and true.

I like to have leisure to read through the paper from a to izzard at one sitting, but the truth is that I usually read it on the wing till I get my favorites scanned over.

One writer not long ago mentioning the "joys" of yore set my mind to weighing pro and con the facilities we had when young for social recreation in our neighborhood, and I believe the "Literary Society" played the prominent part in its day. It flourished in the winter season, as even young people when working from dawn to dark in reality can't "run around o' nights." And a day's work then did not begin at 7 and end at 6. It began with the first faint stirrings of daylight.

Little Recreation

The one who did the housework also did such incidentals as seeing after the chickens, hogs, cows and calves, and the garden was a woman's relaxation. Only Sunday was a social day, except every four years a day was taken for the "Pole-Raising" or the pet political party.

But during the winter months "log meetin's" and "literaries" flourished. At the old Red Brush school we always organized a society, with usually the teacher as president, and there were really interesting sessions. Declamations, readings, essays, dialogues, songs and the crowning thing of all was the debate on some topic. Sometimes the old, old "The Pen Is Mightier Than the Sword" and "Pursuit Is Pleasanter Than Possession." That latter is not phrased correctly, but that is the gist of it at least. Occasionally the debaters would be so visionary as to take up woman suffrage, the negative side invariably quoting St. Paul.

Served Its Purpose

But it was good for the youngsters. Many teachers went out from that school and all had a vision of service. Many have achieved some little renown for their work, and many have passed into the Great Beyond, but the erstwhile literary was the forerunner of our present day clubs and societies and as surely served its purpose in its day as the 20th century variety does today.

That was in the day of cutting and rolling into great pyramids the finest products of the virgin forest, and burning them to get rid of them, so a scanty living could be wrung from the cleared soil. The present day generation could scarcely believe of the waste of timber that went on in the name of farming. Sound trees, three and four feet in diameter, burned as trash. Hillsides cultivated as assiduously as bottoms, with soil washing out in every rain.

In our community we always had a church organization, worshiping for years in the schoolhouse before building the church which we still use. We had a Sunday school through the summer, ending in a celebration the closing Sunday every one came and helped and the building would be so crowded some classes would be taken outside in the shade to recite, and the closing exercises for the season were usually held out of doors. The lessons taught in that little, dilapidated schoolhouse are fresh in my memory today, and one especially, "The Cities of Refuge" in Canaan for the Israelites, has all these years been a stay and a solace to me, the teacher so plainly applying the lesson to our every-day lives.

Nellie R. Nesselroade.

Here's how Delco-Light *builds profits and cuts expense*

HOW would you like to save two to three hours a day on your farm? How would you like to make $300, $500, $1000 extra profit from your work? Other farmers, with problems exactly like yours, are doing it. And so can you.

Read what Henry Zumbehl writes: "Delco-Light makes possible three extra hours' work a day in the barn. Two of my brothers work with me, so that's nine additional working hours a day." At only 30 cents an hour, *that one item alone makes the Delco-Light Plant pay $985.50 extra profit a year!* . . . Unusual? Not at all. W. E. Miller says Delco-Light *enables two men to do the work of four.* And in the house, Mrs. C. E. Schmidt finds that electricity and running water *save the time of a hired girl.* Figure *that* saving by the year!



Henry Richterkessing says Delco-Light enables him to do two hours' extra work in the barn every night. "That means $1 a day saved by Delco-Light."



The new 4-cyl., 1500-watt Delco-Light Power Plant provides ample power and light for the bigger jobs.

Lights in his henhouse bring him *an extra dollar per hen per year* . . . No matter *what* kind of farming you do, Delco-Light will help you do it *better* and *more profitably.*

Earns its cost twice over

Yes, Delco-Light *does* save time and work—in a hundred ways. And look at the other ways it pays profits. Here's W. C. Stuart, of South Dakota, who says lights in the farrowing pens *save him better than one pig per sow* . . . Then there's Frank Saukup, a poultryman.



Zumbehl Brothers of Missouri. Henry Zumbehl says, "We use Delco-Light for lights in the house, two barns, hogshed, hen-house, garage, smoke-house and silos. The safety from fire means a great deal."

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See the new 4-cylinder Combination Delco-Light Power and Light Plant. It generates abundant power for the largest farms in the country. And for smaller farms, Delco-Light offers automatic, storage battery, and combination plants for every requirement. All are surprisingly low in price . . . remarkably easy to buy on G.M.A.C. terms.

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Garden and Truck Crops

By GILBERT S. WATTS

A FEW days ago I built another sash plant house 22 feet wide by 90 feet long. Heat is radiated from two-inch hot water pipes which are connected with a second-hand hot water boiler. This house will accommodate nearly one hundred thousand plants when spaced an inch and a half apart each way. There are no mats to roll on and off morning and night. The labor of watering is greatly diminished because one is right in with the plants and it is unnecessary to open and close sash as when watering ordinary hot beds or cold frames early in the season. However, I believe it would be worth while, unless one already has sash on hand, to compare the cost of building an inexpensive house with sash bars and glass. The wider spacings that would be available between sash bars in that case would allow more light to enter and possibly the cost could be figured as low as would be incurred if sash and glass were bought.



• • •

SKILLFUL watering is possibly the most important factor in controlling the growth of plants under glass. An added touch of water here or care in preventing water from reaching some other spot will insure uniform plants of the kind that make early profits possible. In fact the artist with his brush and the gardener with his sprinkler have much in common, each must have in mind at the beginning an ideal of the picture or plant he wishes to produce. It is only by an artfully executed touch of paint or of water, as the case may be, that the ideal is developed into reality.

• • •

NOW that dazzling sunny days occur more frequently it becomes difficult to maintain optimum moisture conditions for germinating small seeds in flats or plant beds. An old and very simple scheme is to water moderately immediately after sowing and then to cover the ground with a single or double thickness of old newspapers. As a rule such covering will conserve moisture until germination has taken place, but one must be watchful lest the plants come up before they are expected and grow spindly and worthless under the paper.

Another very satisfactory plan, particularly with celery which must be sown very shallow, is to cover the soil with coarse burlap and water right through this covering. Old fertilizer sacks should not be used unless they have been washed thoroughly.

• • •

IT is surprising how much more rapidly seeds will germinate if relatively high temperatures are maintained. In most instances no harm will be done if temperatures up to 90 degrees are carried, but of course this must be reduced as soon as plants are above ground.

• • •

FOR a number of years it has been my custom to try to have early cabbage and lettuce plants large enough for the field by April first. Then the hardening process is begun by watering lightly and maintaining comparatively low temperatures. Year in and year out this schedule seems to average about right in central Pennsylvania.

• • •

BOTH at the beginning of the season and at the end of the season it is a mighty good plan to conduct one's operations at least as much in accordance with the calendar as with the prevailing weather. At its best the weather is an unknown factor. All we can do is to go by averages. Whenever one allows himself to be influenced too much by the weather of the moment he is in danger, not only of planting too early or harvesting too late when temperatures are favorable, but also of being unnecessarily delayed in a cool spring or unnecessarily hastened in a cool fall. A grower who works pretty close to the recognized average dates for his community is usually best off in the long run.

• • •

EACH spring, sometimes too late to do any good, inquiries come in concerning control of the cabbage maggot. Therefore, it may not be out of place to repeat the customary formula and simple instructions.

Dissolve one ounce of corrosive sublimate (mercuric chloride) in eight gallons of water.

Apply a half cupful around the base of each plant within a few days after setting in the field.

Repeat in about eight or ten days.

About five pounds of corrosive sublimate will be required per acre.

• • •

IF one has no potato planter and grows too small an acreage of this crop to warrant such an investment but has a transplanting machine considerable saving over hand planting may be made by dropping the cut seed through the transplanting shoe. With some makes of transplanters extra deep shoes can be secured. With these it is possible to plant as deep as may be desired. If the planter cannot be run deep enough this problem may be solved by marking out with a shovel plow, and planting in the bottom of the opened row.

• • •

THE closer the adjustment of production to demand the easier will be the solution of marketing problems. Such adjustment includes not only the kind of things grown but also variety, season and succession. Successful market gardening or truck farming is as much a matter of marketing to advantage as it is of growing good crops. At planting time the far-sighted grower continually keeps in mind the probable demand, as we said a moment ago in respect to variety, season and succession.

• • •

DID you ever go to the field with a horse or mule and later find yourself without a wrench that simply had to be had in order to make some essential adjustment to the implement being used? Perhaps it would have been very convenient if nature had provided tool boxes on our work animals. But she did not. A very simple solution is to secure an eight or ten-inch wrench having adjustable jaws and a hole in the handle. Then it is a very simple matter to fasten the tool to a ring on the hames by means of a light short strap.

• • •

Will you please advise me what to do with my cabbage to keep it from taking the big root? I have put it in different ground to see if it would be the same. My little plants have the big root. Mrs. E. B.

UNQUESTIONABLY your cabbage has been affected by the disease known as club root. This will live over in the soil for a period of four or more years. Even though you have been planting on disease-free land the fact that your plants have been infested with the "big root" would mean that the trouble would go with them to the field wherever you set.

I would suggest that you grow your plants in soil that never,—or at least within a good many years, has produced cabbage, cauliflower, turnips or similar crops. Then arrange to rotate your cabbage so that it will not be grown in the same place more often than once in five or six years. Liberal use of lime will help keep this trouble in check. Do not feed club rooted cabbage to livestock as the disease may be introduced in new areas through the manure. G. S. W.

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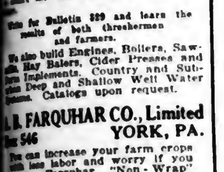
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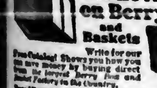
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The MARKET PLACE
By W. R. WHITACRE

PEACH growing in these days is a nerve-racking occupation. Last year New Jersey peaches were hard hit by early frosts and this year with the season about two weeks early growers are again on the anxious bench. The buds are showing pink, spring work is piling up and there is the threat of frost. On the other hand if there is no frost and all the producing sections have a good crop then the peaches usually sell at such low prices that they are unprofitable. In other words one man's hard luck is another's fortune.

There is one bright side to peach growing, for while the hazards have increased and competition is stronger, it at least is much easier to work than it was formerly. We used to make our own self-boiled lime sulphur and apply it with a hand pump barrel sprayer.

Easier and Quicker

Now, I believe that very few commercial growers make their own lime sulphur and the power sprayer has replaced the back breaking barrel pump of the old days. Then there was the long pole with the heavy hose which we used to tote around the orchard but that, too, has gone out of fashion and the spray gun is much handier and quicker. Some growers even go a step further and use the duster which covers the orchard much more quickly than the spray outfit.

As you travel through the peach sections of New Jersey it looks as though there is a normal set of buds and that there will be a good crop, if frost or other unforseen conditions do not develop. There has been a trend toward reducing the number of varieties grown, especially those early varieties of poor quality which compete with the Georgia crop. There is a real place for a high quality peach that would replace the Carman or Greensboro.

A New Peach

This year the first commercial crop of the Golden Jubilee, a new variety which was developed by the New Jersey Experiment Station, will be harvested. This is a free-stone variety similar to the Elberta, which ripens at the same time as the Carman. There are a number of blocks of this variety coming into bearing this season and growers are anxiously awaiting the outcome. If this peach comes up to their expectations it will be a big help to the New Jersey peach grower.

I believe that the peach crop requires more skill than any other commodity to market successfully. It must be picked at the proper stage of maturity for the purpose for which it is intended. If it is to be shipped it must be harvested before it is really fit to eat and a day makes a big difference in its maturity. After it is harvested it cannot be held in the packing house for any time but must start to market. Of course it can be held in storage for short periods of time, but unless the peaches are in excellent condition this is not very satisfactory and oftentimes they do not bring enough more after they are brought out of storage to pay the added costs.

—o—

No Harm Done

Have pruned my grapes too late and they are bleeding. Can anything be done about it?

NOTHING can be done about it and nothing is necessary. The effect of "bleeding" on grape vines is much less serious than is commonly supposed. The loss will be far less than if the vines had been left unpruned. S. W. F.

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Seed is seldom disease-free. Even certified seed often carries some infection. Dr. Wm. H. Martin, of the New Jersey Experiment Station warns: "There is no state that does not permit at least 10% of scab and Rhizoctonia." To be safe, use Semesan Bel on all your seed.

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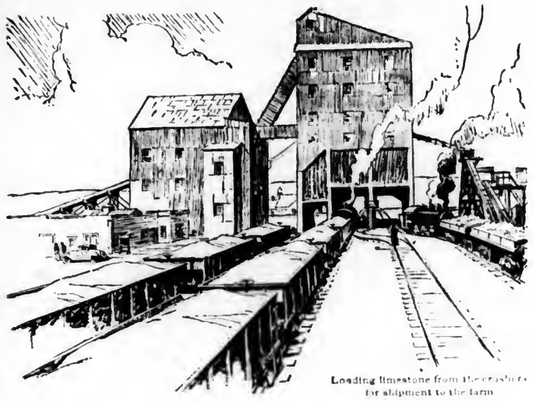
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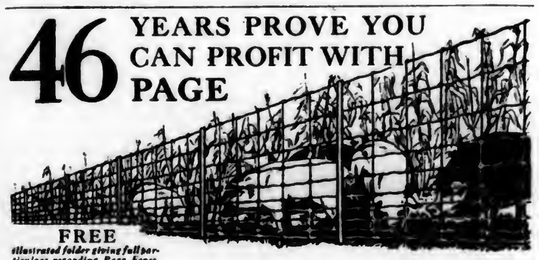
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Orchard Windfalls

By S. W. FLETCHER

BEN DAVIS apples.—The last of the 1928 apple crop of Alder Run Orchard, about 2,000 bushels of Ben Davis, was sold out of the common storage on the farm the first week in April. The Bens brought about as much as the average selling price for the year of better quality varieties, such as Baldwin and York. It has been our experience that if Ben Davis in reasonable quantity, is kept in the farm storage until April that it will sell, four years out of five, for about as much as the more highly flavored sorts. This being the case, it is the most profitable variety we have, because it bears every year and the cost of production is low. The only special consideration it requires is in spraying, the ordinary lime sulphur summer spray is likely to russet Bens, hence we find it better to dust this variety, especially in the petal fall and cluster apple applications.

I know it is all wrong for a Professor of Horticulture to admit that there can be any virtue in a Ben Davis apple. It is the butt of most as many jokes as a certain low priced automobile and has been always universally execrated by professional men at least, as a parasite and pariah. Nevertheless the fact remains that under certain conditions it pays. It is foolish to condemn a variety that pays.

There is a place for the Ben Davis apple in Pennsylvania horticulture, until somethings better turns up. That place, as I see it, is in districts where it thrives best, in moderate proportion of the total planting, say not over ten per cent; and the fruit to be kept off the market until spring, after better quality sorts are gone. It also has a place in the export trade, particularly to South America.

Show me another late-keeping variety that has all the endearing traits of the Ben Davis but is better in quality and I will gladly eliminate it. Winesap will not do, it runs too small. York will not do, it is uncertain in common storage after February. Stark will not do, it is poor in color and less dependable in production. Rome more nearly fills the bill than any other sort, but with us Ben Davis will outyield it almost two to one.

So I will cling to my disreputable friend, Ben Davis. "If this be treason, make the most of it."

• • •

WORKMEN'S Compensation Act.—W. H. Horner, Director of the Bureau of Workmen's Compensation, makes the following statement:

"The Act of June 3, 1915, Pamphlet Laws 777 which is a supplement to the Workmen's Compensation Act of 1915, provides in Section One 'That nothing contained in any article or any section of an act, entitled the Workmen's Compensation Act of 1915, shall apply to or in any way affect any person who, at the time of injury, is engaged in domestic service or agriculture.'

"In the Digest of the Workmen's Compensation Law of the State of Pennsylvania by William A. Skinner, he holds that the word 'agriculture' was intended by the Legislature to cover all things ordinarily done by the farmer and his employes incident to the actual preparation of the ground, planting, seeding, [illegible] and harvesting.

"The Workmen's Compensation Board in the case of Covert V. Abbott held that 'A person injured while engaged in pruning trees in an orchard owned by a farmer and operated by him as a part of his general farming, was engaged in agriculture employment.'

"In the case of Warren Galbraith, vs. A. E. Brough and Sons, the Workmen's Compensation Board held that injuries resulting from a mule kick received while hauling posts to be used in fencing an orchard are compensable. The operation of an orchard by a real estate dealer is not an agriculture pursuit within the meaning of the Act of 1919."

"In West vs. Cummings, the Workmen's Compensation Board decided that 'Where the Defendant owned a certified dairy, selling nothing but milk and the only grain raised by the defendant is used to feed the cows, and cleaning stable only duties required in the performance of such incident to sterilization and preparation of milk for market, the Board held that he was not an agriculture worker.'

"From the decisions quoted, it is reasonable to assume that in cases where the raising of apples or any other fruit is only incidental to farming and not the principal industry, it would likewise follow that a person injured while picking apples would be engaged in agriculture pursuits. However, should apple raising be the principal industry and farming not only be incidental to this industry as in the case of West vs. Cummings, above cited, it would naturally follow that a person injured while picking apples would not be regarded as an agriculture worker and would, therefore, be a beneficiary under the Workmen's Compensation Law. The same principle would apply in the raising of poultry or fruit growing."

It appears from the above that citizens are not farm animals, and fruit growing is not farming.

• • •

RINGING.—Last June I [illegible] three of the four main limbs of a vigorous eight year-old Delicious tree in my yard which had borne no fruit. The buds are now pushing; the main limbs are full of blossom buds, while the unpruned limb has very few. I had the same experience with a fifteen year old Summer Rambo tree last year. Experiments by F. N. Fagan at State College have shown very clearly the advantage of ringing vigorous young "filler" apple trees, to bring them into bearing.

The ringing should be done only on vigorous trees which have the age and size to bear good crops, but are running to wood." It is done when the growth is most rapid, which usually is about the first of June. The bark on the trunk or large limbs is cut through to the wood, in a ring; another ring is made about two inches below the first one. The bark should not be removed as in girdling. The wound heals in a few weeks and the tree suffers only a slight temporary check—enough, however, to throw it into bearing. The same tree may be ringed in successive years. While this method is especially applicable to fillers it may be used to advantage on any vigorous but unfruitful trees.

• • •

Lime Sulphur

I bought a barrel of lime sulphur in the spring of 1927. It came too late for the first spraying so I didn't get to use it all. This last winter the remainder sat in the barn [illegible]. Would the freezing as well as the age hurt it?

J. B.

NEITHER freezing nor age should have seriously reduced the value of the material; but it is always well to test each barrel, before using, with a specific gravity spindle, and dilute accordingly. Dilution tables may be secured from your county agent.

S. W. F.

When Laying Out the Flower Borders

(Continued from page 9.)

dahlias, find little adaptation in the flower border. Separate beds need be provided and it is best to grow them in rows in the garden and cultivate them like vegetables, using the plant for cut flowers.

I could not expect the farm home planning to have all the flowers I have mentioned in this article by any means, but we can make a start with a few, with the old reliables at first, have a succession throughout the year, and then as interest grows you will want to add the new and rarer sorts. Choose for heighth also, tall plants at the rear, the medium types, dwarf sizes and the smallest edging plants.

Were I to name 20 of the perennial flowers that I most admire and would set high on my score card above, considering a variety for height, it would be the following list:

Tall

	Color	Season
Hollyhocks	Pink, red, white	June
Delphinium	Purple, blue	June
Veronicastrum	Purple	July Aug.
	Medium Tall	
Gaillardia	Yellow, crimson	June Nov.
Coreopsis	Yellow	June Sept
Phlox	Red, pink white	June
Shasta daisy	White, pink, purple	July Sept
Monkshood	Pastel shades	May June
Pyrethrum		May June
Chrysanthemum	Red, pink, purple, white	Sept Oct
Shasta daisy	White, yellow, purple	
Edwardsia	White	June Aug
	Red	June July
	Medium	
Sweet William	Various	May June
Phlox	Various	May June
Tiger lilies	Yellow, orange	June July
Pinks	Various	May June
	Small	
Alyssum	Yellow	April May
Forget-me-not	Blue	May Aug
Sedums	Various	June Sept
Moss pink	Pink	May June

No other flower grower would be expected to have the same list. It is offered only as a guide. Personal choice will decide several substitutions.

In preparation of the border for these flowers we spade up about five or six feet in front of the shrubbery background, incorporate rotted manure, have a good loam soil, and then add some mixed complete fertilizer or bonemeal before setting the plants.

Some of these perennials can be started from seed in the very early spring and will flower the first year, but very few indeed, as gaillardia, Shasta daisy, platycodon and lychnis. Most perennials are started from seed in June or July. If a perennial border is to be made now this spring, it is much better to buy plants, and buy them from a reliable firm specializing in perennials. Divisions can be made this spring of nearly all these perennials, if large enough, with only a few exceptions. Divide iris in July, peonies in September and Oriental poppies in August.

Paint for Appearance

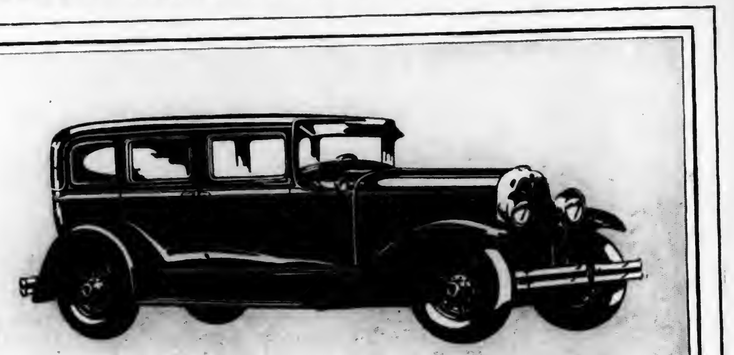
THE first step in home beautification work in the spring time is the wise use of paint.

In order to tie all the buildings together, so to speak, in a uniform color scheme, all buildings, including the house, garage, fences, barns and all, should be painted the same dominant color. Care should be taken to have the color harmonize with the surroundings.

White is one of the most popular colors and one of the best since it harmonizes with anything. Cream, and the lighter shades of yellow and tan are also very good. Gray is a neutral color and harmonizes well, but is somewhat drab and dull. Roofs in green, red or some of the newer mixtures are good.

With the house and other buildings brightened up and moulded into a unit with paint, one should give them the proper setting of grass, trees, shrubs and flowers to complete the harmonious picture.

C. H. Metzger.



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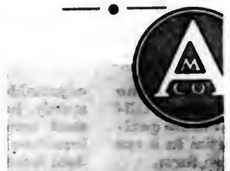
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11 years reliability. Satisfied Customers our specialty. Prices Reasonable. Write for catalog and price list.
BUCYRUS HATCHERY CO.,
Box 418. Bucyrus, Ohio

Poultry Problems
Within Yards

An interested m keeping hens from flying by cutting cord in wing and would appreciate a little more definite information. Is there a little white cord near the base of the wing? Can this be done to old hens and will it cause a drop in egg production?
A. B. L.

A GOOD practice to keep hens within yards is to cut the main primary feathers on one wing. In attempting to fly, the hen finds it very difficult. The objection to this practice is that the feathers soon grow out and the operation has to be repeated.

Another method, but one which requires more time, is to remove about one eighth to one-fourth of an inch of the cord near the second joint of the wing. This cord is white and when the wing is stretched out it can be easily observed. The operation is very simple, little or no blood results and the health of the bird is not impaired. Of course, clipping tends often has an effect on egg production. However, if the operation is performed when the birds go to roost, probably little effect on egg production will result.
H. C. K.

Unabsorbed Yolks

I bought 400 chicks, brought them home in a car and was careful that they did not get chilled. Put them in a clean brooder house, 10x12 feet, equipped with a 150 chick brooder stove. When taking them from the boxes we noticed a lot of under size chicks. We withheld all feed until 72 hours then started with a reliable mash feed and dried buttermilk. They all seemed to feed the first day but on a day or two some started to die and a few of them still dying, so at this date they are weak and refuse to eat or drink. On opening the first ones we found in some almost the entire yolk; in the few that are dying now it has turned almost black and watery.
J. V. B.

THERE are several causes for unabsorbed yolks in young chicks. The chief of these are bacillary white diarrhea, over-heating of the hatching eggs during the period of incubation, or chilling and over heating of the chicks in the brooder.

I would suggest that you send a few specimens to the Bureau of Animal Industry, Harrisburg, Pennsylvania, by express prepaid for examination. They will be able to determine if bacillary white diarrhea is the cause of the trouble.

It would appear that you had sufficient heat in your brooder house to provide comfortable surroundings for your chicks. There is nothing which you can do to correct this situation in your present flock.
H. C. K.

Brooder House

Would like to have suggestion on how to construct stationary type of brooder house with sun porch to care for approximately 1,000 to 1,500 chicks, to be divided in four or five different groups. We had in mind to build muslin front type to ventilate as weather condition will not be very severe. We have natural gas to heat house by.
H. Wayne Riggle

A SHED type house, twelve feet deep, 4½ feet at the back and 7 feet at the front, divided into pens ten feet wide by movable wire frame partitions will make a very satisfactory permanent brooder house for chicks. A sun porch can be made in front of each pen about 6x10 feet. I prefer making two frames each 3x10 feet of 2x4's and covering them with half-inch square mesh wire for a floor, and then making a coop above this out of frames about two feet high covered with inch mesh netting, with a cover made of frames covered with two-inch mesh. Such a floor is always sanitary and the chicks do not mind walking on the wire.

I have two houses such as have been described, heating each pen with a coal burning brooder stove. I have had no experience with natural gas. R. L. S.

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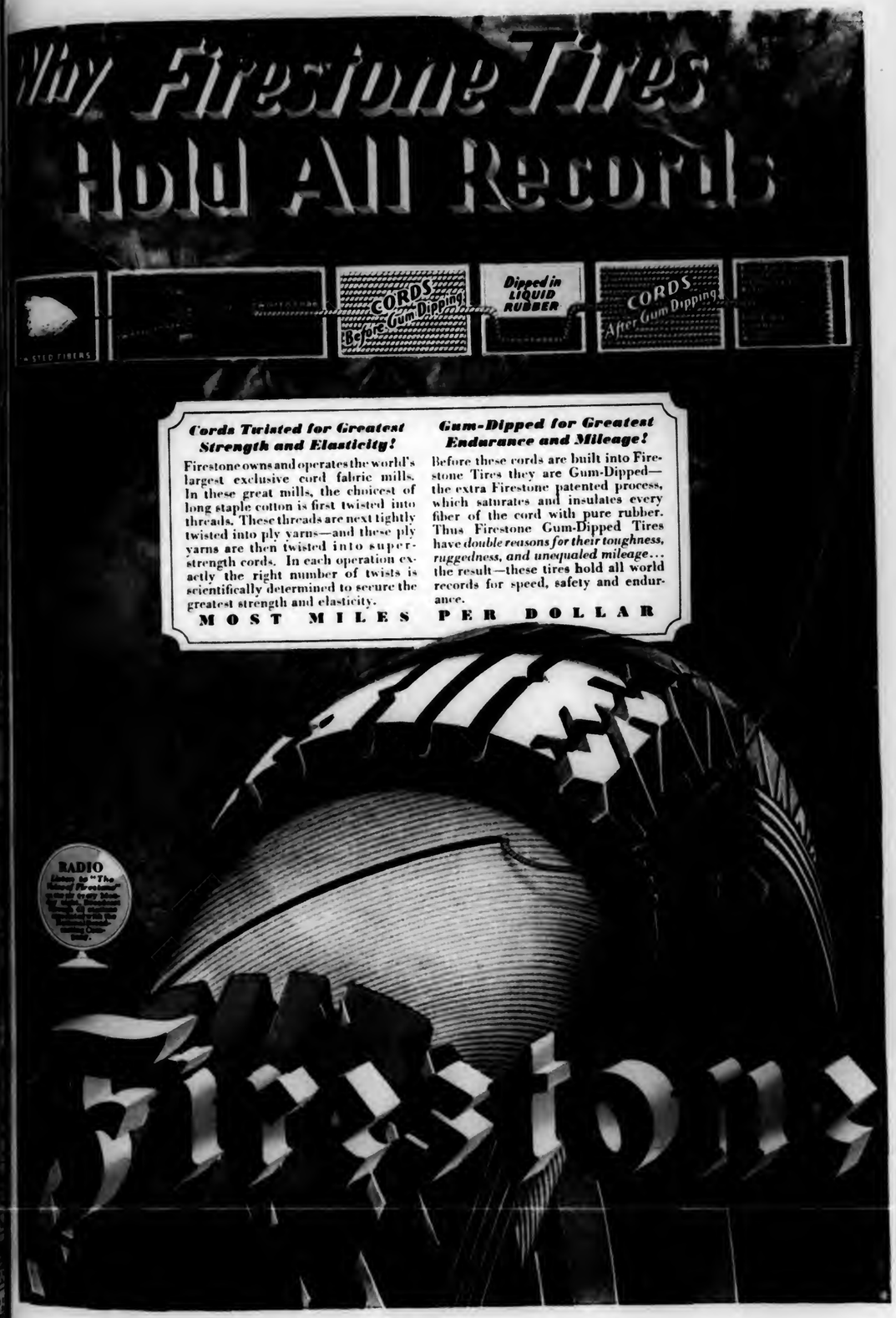
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Experience with Chicks

IN February I started 200 baby chicks. It is the first time I have tried to raise baby chicks under a brooder. Thus far I have lost three. The chicks are now three weeks old. The first couple of days some had a little loose droppings that would stick to them. I also noticed that others picked at them, so I washed that part carefully so the others would not infect themselves. That seemed to be a great relief to the chicks. Some had sore eyes and were also picked by the others. I washed them with a mild solution of boric acid. That helped. Now they are fine and seem to do very well.

The other day I went up to the attic and noticed swarms of flies on the windows. They must seemed to have left their winter hiding place to enjoy the first warm embraces of that lovely spring day. I started war against them immediately and hope to have killed the mothers of millions of flies that would have annoyed us the coming summer.

Helene Rhenius

Peat Moss

We were advised not to use peat moss for litter for baby chicks, as they would eat it with bad results. I notice in March 9th Pennsylvania Farmer that you prefer using it to cut straw.

Do you think feeding skimmed sour milk is good as a preventive for white diarrhea, besides feeding dried milk in the mash? What would you advise in using potassium permanganate in drinking water? Joseph M. Roberts, Jr.

YOU need have no hesitation in using peat moss for litter in brooder houses. I have used it for several years and find it superior to anything else of that nature which I have ever used. In handling baby chicks I leave them in chick shipping boxes until they are old enough for their first feed, and then put them under the brooders with feed and drink before them, which keeps them from eating the litter. Once they start eating mash and grain they will not bother with the litter. I consider this method much better than putting them in the brooders before they are old enough to be fed, as they remain quiet and warm in the boxes, which should be kept in a comfortable darkened room, and absorb the yolks as they should, whereas if they are put out without feed they will eat litter, pick toes and get into trouble generally.

In building the white diarrhea proposition I brood chicks from blood tested stock only under sanitary conditions, and give them a drink of sour milk or dilute commercial buttermilk before they have anything else. Sour milk helps with intestinal conditions, but is rather troublesome to feed, and many poultrymen are using dried milk in the ration instead of the liquid form on this account. If you have liquid milk to feed it will be best to cut down the proportion of dried milk somewhat in order to avoid an excess of protein.

I do not advise the use of potassium permanganate in the drinking water unless there is an outbreak of contagious disease in the flock. R. L. S.

Lights in Brooders

Several poultrymen in this community are using electric lights in their brooder houses. They leave them on all night, saying that by doing so the chicks don't crowd at night. They say they have just as good results as before. I have never used lights before but am about to try them this season. I do not have electric but am going to use gasoline lanterns. What is your idea as to the use of lights on small chicks?

What is a good solution to scrub a brooder house floor with?

Will a brooder stove burn more coal with a very tall pipe than one with a pipe which is just about two feet above the roof? Clarence Carr.

I THINK it is a very good practice to illuminate dimly a brooder house at night, as the chicks do not crowd and are able to blunder around a bit and drink if they are thirsty. Do not



Princess Gertrude, owned by Charles A. Shepard, Winterville, Ga. Record made as Georgia egg laying contest

Oatmeal Wins Again!

Grand Champion of all North American egg laying contests, all breeds; Princess Gertrude, a Quaker Ful-O-Pep raised hen—335 eggs in 51 weeks

ONCE again the value of Quaker Ful-O-Pep Feeds—the *oatmeal* feeds—is proved in competition. Princess Gertrude, winner of the Grand Championship International, all breeds, with a record of 335 eggs in 51 weeks, was raised on Quaker Ful-O-Pep Chick Starter and Quaker Ful-O-Pep Growing Mash.

More and more poultry owners are turning to the famous *oatmeal* mashes. Right now is the time for you to consider the advantages of using

1 Quaker FUL-O-PEP CHICK STARTER and 2 Quaker FUL-O-PEP GROWING MASH

By all means, feed Quaker Ful-O-Pep Chick Starter for the first 6 weeks! This is the oatmeal feed that insures a good start. After the 6th week, feed Quaker Ful-O-Pep Growing Mash, because oatmeal is important as long as growth and development are in progress. Oatmeal builds pullets that have healthy organs and the disposition to lay. Oatmeal builds finest market fowl. Oatmeal—properly blended with the other good ingredients Quaker uses—is a most economical, most profitable feed for poultry. See your Quaker Dealer.

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Giant Magic unequalled for raising broilers.



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LANCASTER QUALITY CHICKS

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Our chicks come from flocks that have been carefully culled for Egg Production and Standard Quality. By poultrymen trained at the Ohio State University. Our catalog is chicken from cover to cover, write for it or order from this ad. 100% live delivery guaranteed. Ref. Hocking Valley Nat. Bank. Member I. B. C. A.

Varieties—Postpaid prices:	25	50	100	300	500	1000
Quality Big Type Barron White Leghorns	$4.00	$7.50	$14	$41	$67.50	$130
Rose, Single C. Br. Leghorns, Anconas	3.75	7.00	13	38	62.50	120
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Light Brahmas, Jersey Black Giants ..... Heavy Broilers $12.00 Light $10.00

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OHIO ACCREDITED CHICKS — ALSO BABY DUCKS

Every bird in our breeding flock is banded and a record kept. Our flocks are inspected by experts trained and authorized by Ohio Poultry Improvement Association. Find out about our guarantee plan. 16 breeds. We have limited number of Chicks from Ohio R. O. P. pedigreed stock. Write today.

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Barred, White & Buff Rocks, S. C. & R. C. Reds, White Wyandottes, Silver Wyandottes, White & Buff Orpingtons	$14.00	$40.50	$65.00
White & Brown Leghorns	12.00	34.50	55.00
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Sunbeam Chicks are BIG Chicks—Weigh 11 to 12 lbs. per boxed 100. 100% Live Delivery Guaranteed. Big Discounts for Quantity orders. FREE Illustrated Catalog. We ship C. O. D.

SUNBEAM HATCHERY

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A *disinfectant*

for poultry houses, yards, pens, and stables



and about the home

DR. HESS Dip and Disinfectant destroys disease germs, keeps down foul odors and establishes health conditions. It is five times as strong as carbolic acid. Standardized — always uniform in strength.

Use in sinks, drains, closets —wherever there is filth or decaying, foul-smelling matter.

Sprinkle in poultry-houses, nests, roosts, pig pens, dairy barns and houses. It is death to lice. Keeps premises healthful and clean smelling. Guaranteed.

DR. HESS & CLARK, Inc. Ashland, Ohio

DR. HESS DIP & DISINFECTANT

Look! DUCKLINGS



Postpaid. Live arrival guaranteed. White Pekins, Indian Runners, Rouen and Buff Orpington ducklings. Ducklings make the most profitable poultry known. $30 a 100. Catalog free. Stamps appreciated.

Mahon Poultry Farms, Dept. 82, Gambier, Ohio

CHICKS

8c up. Healthy, free range stock. Reds, Wyandottes, Leghorns, Mixed. Circular and price list. Delivery guaranteed.

LONG'S RELIABLE HATCHERY Box 10, Millerstown, Pa.

LIVABLE CHICKS C. O. D. from our own big, healthy, bred-to-lay stock. Big type Tancred S. C. White Leghorns of 200-egg breeding $13.00-100; $40.00 500. "Big Indian" Rose Comb R. I. Reds, dark color, and Barred Rocks bred-to-lay Barred Rocks 10¢, permit) $16.00-100; $46.00-300. May prices $3.00 per 100 less. Free circular.

WILSONS POULTRY FARM, Nottingham, Pa.

ZELLER'S STRAIN QUALITY CHICKS from Large Type S. C. White Leghorns, Tancred, production bred matings $18 —100; $77—500; $150—1000. Also quality Rocks and reds. 10% books order.

EDGAR A. ZELLER, 2014 Manada St., Harrisburg, Pa.

CHICKS Pure bred. Blood tested, free range breeders Leghorns, Anconas, 12c. Rocks, Reds, 14c. Wyandottes, Orpingtons, Minoreas, 13c. Black Giants, 20c. 100% live delivery. Valuable Chick Manual Free.

SEIDELTON FARMS, Washingtonville, Pa.

TANCRED STRAIN **White Leghorn Chix**

$10.00 per 100; $47.50 per 500. Extra nice healthy chix, shipped cash on delivery. Write.

Brookside Poultry Farm, McAlisterville, Pa.

PUREBRED BARRED ROCK CHICKS

Now 12c each. Heavy mixed, 10c each. Prompt service, 100% live delivery guaranteed.

CHAS. F. EWING, R. 1, McClure, Pa.

furnish so much light as to make the chicks active.

I am not very much in favor of using gasoline lanterns in chicken houses, especially where they are left for any length of time, as they may take fire and explode with disastrous results. I know of one such instance in my neighborhood.

A strong solution of lye in water will remove the filth from a floor. This season I gave my brooder house floors a dressing of waste motor oil and car bohneum, mixed, as a final treatment.

A tall pipe will increase the draft, and probably burn more coal. Do not have the pipe any longer than necessary above the roof. R. L. S.

Brooder for Turkeys

I intend brooding my turkeys in a brooder house this year. Will build a 10x12 brooder house, but do not know exactly how high it should be. Would a 300-chick coal brooder be large enough for 100 day-old turkeys? Can you tell me how long I should keep them off ground? I mean to fence in a lot 100x50 feet and plant it and divide in four lots.

Also what shall I feed my little geese? Mrs. H. F. Shaffer.

A 10x12 brooder house should be about four and one-half feet in the rear and about seven feet in the front. If you will write to the N. J. State Agricultural Experiment Station, New Brunswick, N. J., you can get a free bulletin describing just such a little building as you want.

I believe that a 300-chick size brooder would be all right for the little turkeys. It would be safest to keep them off the ground for six or eight weeks, feeding one per cent cod-liver oil in the mash during this time, unless you feel absolutely certain that the range is free from infestation, which is not often the case.

A little bread and milk makes a good starter for goslings. Put a little sand with it, and supply them with some sort of green feed as soon as possible, as grass is their natural food. I have raised fine geese in a brooder pen with baby chicks, getting the same starting mash and grain as the chicks. The goslings did not seem to hurt the chicks at all, but after a few weeks the chicks started to pick one of the goslings, so I took them out of the pen and gave them to the old geese to manage, which she did according to the best approved goose methods of raising children. Old geese make very good parents, and are always interesting to watch. R. L. S.

Guineas

My experience in the raising of chicks is similar to many others, that the old time way of letting them run free on the ground is unsatisfactory, so is the raising of turkeys and guineas. Would like advice from poultry editor. Also the experience of some who have raised guineas in brooders and on dry mash as chicks.

Can old guineas be confined for a few weeks and fed on a dry mash and mixed grain so as to get their eggs? They would have the run of a shed pen and a fair-sized yard. Can something be placed or fastened to the wings to keep them from flying? M. L.

I MAKE a regular practice of wintering a few guinea breeders with a flock of hens, and clip their wings so that they cannot fly out of the yard in the laying season. They lay right in the nests that the hens use, and I hatch the guinea eggs under fowl hens, and raise the little keets the same as chicks. I have never tried hatching the eggs in incubators or raising the little guineas with a brooder.

I have never thought that raising guineas paid for the trouble involved, as they are wild and hard to handle and rather uncertain to raise, and do not bring in any great amount of money when sold. Most farmers let the old birds run wild—which they do to perfection—and take any increase they may bring in as a gift.

Farmers' Bulletin 1391, distributed free by the U. S. Department of Agriculture, Washington, D. C., goes into full detail concerning the care and management of the guinea fowl. R. L. S.

MONTCALM GAME FARM

Your breeding flock of turkeys needs new blood

Get it from the Montcalm Game Farm

our Mammoth Bronze toms and hens excel in size, vigor, early maturity, lone, thickness of flesh and correct markings. Do not inbreed and lower the vigor of your birds. One of our high class toms will improve a ton of carefully selected birds, will increase the livability of your poults and help get your turkeys off to the early market and high prices. We guarantee all our stock. It must give satisfaction or money refunded.

Write for catalog and prices.

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R. F. D. 3, Box K, Phoenixville, Pa.



Wonderful Success

In Raising Baby Chicks

Mrs. Rhoades' letter will no doubt be of utmost interest to poultry raisers who have had serious losses in raising baby chicks. We will let Mrs. Rhoades tell her experience in her own words:

"Dear Sirs: I see reports of so many losing their little chicks, so thought I would tell my experience. My first incubator chicks, when but a few days old, began to die by the dozens, I tried different remedies and was about discouraged with the chicken business. Finally I sent to the **Walker Remedy Co., Waterloo, Iowa,** for a box of their Walko Tablets to be used in the drinking water for baby chicks. It's just the only thing to keep the chicks free from disease. We raised 700 thrifty, healthy chicks and never lost a single chick after the first dose."—Mrs. Edith Rhoades, Shenandoah, Iowa.

Danger of Infection Among Baby Chicks

Readers are warned to exercise every sanitary precaution and beware of contaminated drinking water. Baby chicks must have a generous supply of pure water. Drinking vessels harbour germs and ordinary drinking water often becomes contaminated and may spread disease through your entire flock and can cause the loss of half or two-thirds your hatch before you are aware. Don't wait until you lose your chicks. Take the "stitch in time that saves nine." Remember, that in every batch there is the danger of some infected chick. Don't let these few infect your whole flock. Give Walko Tablets in all drinking water for the first two weeks and you won't lose one chick where you lose dozens before. These letters prove it.

Never Lost a Single Chick

Mrs. L. L. Tam, Burnettsville, Ind., writes: "I have lost my share of baby chicks from the usual baby chick troubles. Finally I sent for two 50c packages of Walko Tablets, used it in all drinking water, raised over 500 chicks and I never lost a single chick. Walko Tablets not only tend to prevent baby chick troubles, but they also tend to give chicks increased strength and vigor. They develop quicker and feather earlier."

Never Lost One After First Dose

Mrs. C. M. Bradshaw writes: "I hate to lose a great many of the little downy fellows, tried many remedies and was about discouraged. As a last resort I sent to the **Walker Remedy Co., Dept. 508, Waterloo, Iowa,** for their Walko Tablets for use in the drinking water of baby chicks. I used two 50c packages, raised 300 White Wyandottes and never lost one or had one sick after using the Tablets and my chickens are larger and healthier than ever before. I have found this Company thoroughly reliable and always get the remedy by return mail."—Mrs. C. M. Bradshaw, Beaconsfield, Iowa.

You Run No Risk

We will send Walko Tablets entirely at our risk—postage prepaid—so you can see for yourself what a wonderful working remedy it is when used in the drinking water for baby chicks. So you can prove—as thousands have proven—that it will stop your losses and double, treble, even quadruple your profits. Send 50c for a package of Walko Tablets for $1.00 for extra large box—and give it in all drinking water and watch results. You'll find you won't lose one chick where you lost dozens before. It's a positive fact. You run no risk. We guarantee to refund your money promptly if you don't find it the greatest little chick saver you ever used. The Pioneer National Bank, the oldest and strongest bank in Waterloo, Iowa, stands back of our guarantee.

WALKER REMEDY CO., Dept. 508, Waterloo, Iowa.

Send me the 1 50c regular size (or 2 50c economical large size) package of Walko Tablets to try at your risk. Send it on your guarantee to promptly refund my money if I am not satisfied in every way. I am enclosing $1 or $1.00. (If O. money order, check or currency acceptable.)

Name .....

Town .....

State ..... R. F. D. .....

Mark (X) in square indicating size package wanted. Large package contains about two or one-third times as much as small.

BABY CHICKS

	50	100	500	1,000
S. C. Leghorns—Wyckoff Strain				100
Tancred Brown Leghorns				$12.00
Tancred Wh. Race's Select				12.00
Barred, Buff, Black Reds				14.00
Assorted Chicks				13.00
				9.00

Prepaid on 50 lots, 1c less in 1,000 lots. 25 per cent deposit required on C. O. D. on 50 chicks add 1c. Full count and live delivery guaranteed. Parcel Post prepaid. Send for free circular. Order direct from this ad and get by return mail. Catalog free.

BERRY HILL POULTRY FARM, McAlisterville, Pa.

BABY CHICKS

	50	100	500	1,000
Leghorns	$6.50	$12.00	$57.50	$110.00
Light Reds	7.50	14.00	67.50	130.00
Barred Rocks	7.50	14.00	67.50	130.00
White Rocks	8.50	16.00	77.50	
Buffs	8.50	16.00	77.50	
Orpingtons	6.50	12.00	57.50	110.00

White Leghorns are from Tancred and Barron strains. Order from this ad or from free range catalog. Send us all our chicks are from free range flocks. Send us all our chicks are from free range flocks. Send us all our chicks are from free range flocks

THE YOUNG PEOPLE

What I Find Outdoors

FIRST PRIZE

What March Revealed

SOME people expect to find very few attractions outdoors in the month of March, but if these persons will go outdoors and keep their eyes open, what a happy surprise will be in store for them, for March hides beneath her blustery exterior many cheering tokens of spring.

I live on an apple farm near a woods, so naturally I have an excellent opportunity to study birds and flowers. Every year the birds come early to our orchard, but this year they came exceptionally early. I never in my life saw so many robins as arrived here early in March. Great flocks of them came to our fields where they immediately began scratching for food, although they certainly didn't look as though they needed any. They were big and fat and contented looking.

They seemed well pleased with the worm crop our fields afforded and were intent on seeing how many worms they could eat. I suppose that after they get themselves thoroughly stuffed, they will begin to turn their attention to finding sites, probably in the orchard, for their nests.

While Robin Red Breast has deeply interested me, he has not prevented my old friend Bob White from attracting my attention. Indeed it would take a heart of stone to feel no response to the bird's cheery "bob-white!" I first noticed his call early in March, about the time the robins arrived here, and I was surprised to learn that he was around so early. Several times since I have heard his welcome call.

The flower world is not sleeping while the birds are prophesying the coming of spring. Already in the latter part of February, the skunk cabbage poked its shell-like spathe above the ground. This common flower, spurned by many, is really very pretty when it first appears. The flower spathes range from a pale green streaked with brown to an almost solid purple. The pussy willow, too, was an early arrival. This flower, with its soft grayish pink pussies running along its thick brown stem, is a well known herald of spring.

Now with spring well on its way, March is showing us many delightful plants. The slender daffodils are high above the ground, the tender green of the day lilies is evident, and I can detect, among the leaves of the trailing arbutus, dainty buds that give promise of a bountiful supply of delightfully fragrant pink and white blossoms. The anemones are about to bloom, the blue myrtles are peeking out, here and there, through their dark green leaves, the grass is taking on a rich green hue, and the trees are budding.

Singing birds, blooming flowers and budding trees—these are the beauties that March offers to those who will but seek them outdoors!

Elizabeth M. Tower.



Tommy Tufted Titmouse Sings Near Henry Taylor's Home

Then as I go across the hills to the other farms near us, up jumps a big rabbit and away it runs to hide in a brush heap. I always want to give them a chase just for the fun of it, but the cattle must be salted.

I also see the new grass coming and the trees beginning to bud for leaves. I see the spring birds coming back to gladden our hearts with their songs. I always feel like whistling a tune as I continue my journey and I feel that I am a much better boy after seeing all the wonderful things that spring time brings to us.

I can see from a high peak on the farm we live on, the town nearest us which is one mile and a half away; it is a beautiful place with all its trees and shrubbery.

I can also see many other beautiful hills and a river running along quietly and some boys sitting along its banks fishing.

After I get home and look out in our garden I can see the vegetables beginning to come forth from the ground making ready to supply our summer and winter food.

We have so many beautiful things to write about that space does not allow me to continue. So as I sit on our porch watching the sun sink in the west I think of the 4-H song, Taps.

"Day is done, gone the sun,
From the lake, from the hills, from the sky.
All is well, sweetly rest—
God is mighty."

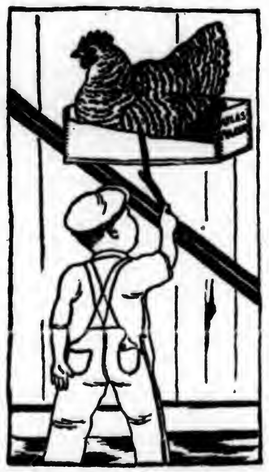
Henry A. Taylor.
Upshur county, W. Va.

SECOND PRIZE

The Merry Farmer Boy

SPRING is here, I feel it in my blood. It is a grand and glorious feeling, just to be a farmer boy when the fine spring days come and lets us out to run and jump and do all the stunts that boys like to do.

I think our greatest thrills come when we can go out and look for the new born animals. I found in our barn twin lambs and today I had the pleasure of being first to see a fine litter of new-born Duroc-Jersey pigs and best of all they are mine, from my livestock project of the 4-H Club.



This is what Fred Pollock found outdoors.

THIRD PRIZE

A Zoo on His Farm

THE first bird we usually hear or see is the robin. A sparrow is building a nest under our porch roof and it flies when any one goes outdoors. The other day I heard a killdeer and saw a shore lark and bluebird.

I saw a coon track on a drift of snow the seventeenth of March. A flock or so of wild geese go over here every spring and I have seen one flock this year. Once I saw about eighty go over. Another time I saw two cranes but have not seen any this spring. Saw two screech owls and heard a hoot owl. A neighbor near us caught a great horned owl in his hen coop and sent it to the Williamsport zoo.

I saw two porcupines, a scarlet tanager, a black-billed cuckoo and several eagles last year. Woodchucks are numerous and I caught one that weighed nine pounds.

Foxes, weasels, minks, ruffed grouse, skunks, hares, crows, hawks and ringneck pheasants are very plentiful and some beavers have built a dam about a mile from here.

The plants and flowers that grow here are, Bath, Indian turnip or Jack-in-the-pulpit, Indian balm, squirrel's corn or Dutchman's breeches, May flowers, goldenrod, crinkle root, cinque and skunk cabbage.

There are trout, frogs, turtles, catfish and eels in the streams here and I caught one eleven-inch trout last year.

I have never been to a zoo but have seen all these animals, birds and plants, wild.

David E. Tomkins.
Lycoming county, Pa.

Little Folks Corner

Baby Birds and Bad Weather

THIS is the month when we have unexpected showers and it isn't safe to venture outdoors without an umbrella tucked under your arm. But how do you suppose the birds manage? Just think how it must be at such a time with the Dove children in that ramshackle place their parents build. It is not uncommon to find poor little Dove babies lying dead on the ground after a severe storm.

The Chipping Sparrow is another bird that has a careless way of putting a few twigs and bits of grass together and calling it a nest.

The baby Phoebes are well protected against the rains owing to their mother's thoughtfulness in putting a good roof over their heads.

Mother Humming-Bird so dislikes rainy weather that she will even turn up the collar of her beautiful cloak whenever a cloud passes. On rainy days she is always on the nest and she not only spreads her wings to cover her nestlings, but, as she settles on the nest, she raises her breast feathers so that the babies can cuddle close to her. Then, when the hot days come along, she holds the umbrella over them and starts the "electric fans"; that is to say, she sits on the edge of the nest, spreads her tail between the babies and the sun, and keeps up a constant and rapid quivering motion with her wings.

Not only Quail mothers but Quail fathers hover their half-grown children, as well as the younger ones, at night and in storms. Father Bob takes the first brood under his care while Mrs. Bob is sitting on the second lot of eggs. When a cold wind rises he starts a low twitter which seems to say, "Come indoors, now! It's too raw for you children to be out." You'd wonder how so big a family could crowd under his short stubby wings. Yet they are it.

That Oriole's nest at the top of chu, swaying in the storm away there at the end of the branch, is tectly safe because the Oriole took out a storm-insurance policy they built it. It is not only moored to the branch as a anchor, but the walls are water-proof material, a flax-like which the Oriole gathers and and weaves into its home. The is hemmed with horse-hair and sides are sewed through and with horse-hair.

Who Will Be the Lucky Ten?

THERE will be ten happy folks when our April contest closes. For the five best cartoons telling about FISHERMAN'S LUCK will be some fine prizes.

Nearly everyone has seen dogs, cats, horses and other animals perform some feats that seemed to indicate intelligence and reasoning power almost human. Five prizes will be given for the best letter on

The Most Intelligent Animal I Ever Saw

Rules are as follows:

Cartoons. Use white, unruled paper and India or black ink. Write name and address and age on the back.

Letters. If possible use ruled paper, pen and ink; name, address and age at top of paper.

Contest closes April 27th.

Address Young People's Editor, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Answers to Last Week's Puzzles

1.—Mass, Ohhol, Mo., Md., Ark., Tenn., Pa., R. I., Oryel, Ore., Minn., La., Me., Mont.

II. I., our euchre, E, mer—, cumber cucumber, I, oh, dear, M, pyre empire, N, grow—, log—obey, K, purr—caper, X, ex—pense.

Special Puzzle Prize

Anne Babb of Maryland won the prize for the puzzle. The words to be are: Sea, heel, tree, head, lure, break, beat, read, dough, dead, hair, square, spade, lemonade.

BIRD GUESSING CONTEST

THERE have been so many requests for "twisted words" I suppose we try our luck with some birds. PRIZES for the best papers, with special attention to correct answers, neat writing and punctuation.

1. Downea Karl
2. Dilkerel
3. Vode
4. Klufie
5. Twihe Obb
6. Thae
7. Darcinal
8. Biton
9. Paiswor
10. Wore
11. Klach Dub
12. Mutonsel
13. Letares Rangate
14. [illegible]
15. Kwohwocho

Prizes for the best story about our little dog have gone to Annabelle Oakes, Emma Stone, Helen Morris and Pearl Allen.

Will Edith Baum of Luzerne county, Pennsylvania, and Edith Knaub of New Castle county, Delaware, please send their address to Little Folks Corner, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1—Louise McPhetridge flies over 22 hours and sets new duration mark for women at Oakland, Cal. Photo shows Miss Louise McPhetridge (Mrs Tharlen), with hair tousled and dead tired photographed just after she landed at Alameda Airport, having set a new flight endurance record for women. She stayed aloft 22 hours, 3 minutes, 12 seconds.

2—Sightseeing "De Luxe." Photo shows an unusual view of a luxurious Western Air Express passenger plane soaring over the mountains on the way from Los Angeles to San Francisco.

3—Herbert Hoover, Jr., at his desk, Los Angeles, [illegible] complete charge of the new radio communication department of the Western Air Express. His task is to put radio telephones in the planes that will allow communication between passenger planes on regular schedule and the ground stations.

4—Bureau of Standards tests girder for world's largest dirigible. William Taylor of the Goodyear Zeppelin Co. and Dr. L. B. Tuckerman of the Bureau of Standards at Washington examining a full-sized girder for the world's largest Zeppelin, now being constructed by the Goodyear Co. for the Navy, after the girder has been tested in one of the precision testing machines at the Bureau.

5—First and exclusive photograph of King George's first day out since his illness. The first photograph of King George on his first day out in the sunshine since he was seriously ill four months ago. Queen Mary accompanied the King on an hour's outing at Craigwell House, Bognor, England.

6—President Hoover will soon have a pincher. Here are two celebrated Doberman Pinchers that will be presented to President Hoover and Governor Koehler of Wisconsin by E. J. Robinson of Milwaukee. Left to right are: Robinson's King to Governor Koehler and Robinson's Prince to President Hoover.

TIGHT BINDING TEXT CUT OFF

Old Rhiney

By CHARLES ADAMS

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SOON a scuffle ensued; blows were struck, and a shot was fired, which appeared to quiet the wrangle. After a time we heard the wagons moving along the road again.

"My grief!" said Leland. "They are terrible folks! And what has become of that cage?"

For a long time we did not dare to go back. We had an idea that it was the lion's cage that had upset and thought that very likely the kind of beasts himself was at large in the woods.

After as much as two hours, hearing nothing further, but fearing instant destruction, we drove cautiously down the hill again, and reaching the main road, went home on the keen gallop, the old chaise rocking like a skiff in a gale. No whip was needed; old Nance was snorting aloud and quite ready to run.

By this time it was morning—Sunday morning—and broad daylight; but our families were not yet astir. After helping Leland to unharness, I stole home and entered the house by a back door, with a pailful of blueberries.

Mother alone awoke and asked, "Where in the world have you been all night?"

In considerable excitement, I began to tell her of the disaster to the circus.

"Oh, I guess the circus is all right," she replied, sleepily. "Circuses always travel in the night. You had better go to bed. It isn't time to get up yet."

I was in truth very tired, and after falling asleep did not wake till past eleven o'clock in the forenoon, when I found the house deserted, father, mother and my two sisters having had breakfast and gone to church, as usual. So profoundly had I been asleep that for some time I did not quite know whether the circus was a reality or a wonderful dream.

While I was rummaging the pantry for something to eat, Leland came over. Like myself, he had but now waked; and all his family, except his aged grandparents, had gone to church.

"Have you told your folks what we saw?" was his first question.

"Only a little," I replied. "They've all gone to meeting."

"Mine have gone too," said he. "Let's cut across the pasture and go over there."

"We really did see a circus last night, didn't we, Lele?" I asked him, for my recollection of it was so strange that I doubted its accuracy.

"What's the matter with you?" exclaimed Leland. "Of course we did! Come on! If it wasn't Sunday," he added, "I would take grandpa's gun."

We felt quite sure that one of the circus and menagerie cages had been upset and left behind in the bushes on the bank of Stony Brook; and after crossing the uplands and entering the woods, Leland and I approached the place in fear and trepidation. For anything we knew to the contrary, a lion, a tiger, or almost any other ferocious beast might have broken loose and be at large thereabouts.

Quiet brooded over the forest, however; not so much as a squirrel "chittered," and as we stole nearer we heard the brook purling peacefully over its shallows.

IT WAS Sunday morning, and probably no one had passed along the road since midnight.

Presently a gleam of bright red paint among the alder leaves enabled us to find the cage. A low, wheezing sound came from that direction. At last, after looking out a line of rapid retreat, we crept a little nearer. The cage had slid down the bank and lay partly in the brook; one end of it was submerged. Inside it we could make out a bulky black object.

Suddenly the wheezing noise ended in a terrific snort. A huge, leathery, round foot was kicked against the bars at the upper end of the cage. Simultaneously a blunt, wartlike horn was stuck furiously out between the bars on the other side, and a tremendous struggle began—a struggle to rise or to get free. The cage shook and rocked on the mossy stones and the water flew wildly. The beast raked its horn across the bars, and in its rage or misery gave vent to a deep, bellowing grunt more horrible than anything we had ever before heard or dreamed of.

Venturing nearer after a time, we dwelt with awe on every detail of the ugly pachyderm's thick, wrinkled hide, his rodlike tail, strange feet, leathery ears, and particularly his thick, blunt, wartlike nose-horn, queer nostrils and fiery little red eyes.

Leland declared that it was a "hipposmackus," meaning, no doubt, a hippopotamus; but I, judging by the nose-horn, declared it was a rhinoceros.

Leland said that hipposmackuses had nose-horns, too; and we were still arguing when Caspar Wilkins, who lived with his mother half a mile farther up the country road, came past. We heard him whistling and shouted to him.

His eyes opened at sight of the red cage. They opened wider still when he saw the rhinoceros inside it, and even our presence there hardly prevented him from running away when the animal suddenly emitted a loud grunt.

A minute later two men came driving along the road. They stopped to see what had happened, but had some difficulty in quieting their horse, which smelled the rhinoceros and snorted loudly. Another wagon, containing a man and his wife, also stopped; but before they learned many particulars the rhinoceros gave vent to another of his loud and peculiar grunts, which set their horse off at a rapid pace. As a consequence, very exciting reports soon after reached the meeting-house at Snow's Corners, and within an hour all the younger portion of the congregation there made its appearance. Mr. Flint, Leland's father, was among them, although he afterward said that he came because he was afraid that Leland would get hurt! When we first saw him, however, he was staring at the rhinoceros, and did not appear to be in quest of any one.

Some said that it was a unicorn; others contended that it was the behemoth of the Bible; but a majority pronounced it a real rhinoceros. Before noon not less than two hundred people—a large number for that sparsely settled district—had collected. Mr. Stone, one of the selectmen of the town, came, and immediately rode off to bring Mr Hosea Briggs, the second selectman, and consult with him as to what they ought to do. Leland and I gave them an account of what had happened the night before—we had already told the story at least fifty times.

Mr. Stone thought it the duty of the selectmen to procure rifles and kill the beast, lest he should break loose and do damage to property or imperil the lives of citizens.

But Mr. Briggs opposed the idea. He was afraid the town would be liable in damages to the owner of the "show." "There is no knowing," said Mr. Briggs, "how valuable the cretur is. He was fetched all the way from Injy." Mr. Stone was not convinced, however.

Meanwhile, too, a commendable sentiment of pity for the ungainly creature began to be expressed; for, truth to say, the animal was in a very uncomfortable situation



The Cheerful Plowman

GIVES UP TOO EASY

PETE GUSH gives up when he gets sick, he says. "Oh my, oh my! So, here I am upon my back. I should be seeding rye. I feel rare symptoms in my spine, deep pains across my chest; my tongue is wearing flannel pants, my temples are possessed. There's little hope for me to rise and don my working duds before the trees have found their leaves and shuffled off their buds.

"It's always thus, pain after pain, and grippe succeeding flu, with rheumatism tagging mumps, and other ills in view! I'm down this time, perhaps for good, I'm down for weeks, I know, nine hundred cramps are in my back, cavorting to and fro!"

Yes, thus he wails, he has no grip, he has no fight, I fear. If he had dandruff he would limp and lose his mead of cheer. If he had toothache he would say his whole blamed skull was ill. If he had fever he would pay his fire insurance bill.

A mole-hill is a mount with him, a stitch is halt a seam, a lightning bug's a forest fire, a sliver is a beam; a rain drop is a drenching flood, a bullet is a war, a hailstone is a load of ice or may be even more.

I think one-half of Gush's ills are due to lack of fight, he keeps his left arm out of use and doesn't use his right. He should pep up and say "Be jing, I'm not half sick today, I think I'll brand a dozen steers and pitch five loads of hay. I think I'll dig a well or two and hammer out some lays, I think I'll run about a mile and lengthen out my days!" But no, when he takes on an ache no matter where it comes he widdles off and falls in bed and there he twirls his thumbs. J. E. T.

"If I had my oxen [illegible] one farmer said, "I would [illegible] the cage out of the brook."

The oxen nearest the [illegible] of the accident were a yoke [illegible] four-year-old steers belonging to the Widow Wilkins. Caspar went home to get them, but his mother forbade him to use them.

In the meantime, [illegible] elder brother, Rufus, [illegible] a number of other young men. With Mr. [illegible] consent, Leland and he went home for [illegible]. Others brought axes. The bushes were [illegible] away. Later, amid much shouting, the cage was hauled up into the road, and its uncouth occupant placed in a less uncomfortable position.

It was expected that the menagerie men would soon come to recover their property. Night came on, however, with no sign or word from them; and did they make their appearance on Monday morning.

Meanwhile it became evident that the rhinoceros ought to be fed and otherwise attended to; but nobody thereabouts had the least idea as to what a rhinoceros usually ate. Some said beef, others hay, and still others alleged that a rhinoceros would eat anything that a hog would eat.

The cage stood beside the road. Several boys had taken fright while being driven past the spot, but no one had actually run away. Complaint was made, and the selectmen were requested to remove the beast.

As the easiest way out of their difficulties, they hired Rufus Flint to take his father's oxen and haul the cage to the town of Mapleton, with instructions to find the proprietor of the menagerie and collect twenty dollars from him, as necessary charges.

As the forward wheels of the cage were [illegible] a pair of ox-cart wheels were substituted at the [illegible] place for the trip.

RUFUS set off with his load. But we had seen the last of "Old Rhiney" by any [illegible]. Late the second day Rufus came back, drawing cage and rhinoceros, and proceeded to Selectman [illegible] yard at Snow's Corners.

He had been unable to find either the menagerie or its manager. The circus had not exhibited in Mapleton, as advertised. There had been a [illegible] row, arising from a dispute about wages. There was also a rumor that the manager had shot a man. He had sold several horses to pay expenses in town overnight, and the next morning had [illegible] ped the elephant and cages on eight [illegible] cars and left covertly. The clown and the [illegible] performers had also departed.

Unable to find the owner of the rhinoceros, [illegible] attempted to unhitch his team quietly and leave the cage on a vacant lot in the village, but had not gone far when a constable came running after him and ordered him to draw the cage away at once, on pain of arrest. He then tried to sell it at a livery stable, and finally to give it away; but nobody wanted the rhinoceros, and what was more, nobody would let him leave the beast.

No doubt the poor animal was half-famished by this time. At any rate, it came back grunting in a truly frightful manner.

Mr. Briggs, the selectman, was a nervous man. The unexpected arrival of the rhinoceros in his yard flustered him grievously; his wife, too, was much frightened by the noise which the creature made. Their cows began bellowing in the barn, and together the Briggs family passed a terrible night.

As soon as it was light the selectman bought a bushel of potatoes from his cellar, and from a safe distance tossed them between the bars of the cage. The hungry brute ate them ravenously, and became a little more quiet.

Mr. Briggs then harnessed his horse and went to get Mr. Stone and Mr. Odway, the other selectmen, to see what was to be done. While tempting to pass the cage in the yard his horse ran away with him and smashed the front-[illegible] of the [illegible].

Mr. Stone and Mr. Odway finally came; but neither of them was able to afford Briggs much relief.

At last they summoned the sheriff and sent him off with a warrant and instructions to go to Mapleton, and thence to continue in quest of the menagerie owners.

They also sent for the town pound-keeper, and ordered him to take the rhinoceros, feed it, and keep him until further notice. The crafty pound-keeper ascertained by measuring the cage that it would not pass in between the stone jambs of the pound, and therefore declined to act.

To his great discomfort, Mr. Briggs was obliged to have the cage remain in his yard, and it was fed by feeding a bushel more of his potatoes to the rhinoceros morning and night that he could get him quiet.

Moreover, scores of persons came there every day to see the animal. Morning, noon and night he was thronged about and fairly overran the place.

(To be continued)



Give the Soil an Organic Kick

Modified Rye Methods

I BELIEVE your rye debaters might modify their disputed practices with profit all around. Formerly the hogging off of rye was widely discussed and widely advocated by a very few. We pastured it more than once on a average of nine to ten a year. Our experience taught us that hogging rye was unsatisfactory as a practice, but it was the means of leading us into a modified system that we have found suits our farming conditions.

For several years we have designated around 20 acres out of a total area of 200 as a soil improvement proposition. The extension people would call this 10 acre area annually a "project." Our method should apply very aptly [illegible] to the great number of farmers who have a bit more land than they can farm just right—and it applies [illegible] only to the farmers farther [illegible] who have land on the ragged edge between profit and loss.

Carried out in its extremest, our plan calls for rye "slapped in" at the minimum cost. This would consist in drilling the rye on corn stubble land in the fall, likely with a sharp hoe drill and no previous preparation of the land. Under exigencies we have substituted [illegible] broadcast with a fiddle seeder in the spring to "freeze in." With timothy seed cheap we have always sowed liberally with both rye and oats.

For Growth of Mature Humus

However attractive these stands show for pasturage it is opposed to our system to graze them and we plan to hold our livestock to a safe limit so we shall never be tempted to graze them in the succulent stage. We are after a maximum growth of mature humus. Whether rye or oats we accept grazing in the mature form by sheep entirely permissible. The animals harvest a part of the grain with profit, offset the seeding cost if you care to consider that expedient.

Of course the animals knock down the standing grain and in a short while the field is green with a second crop. By the next spring we have a heavy mulch on the ground that can be plowed down as early as we please and in sufficiently weathered and rotted form so that it does not damage the corn crop. The only disturbing factor in our case is that the extra early oats yielded on the top of the ground usually makes such a good crop that we can't resist the temptation to harvest it, but in this case we cut the straw as high as possible and depend on the timothy alone to make our second crop of humus.

This kind of handling gives your soil an organic kick that lasts for years. In fact we have found it very advisable to apply three or four hundred pounds of superphosphate per acre to [illegible] down the corn plant and give it a more definite maturing tendency, shortening the season and certainly giving us noticeable increase in quantity and quality of corn. The organic matter we get by this method is much more serviceable than badly rotted and leached strawy manures hauled from [illegible] lots.

Before we began seeding oats for the pure-and-simple means of giving the land a rest from persistent cropping we lost a crop of oats due to extremely wet growing season and repeated rains and whipping of the crop by wind. That oats was that! Forthwith we had a second crop of oats, "volunteer oats". I used to be a keen hand at having the maximum number of livestock on the spot to utilize every mouthful of such grazing but lately not near so keen. If the land is on the thin order it may be [illegible] cheaper than the livestock and [illegible] ger than the boss' pocketbook even.

Ten thousand farmers have too much land and are hammering over it all every year shooting from much of it a [illegible] labor return. From our experience I should suggest that thousands of farmers in this day on depleted soils might well invest in "time locks" to put on the gates of their rye fields—time locks set to open the gate about 10 or 15 months after seeding.

G. P. Williams

Insurance Company Buys Farms

WHILE in Hardin county, Ohio, I was informed that a certain insurance company had taken over 43 farms on which it had mortgages and it expected to have to take over many more. The farms have been purchased at but little more than the buildings are worth, but in most instances the insurance company had a great deal more against the farms than they brought at the forced sale and they had to buy them in order to save themselves. They are now buying tractors and farm machinery by the carload. They are hiring men to move on the farms and paying them $50 per month besides furnishing them 500 pounds of pork each year and allowing them to keep some cows and chickens. These hired men should be able to get most of their living off the farm for which they pay nothing. It looks like a good proposition for the hired man.

For years the writer has been of the opinion that farmers could not make a success in farming by proxy. One handicap this company will have is the fact that these farms are scattered all over the county and each farm will constitute a unit. That is, each farm will have to have its farm machinery equipment and this will greatly increase the overhead expense. If the farms laid in one body they could be supervised more cheaply and it would require fewer machines to run them. Fewer men could do the work on such farms.

One thing certain, this company will not continue many years to run these farms if they prove to be money losers, for it will have an accurate system of bookkeeping which will disclose each year how much money the farms have made or lost. It would be better for the farmers if they would install a system of this kind on their farms. It will be interesting to watch this company in Hardin county where they likely will have 70 farms before the end of the present year. D. W. Z.



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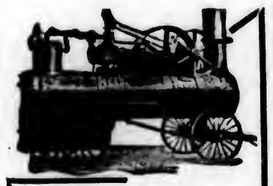
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"Only a little," I replied. "They've all gone to meeting."

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In the meantime, [the] elder brother, Rufus [Flint], worked away from home, had come [home] with a number of other young men. With [their] consent, Leland and he went home for [the] Others brought axes. The bushes were [cut] away. Later, amid much shouting, the [cage] hauled up into the road, and its uncouth [load] placed in a less uncomfortable position.

It was expected that the menagerie men [would] soon come to recover their property. Night [came] on, however, with no sign or word from them; [nor] did they make their appearance on Monday [morning].

Meanwhile it became evident that the rhinoceros ought to be fed and otherwise attended to; [but] nobody thereabouts had the least idea as to what rhinoceros usually ate. Some said beef, others [said] and still others alleged that a rhinoceros would eat anything that a hog would eat.

The cage stood beside the road. Several [people] had taken fright while being driven past the [place], one had actually run away. Complaint was made and the selectmen were requested to remove the beast.

As the easiest way out of their difficulties, they hired Rufus Flint to take his father's oxen and [move] the cage to the town of Mapleton, with instructions to find the proprietor of the menagerie and collect twenty dollars from him, as necessary charges.

As the forward wheels of the cage were [broken], a pair of ox-cart wheels were substituted in their place for the trip.

RUFUS set off with his load. But we had seen the last of "Old Rhiney" by any [means]. Late the second day Rufus came back, driving the cage and rhinoceros, and proceeded to Selectman [Stone's] yard at Snow's Corners.

He had been unable to find either the menagerie or its manager. The circus had not exhibited in Mapleton, as advertised. There had been some row, arising from a dispute about wages. There was also a rumor that the manager had shot a man. He had sold several horses to pay expenses, but before they learned many particulars the rhinoceros gave vent to another of his loud and peculiar grunts, which set their horse off at a rapid pace. As a consequence, very exciting reports soon after reached the meeting-house at Snow's Corners, and within an hour all the younger portion of the congregation there made its appearance. Mr. Flint, Leland's father, was among them, although he afterward said that he came because he was afraid that Leland would get hurt! When we first saw him, however, he was staring at the rhinoceros, and did not appear to be in quest of any one.

Some said that it was a unicorn; others contended that it was the behemoth of the Bible; but a majority pronounced it a real rhinoceros. Before noon not less than two hundred people—a large number for that sparsely settled district—had collected. Mr. Stone, one of the selectmen of the town, came, and immediately rode off to bring Mr Hosea Briggs, the second selectman, and consult with him as to what they ought to do. Leland and I gave them an account of what had happened the night before—we had already told the story at least fifty times.

Mr. Stone thought it the duty of the selectmen to procure rifles and kill the beast, lest he should break loose and do damage to property or imperil the lives of citizens.

But Mr. Briggs opposed the idea. He was afraid the town would be liable in damages to the owner of the "show." "There is no knowing," said Mr. Briggs, "how valuable the cretur is. He was fetched all the way from Injy." Mr. Stone was not convinced, however.

Meanwhile, too, a commendable sentiment of pity for the ungainly creature began to be expressed; for, truth to say, the animal was in a very uncomfortable situation.

(To be continued)



Give the Soil an Organic Kick

Modified Rye Methods

I BELIEVE your rye debaters might modify their disputed practices with profit all around. Formerly the hogging of rye was widely discussed and widely advocated by a very few. We tried it more than once on occasions up to ten a year. Our experience taught us that hogging rye was unsatisfactory per se, but it was the means of leading us into a modified system that we have found suits our farming conditions.

For several years we have designated around 20 acres out of a total area of [cropland] as a soil improvement proposition. The extension people would call this 20-acre area annually a "pet test." Our method should apply very appropriately to the great number of farmers who have a bit more land than they can farm just right—and it applies also to the farmers (a large share) who have land on the ragged edge between profit and loss.

Carried out in its extreme form our plan calls for rye "slapped in" at the minimum cost. This would consist in disking the rye on corn stubble land in the fall, likely with a sharp hoe drill and no previous preparation of the land. Some exigencies we have substituted [by] broadcast with a fiddle seeder in the spring to "freeze in." With timothy seed cheap we have always sowed timothy with both rye and oats.

For Growth of Mature Humus

However attractive these stands show for pasturage it is opposed to our system to graze them and we plan to sell our livestock to a safe limit so we shall never be tempted to graze them in the succulent stage. We are for a maximum growth of mature straw. Whether rye or oats we accept grazing in the mature form by sheep entirely permissible. The animals harvest a part of the grain with profit, offset the seeding cost if you care to consider that expedient.

Of course the animals knock down the standing grain and in a short while the field is green with a second crop. By the next spring we have a heavy mulch on the ground that can be plowed down as early as we please and in sufficiently weathered and rotted form so that it does not damage the corn crop. The only disturbing factor in our case is that the extra early oats yielded on the top of the ground usually makes such a good crop that we can't resist the temptation to harvest it, but in this case we cut the straw as high as possible and depend on the timothy alone to make our second crop of humus.

This kind of handling gives your soil an organic kick that lasts for years—in fact we have found it very advisable to apply three or four hundred pounds of superphosphate per acre to same down the corn plant and give it a more definite maturing tendency, shortening the season and certainly giving us noticeable increase in quantity and quality of corn. The organic matter we get by this method is much more serviceable than badly rotted and leached strawy manures hauled from [the] lots.

Before we began seeding oats for the pure-and-simple means of giving the land a rest from persistent cropping we lost a crop of oats due to extremely wet growing season and repeated rains and whipping of the crop by wind. That oats was flat! Forthwith we had a second crop of oats, "volunteer oats". I used to be a keen hand at having the maximum number of livestock on the spot to utilize every mouthful of such cropping but lately not near so keen. If the land is on the thin order it may be hungrier than the livestock and hungrier than the boss' pocketbook even.

Ten thousand farmers have too much land and go hammering over it all every year skinning from much of it a bare labor return. From our experience I should suggest that thousands of farmers in this day on depleted soils might well invest in "time locks" to put on the gates of their rye fields—time locks set to open the gate about 16 or 17 months after seeding.

G. P. Williams.

Insurance Company Buys Farms

WHILE in Hardin county, Ohio, I was informed that a certain insurance company had taken over 43 farms on which it had mortgages and it expected to have to take over many more. The farms have been purchased at but little more than the buildings are worth, but in most instances the insurance company had a great deal more against the farms than they brought at the forced sale and they had to buy them in order to save themselves. They are now buying tractors and farm machinery by the carload. They are hiring men to move on the farms and paying them $50 per month besides furnishing them 500 pounds of pork each year and allowing them to keep some cows and chickens. These hired men should be able to get most of their living off the farm for which they pay nothing. It looks like a good proposition for the hired man.

For years the writer has been of the opinion that farmers could not make a success in farming by proxy. One handicap this company will have is the fact that these farms are scattered all over the county and each farm will constitute a unit. That is, each farm will have to have its farm machinery equipment and this will greatly increase the overhead expense. If the farms laid in one body they could be supervised more cheaply and it would require fewer machines to run them. Fewer men could do the work on such farms.

One thing certain, this company will not continue many years to run these farms if they prove to be money losers, for it will have an accurate system of bookkeeping which will disclose each year how much money the farms have made or lost. It would be better for the farmers if they would install a system of this kind on their farms. It will be interesting to watch this company in Hardin county where they likely will have 70 farms before the end of the present year. D. W. Z.



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Four and Five-Month-Old Jerseys and Guernseys on Dry Grain Calf Feed

Dry Grain Mixture for Calves

By C. B. BENDER

THE New Jersey dry grain mixture for calves was developed to meet a specific problem in the dairy production industry.

In many of the districts where all milk produced is sold as whole milk, statistics have shown that the average production per cow does not increase beyond certain well-defined limits. Very often many districts show a decrease in the average production per cow. As the price of land increases, the taxes increase, labor increases and unless a definite remedy is found these dairymen must change their methods or go to the wall because the price of whole milk will not increase sufficiently to compensate these factors.

On further analyses of these conditions the following points are found to be true in New Jersey and could well be applied to other states. Sixteen counties increased the production per cow. Fifteen of the sixteen counties that increased their production per cow raised some of their replacements, while the other county purchased its replacements. The five counties which decreased in average production per cow purchased all the replacements. Furthermore, in the counties raising replacements pure-bred bulls predominate as sires.

Experimental Work

Although the constructive breeders and dairymen know that the foundation of success in the dairy business is based on breeding, feeding and weeding, the average producer of market milk does not raise enough animals to take care of his own replacements. This is due to three reasons, (1) the high cost of raising calves on whole milk, (2) the digestive troubles caused by gruel feeding when sanitary practices, regularity of feeding and temperatures are not checked continually, (3) the labor necessary to carry out these older practices of calf feeding.

Realizing that these problems were facing the dairymen and knowing that New Jersey or in fact any other state which sold most of its milk as whole milk could not have dairy prosperity on purchased replacements under the present system of buying, a sound calf raising and feeding program had to be instituted.

The breeding problem could be solved by using the best possible pure-bred sires either of proved ability or of families of proved ability and raising the female offspring of these bulls when mated to the best cows in the herds.

The method of raising the calves was the problem facing us. It was decided that the ration should be fed dry, to reduce the cost of raising calves but must produce normal growth with a minimum of digestive disturbances six months of age. Furthermore, calves should receive no milk as they were thirty days of age.

In the eight years of experimental work on this problem after trying and discarding numerous grain combinations, the soluble blood flour mixture was developed. After repeated feeding trials under all conditions and with all breeds of cattle we found that we were able to raise calves which were normal or above normal at six months of age both for height and weight. These animals were not troubled with digestive disorders and were raised to six months of age at an average feed cost of $35 per head and the labor costs were reduced to a minimum.

World's Record

In following these animals through production [illegible] found that one animal made a world's record for milk, and made records which stood second in the state and [illegible] others produced as par with milk-raised half sisters by same bulls.

The dry grain mixture consists of the following ingredients, 100 lbs. yellow corn meal, 150 lbs. of ground oats, 50 lbs. wheat bran, 50 lbs. linseed oil meal, 50 lbs. soluble blood flour and 12 lbs. of minerals. The mineral mixture consists of equal parts of finely ground steamed bone meal, powdered limestone and salt.

The feeding method is as follows: Take the calf from the cow when 24 to 36 hours old and feed two pounds of whole milk three times a day. Do not increase the amount of milk fed. When the calves are one week of age they are accustomed to the dry grain mixture and alfalfa hay. When the calves are three weeks of age the amount of milk is reduced and the calf allowed access to water. When the calves are thirty days of age they are subsisting on the dry grain mixture and the best altalfa or clover hay and water.

Put enough grain and hay in front of the calves in the morning to last them for twenty-four hours, allowing them access to water at all times. Never forget about them until the next morning. The calves will eat from two to three pounds of grain the third week and will be eating a maximum of four pounds a day. The fifth month will not increase the grain feeding over six pounds a day and we take the calves off this grain mixture at six months of age. Be sure that the calves



Dry-Fed Grain Mix Holstein Calves at the Walker-Gordon Farms

[illegible] best legume hay and give them [illegible] can eat.

[illegible] dry grain calf mixture is being [illegible] over two hundred dairymen in [illegible] Jersey with excellent results. In [illegible] is this list are the Walker Gordon Farms at Plainsboro, Foregate [illegible] and many other breeding establishments embracing all of the popular [illegible]

[illegible] one word of caution should be [illegible] blood meal must not be substituted [illegible] soluble blood flour and calves [illegible] this grain mixture must be [illegible] quality legume hays. Timothy [illegible] entirely out of the question. [illegible] recommendations are followed normal calves can be raised [illegible] with a great saving of labor [illegible] with a great deal of satisfaction to [illegible] dairy farmer.

Sweet Clover

[illegible] am always a heavy feeder on short [illegible] of feed about one pound of feed to [illegible] and one-half pounds of milk to [illegible] producers. I think I must do this [illegible] I have all timothy hay with a little [illegible] of clover in it. This year my cows [illegible] her greedily, but their bowels are [illegible] laxative than they should be. Do [illegible] think this is due to the sweet clover [illegible] They seem to like this since they [illegible] started on it, if not too coarse in [illegible] diet.

[illegible] My land is not adapted for alfalfa [illegible] and this sweet clover seems to thrive [illegible] Do you think it advisable to sow [illegible] field of twenty acres, that is in [illegible] corn now, to sweet clover for hay [illegible] the following year? I want to sow the [illegible] sweet clover very thick so that it does [illegible] not have a chance to become coarse in [illegible] the stem. In this case, I want to sow [illegible] it broadcasted and then apply one and one [illegible] half tons of limestone meal per acre [illegible] and also top-dress some of the best [illegible] fields with stable manure. What do you [illegible] think of this plan? Martin L. Gish

SWEET clover hay has a tendency [illegible] to produce a laxative condition in [illegible] the alimentary tract, hence this is [illegible] probably the cause of the unusual situation [illegible] with your dairy cows.

[illegible] Sweet clover is a valuable pasture [illegible] and improvement crop, but when [illegible] used as a hay may be dangerous to livestock, [illegible] according to A. V. Hansen of [illegible] the Agricultural Experiment Station at [illegible] Lafayette, Indiana.

[illegible] A new disease characterized by the [illegible] clotting power of the blood occurred [illegible] on the farm of Charles Art of [illegible] Lafayette, Indiana. In November, [illegible] he started feeding his cattle and [illegible] a roughage ration of equal quantities [illegible] of sweet clover hay and silage. [illegible] In January one animal bled to death [illegible] after it was dehorned, then a number [illegible] of cattle developed stiff, jerky gaits and [illegible] some swellings appeared along [illegible] the flanks, backs and necks. Seven [illegible] head of eleven animals were lost.

[illegible] In North Dakota the Experiment [illegible] Station found outbreaks of this new [illegible] disease on 75 farms during a single [illegible] year. Professor French of the University [illegible] of Illinois believes the greatest [illegible] danger comes from feeding the second [illegible] cutting of sweet clover hay.

[illegible] It has been discovered that this disease [illegible] rarely develops within a month [illegible] after the time sweet clover is first fed [illegible] and therefore, alternating sweet clover hay [illegible] every two weeks with some other [illegible] forage seems to be the best way of [illegible] avoiding trouble. Sweet clover should [illegible] be pastured heavily enough to prevent [illegible] the developing of a rank growth. Your [illegible] plan of procedure in growing the clover [illegible] seems to be all right. A. A. B.

Choked Cows

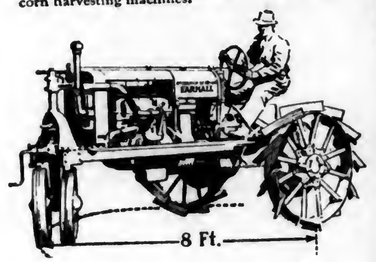
[illegible] IN regard to choke in cows, I have had cows choked to death by trying [illegible] to ram the obstruction down with a [illegible] stick. Since I used about one-[illegible] pint of lard I never lost one. You [illegible] can't strangle a cow with a small quantity [illegible] of lard and the cow will cough it [illegible] up in a few seconds. H. L. M.

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plants up to 60 acres in an 8-hour day, with 4-row planter. In *cultivating*, with 4-row outfit as shown here, it cleans 35 to 50 acres a day, and in later cultivatings 50 to 60 acres a day. Two-row work in proportion. Handles all haying jobs, cutting a 14-foot swath with 7-foot Farmall-powered mower and 7-foot trailer mower attached; also rakes, loaders, etc. Plows two furrows, pulls all seed-bed implements, and operates grain and corn harvesting machines.

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REGGIE GARRETT, Amherst, S. D.

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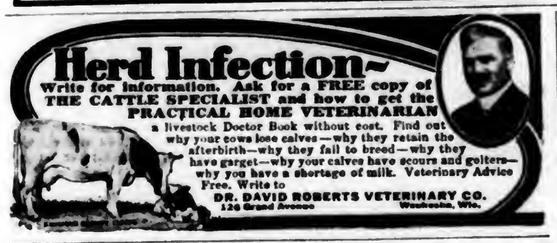
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Farm and Dairy

By L. W. LIGHTY

TO MAKE one's work count requires thought and we call it executive ability. Everywhere we find too many single-track minds. The good farm manager needs a whole train-yard full of tracks with the switches well oiled. There may be three jobs waiting or three times three and most of them demanding promptness.

The weather is the great factor on the farm. The whole farm is out of doors. We are in the midst of seedbed preparation and seeding when a drenching shower suddenly stops all that for the day. The man with executive ability will be at another job with the help as soon as the rain is over and there is no hitch at all, but often have I seen all work cease after the shower and little done until the ground was again in order to seed. I have actually watched with horror folks spraying trees against the wind when they might have sprayed with the wind two days later and done a much better job with much less effort.

I watched a man carry corn to his hog house daily for years forty odd steps when his neighbor constructed a crib adjacent to the hog pen for a small fraction of the cost of carrying that corn.

Another friend who applied thinking to his efforts found he used 20 minutes a day carrying water to his hogs. He put down a pipe at a cost of $23, enabling him to water the hogs in a minute. Another man I know rearranged his cattle shelter and greatly improved it and is saving three full days work for one man every month getting the manure out to the field.

Steps Saved

The man who thinks as he works is constantly eliminating a lot of useless effort, all of which reduces cost of production just that much. When Utopia arrives our politicians may control the selling price for us but in the meantime it is good business for us to tackle the other end of the line and reduce the cost price. Then with good produce well advertised we can put some distance between cost and selling price and that is our profit, but in a half century experience this latter never came to me unless I made my work count. Some day when two and two make five it may be different.

In the long ago we were quite willing to read a page or two to find an item to make us laugh, but now we demand the laugh at a glance and that demand has brought the comic panels in our dailies. Apparently the comic strips have given some of our sedate experiment station folks an idea.

Experiment station bulletins have the reputation among farmers of being pretty dull and obscure reading, but when one comes with the gist of the story on the title page in pictures our curiosity may be aroused enough to investigate the rest of the pages. I have before me an excellent example from the Minnesota Experiment Station on increasing dairy income. A large stack of timothy hay with a small heap of grain bears the legend 177 pounds of butterfat and $28 above the cost of feed. Another panel shows a smaller stack of alfalfa with a fair heap of silage with a good sized pile of grain made up of corn, oats and barley tells the story—"fed to the same cows produces 246 pounds of butterfat and $57.88 over the cost of the feed."

Pasture

It is a pleasant surprise to have so many pasture inquiries. A score and more years back the idea was broadcast that pasturing dairy cows was a wasteful practice and pastures were plowed up or neglected in many sections. While I still did field work I looked at areas on hundreds of farms that were naturally adapted to pasture but were put under the plow. The results were that steep hillsides were badly eroded and the rough rocky fields with many obstructions were unprofitable because of the extra time consumed and the many breaks in the implements. I then urged that these areas be put into permanent pasture and at this time I urge it more emphatically if possible.

Permanent pasture pays considering only the health and resisting stamina of the cattle. It pays handsomely as a labor saver during the busy season on the farm. Every practical farmer who has been observant for some years knows that not at any time do the cows look as well and give as much milk as when on a good pasture. Also at no time do they yield milk costing as little as on good pasture. We should not expect the permanent pasture to take care of itself continuously without any attention, but I have watched such pastures for twenty and as many as thirty years and they are very excellent today and the work and expense put on those areas are almost negligible.

Warren County C. T. A.

THE Warren County C. T. A. finished its sixth year March 1, 1929, with 20 whole year members. There were 625 cows in the association during all or part of the year. Thirty-five cows produced over 400 pounds butterfat during the year.

The Holstein herd of Warren State Hospital leads the Association in both milk and butterfat production—with an average of 10,558 pounds milk and 368.4 pounds butterfat. G. G. Carter's herd is second in production of butterfat.

The Warren State Hospital R. H. cow No. 500A-1069042—two-year-old—leads the association of the individual cows in production of both milk and butterfat—with 16,500 pounds milk and 539.5 pounds butterfat. There are 17 cows now in the same herd in the 400 pounds butterfat group. The Rouse Hospital has seven cows in that group.

The results for the six years are as follows:

Year	Ave. No. Cows	Lbs. Milk	Lbs. Butterfat
1924	469.40	7636	281.5
1925	382.40	7064	274.6
1926	284.67	5928	240.5
1927	474.93	8207	314.0
1928	526.26	8229	318.0
1929	493.15	7973	297.6

Individual Herd Records

Seven herds with an average of five or more cows exceeded an average production of 300 pounds of butterfat. A complete list of these herds follows:

Owner	Ave. No. Cows	Breed	Lbs. Milk	Lbs. Butterfat
Warren State Hospital	69.50	R. & G. H.	10,558	368.4
G. G. Carter	8.58	G. H. & Mix.	9,302	366.9
A. F. Dyke	18.25	R. G. & G. H.	7,363	341.6
Rouse Hospital	41.50	R. & G. H.	9,654	340.5
Paul Lindell	16.83	G. H., G. G.	8,691	322.3
B. E. Firth	16.17	G. H., G. G.	8,308	316.2
J. A. Lopus	12.83	G. H., G. G.	7,893	308.7

O. C. Tritt, County Agent.
A. G. Ehrensberger, Tester.

Compiled by I. O. Sidelmann.

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Farm Practice

By W. D. ZINN

Orchard Grass

A WEST VIRGINIA reader asks whether I would recommend orchard grass for meadow. The best answer I can give to that question is to tell what I have done. I have a meadow on one of the grazing farms that I do not want to plow very often and last year in seeding it down we sowed five pounds alsike and two bushels of orchard grass per acre. There is no other grass we can sow on our meadows that will last so long as orchard grass. It makes as good hay as timothy, but that is not saying much in its favor. Like timothy it should be cut as soon as it comes into head if the best results in the hay are obtained. No greater mistakes are made I believe, than in letting the grass or clover stand until they get too ripe to cut.

• • •

Best Days to Plant

Would like to know the days best to plant potatoes and other underground crops. Also corn and other crops that grow above ground.

W. T. M.

OUR correspondent must refer to the moon when he says "the best days" to plant potatoes. In all my experience as a potato grower I have never gone to the almanac to know how the moon was before I planted our potatoes. I believe the best day is when the season has come for planting potatoes and the ground is in proper condition and has been properly fertilized.

• • •

Sawdust

I have a sawdust pile three years old. Would it be of any value as fertilizer on a meadow? Would it be of more value to spread it on where I am going to plow and turn it under?

I am planning to sow some soy beans again this year. I seldom get them cured out just right, it always rains on them before they cure well. They usually mould in the stack. Have been thinking of sowing Sudan grass with them this year. Does it make a good mixture? Would it be easier cured?

C. R. White.

SAWDUST does not contain enough plant food to pay for the hauling as a rule, but my neighbor hauled out sawdust a few years ago and put it on some heavy clay land and turned the field for soy beans. When the beans were cut for hay the land to which the sawdust was applied produced beans from four to eight inches higher and were much darker green than the others. It paid my neighbor very well for hauling the sawdust out, and it may pay our correspondent very well.

Sudan grass when sown with soy beans does make the beans cure out quicker. Do not sow more than 10 pounds per acre of the Sudan grass.

• • •

Fertilizer for Potatoes

Would 600 pounds of superphosphate, 200 pounds potash and 200 pounds of nitrate of soda be about right for one acre, sow half all over the land, the other put in the row for potatoes?

F. A. Beall.

THE ingredients suggested will make a 4-6-6-7.5 goods. This is too low in phosphoric acid and nitrogen but not too high in potash. If the land has had no manure and has not been growing legumes often the fertilizer can be greatly improved by doubling the amount of both nitrogen and phosphoric acid.

—o—

Correct

Father: "I never kissed a girl until I married your mother. Will you be able to say the same to your son when you become a married man?"

Son: "Not with such a straight face as you can, father."

A message to Brood Sows who farrow in April



DON'T be the kind of a brood sow who wastes all summer raising three or four pigs, when the right kind of feed will give you the bone, muscle and blood to grow a big litter of strong, healthy pigs.

Some folks think that anything is good enough for a pig to eat, but when they skimp on cheap or improperly mixed feed they only fool themselves in the end by getting less pork and taking a longer time to get it.

We learned through years of experience and experiments on the Larro Research Farm just what hogs need and in the big Larro mill we follow that formula exactly, using only the highest grade of ingredients that can be bought.

Larro Hog Feed will not only condition you for farrowing time, but after your pigs are weaned Larro Hog Feed and corn, fed according to directions in each sack will grow them cheaper and better than any other feed you can get.

You know what Larro Dairy Feed and Larro Poultry Feed have done for your barnyard neighbors. Give your litter a chance, too.

Larro



HOG FEED

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Detroit, Mich.

Manufacturers of Dairy, Hog and Poultry Feeds

TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

THE cattle market came to life this week and there was a general advance in prices, with steers showing the most gain. Most of the trade in steers was at an advance of 50 cents to $1 above last week's close, with receipts running a little lighter than last week. The advance in prices was apparently due more to the moderate offerings than to improvement in beef trade, so there is room for doubt as to whether, with larger runs, it can be held. However, feeling in general is better, and the outlook improved over a week or two ago.

Best steers brought $14.75 this week. Not many cattle of top quality and finish are being offered. Bulk of steer sales this week were at $12.15 to $14.15, against $11.85 to $13.40 last week, and $12 to $14.50 the same week last year.

So far this year the twenty leading markets have received 2,567,000 cattle, against 2,876,000 during the same period last year and 3,123,000 two years ago. That production is at low ebb is generally agreed, and on this basis there is confidence of a fairly good price level all summer, though some of those who come into the market for cattle are scared of the high prices of stockers and feeders. The market here advanced 50 cents this week with offerings light and demand the same. It takes $12 or better to buy anything in the feeder line that deserves to be called good.

Pork in Store

There was a small increase in stocks of Chicago lard during March, the April 1 total being 98 million pounds, against 95 million March 1. While the supply is much larger than a year ago, it seems probable that, with hog receipts dwindling, disappearance will set in earlier in the year than usual, and may even start this month. This belief is supported by the situation appearing in stocks of all pork cuts. Here the April 1 total was 141 million pounds, against 190 million March 1 and 131 million April 1 last year. The total is under a year ago, and there was disappearance rather than accumulation during March. The Chicago storage is usually fairly representative for the entire country. The figures explain why the packing industry is keen for hogs.

Hog Market Erratic

Hog prices during the past week did more bobbing around than during the preceding two weeks, but the market as a whole was close to the highest level of the season. A rise to a top of $12.15 Tuesday, equal to the season's peak, reduced the demand, especially from smaller interests, resulting in a drastic cut in quotations the following two days. The top on Thursday was down to $11.55, with the average that day at $11.25, the latter standing lowest since March 9. However, "bargain" prices existed only for a day, bringing a rush of shipping orders Friday and 25@30c of the loss was replaced, indicating that hogs are well worth the money at $11.50 and slightly below. Shipping orders Friday were second largest of the week. Larger houses are eager for hogs costing $11.25@11.30.

Continued small receipts have given producers of hogs more advantage over the buyer and price cuts are sure to be followed by meager supplies. Eleven leading markets since January 1 show a total of only 8,585,000, compared to 10,659,000 a year ago. Weights of hogs during the last three weeks have been running heaviest since early last September, offsetting the decrease in numbers to some extent. Sellers during the last five weeks have held the advantage on most sessions. During this period the extreme top at Chicago has been below $11.50 only twice and above $12 on 11 days. Last week's general average at $11.60 stands within 10c of the highest since last September and $3.30 above a year ago.

Lambs in Good Demand

Lambs were in good demand and moved higher in face of larger supplies during the last week, the week's general average at $16.90 being only 15c under the highest weekly average since last June. New high marks for the season were established in several branches, top shorn lambs reaching $16.55 and aged wool ewes, $11.50. The latter were highest since June, 1928. Receipts at 67,200 were third largest since January, but with warm weather turning more demand to lamb in preference to pork, offerings hardly equalled requirements toward the end of the week. Fancy wool lambs sold upwards to $17.75. California springers at one of the river markets brought $19.25 and Arizona springers sold up to $18.75, but both states are reported holding bulk of supplies back until about the middle of May. During the last two weeks, Chicago has handled nearly 80,000 Colorado fed lambs, bringing the season total up to 321,000. There were about 600,000 lambs left in the northern Colorado, Arkansas Valley and Scotts Bluff feed lots on March 30, 1929, compared with 480,000 a year ago. Shipments of lambs to March 30 from these areas indicate the following percentage of lambs still on feed: Northern Colorado 33 per cent, a year ago 28 per cent; the Arkansas Valley, 38 per cent, a year ago 30 per cent, and the Scotts Bluff, 33 per cent, a year ago 17 per cent. That lamb is rapidly becoming a more popular meat among the middle class is well indicated by developments during the past two years. Prices have been among the highest on record, despite increased production. Receipts at 20 markets so far this year at 4,090,000 compare with 4,030,000 a year ago. Receipts in 1928 were largest since 1919.

Grain Trade

The trend in the grain market was sharply lower this week, both corn and wheat declining, but oats showing little change. Good reports on the condition of growing wheat were the principal weakening factor in that cereal, and there was little interest in corn to give strength to the trade, though the cash market was in fairly good shape from the standpoint of offerings and demand.

European supplies of wheat are reported as not burdensome, but sufficient to take care of immediate needs. Argentine shipments are falling off. Advices from Russia indicate poor collections of grain and the possibility of imports of foreign wheat to that country.

The development of plans for farm relief legislation has had no effect in the grain markets though the situation at Washington is being watched closely.

Some traders express the opinion that grains at current levels are low enough, feeling that price movements from now on are more likely to be upward than toward a lower range of prices, but there is not enough confidence in such belief to result in buying, which of course is the only way prices can be advanced.

Iowa Revising Auto Laws

The automobile legislation of the state of Iowa is being revised. Plans include removing the speed limit; licensing drivers, the licenses to be granted without examination and revocable for driving offenses; revoking the registration of an automobile against the owner of which there stands an unsatisfied judgment for damages; and raising the gas tax from three to four cents. Some of the legislation has already been passed.

Soy Beans in Illinois

Illinois soy-bean production has increased from 40,000 bushels ten years ago to 3,000,000 last year. With the increase in acreage has come an increase in acre yield. During the first three years of the past 10-year period the average acre yield of soy beans in the state was 10.5 bushels, whereas during the last three years of the 10-year period it was 14 bushels. The highest yield in the ten-year period was that reported in 1928, when the average yield for the state was 16.5 bushels.

The value and economic importance of the crop was indicated this past spring, when three companies or organizations operating in Illinois pooled their interests and guaranteed a price of $1.35 a bushel for one million bushels of Illinois-grown beans. Products made from this crop of beans include oil for culinary purposes, soap stock and paint and varnish oil. The meal has been used largely in feeding the dairy cows of New York, but has also found its way into flour for human food, pastes and glues, and been used extensively in the paper industry. Watson.

Chicago, April 6, 1929.

Miscellaneous Produce

Lancaster

Butter.—Country butter, 52@55c; creamery, 56@55c.

Poultry.—Chickens, dressed, $1.25@2.50 each; springers, 75c@$1.25 each; ducks, $1.50@2.50 each; squabs, 25@50c each.

Eggs.—Fresh eggs, 28@31c.

Vegetables.—Asparagus 20@25c per bunch; beets, 10@15c per bunch; red pepper, 15@30c each; string beans, 30@35c per ¾ pk.; beans, Lima, 35@40c per pt. box; cabbage, 10@20c per head; carrots, 8@15c per bunch; Brussel sprouts, 25@30c per qt. box; cauliflower, 20@40c per head; celery 10@25c per bunch; cucumbers, 10@20c each; spinach, 12@15c per ¾ pk.; rhubarb, 10@15c per bunch; peppers, 5@8c each; endive, 10@15c per head; lettuce 10@20c per head; radishes, 8@10c per bunch; mushrooms, 25@30c per pt. box; peas, 35@40c per ¾ pk.; onions, 20@25c per ¾ pk., green onions, 10c per bunch.

Potatoes.—Old, per bu., 65@75c; new, 35@40c per ¾ pk.

Sweet potatoes.—20@25c per ¾ pk.

York

Butter.—Country, 50@55c; separator, 55@60c.

Eggs.—Fresh, per doz., 28@30c.

Poultry.—Hens, per lb., 26@30c; Leghorns, dressed, $1.25@1.50 each; heavy, $1.50@2.

Vegetables.—Potatoes, 75@90c per bu.; cabbage, 5@20c per head; lettuce, 10@20c; hd.; Spinach, 10@15c, ¾ pk.; celery, 8@15c stalk; onions, 10@15c box; green, 10c bunch; radishes, 5@10c bunch.

Apples.—Per bushel, $1.25@2.

Philadelphia

Eggs.—Firsts, 27½c; seconds, 26@26½c.

Butter.—Creamery, tubs, 92 score, 46c; 88-90 score, 45@45¾c.

Apples.—U. S. No. 1, per bu., Delaware Winesaps, $1.50@1.60; nearby ⅝ bskts., Stayman, 75c@$1.25; Romes, 75@$1.

Strawberries.—Fla., 32 qt. crate, best, various varieties, 33@40c.

Asparagus.—S. C., doz. bunch crates, large, $4.50@5.25; small, $2.50@3.

Beets.—Texas crates, bunched, $2.50@2.75.

Cabbage.—Fla., ½ bbl. hpr., 75@90c; S. C., ½ bbl. hampers, 90c@$1.

Lettuce.—Cabt. Iceberg, crates, 4 to 5 doz., $3.75@4.50; Carolina ½ bbl. lumps, Big Boston, $1@1.50.

Onions.—New York, 100-lb. sacks, U. S. No. 1 yellow, $1.75@2.50; Texas crates, Bermudas, $2.75.

Potatoes.—Pa. round whites, per 120 lbs. 75c@$1.10; Fla., new stock, per bbl., Spaulding Rose, U. S. 1, 86.25@6.50.

Sweet potatoes.—N. J. ⅝ bskt., yellow, 90c@$1.15; Md. and Delaware, No. 1, $1.25@1.50.

Peppers.—Fla., crates, fancy count, $2.50@3.

Rhubarb.—Calf, boxes, fancy, $2.50@2.75; nearby bunches, 3@4c.

Radishes.—N. Car., bu. hamps, red, $1.75@2.

New York

Butter.—Creamery, higher than extras, 45½@46c; extras, 45c; firsts, 44¼@44¾c.

Eggs.—White, eggs, current receipts, average extras, 31@32c; extra firsts, 30½c; mediums, 28@30c.

Poultry.—Live, by express, fowls, 33@34c; broilers, 40@52c; ducks, 17@27c; turkeys, 40@45c.

Apples.—Eastern and Southern, bu. bskts., Rome, $1@2; Greening, 75c@$1; McIntosh, $1@3.75; barrelled stock, No. Spy, $3.75@9.50; York Imperial, $2.75@3; Baldwin, $2.50@6.

Potatoes.—L. I., 150-lb. sack, $1.35@2.25; Maine, $1.75@2; Fla., new stock, Spaulding Rose, No. 1 bbl., $6@6.50; Bermudas, $8@9.50.

Sweet potatoes.—Jersey, best bskt., $2.75@3.

Baltimore

Butter.—Creamery, fancy, 49@49½c; rolls and dairy prints, 30@32c; packing stock, 30@32c; butterfat, lb., 48@49c.

Eggs.—Md.-Pa. nearby firsts (loss off), 29¾c; western firsts, 29¾c; southern, 25¾c.

Live poultry.—Hens, old, 4½ lbs. and over, 32@33c; small to medium, 32@33c; Leghorns, 30@32c; young chickens, 38@42c; broilers, small, 45@45c; Guineas, young, 1¾ lbs. or over, each, 90c@$1; roosters, 18@22c; ducks, 25@30c; pigeons, pair, 35@40c; squabs, 30@50c; turkeys, 30@42c.

Apples.—Fancy pack, bu., $1.50@2; per bbl., $3@6.75.

Potatoes.—Per 150 lb. sack, $1.60@2.10.

Sweet potatoes.—No. 1, hamper, $1@1.50; Yams, per bbl., $1@1.50.

Pittsburgh

Butter.—Creamery prints, 92 score, 52@52½c; tubs, 51@51½c; local tubs, 48@49c.

Eggs.—Fresh, select white, 29@31c; brown, 28@30c; current receipts, 26@27c.

Poultry.—Heavy hens, 33c; Leghorns, 31@32c; broilers, 48@50c; roosters, 20c; ducks, 30@32c; geese, 22@25c; guineas, 40@50c per pair.

Potatoes. Per 150 lb. sack, N. Y. whites, $1.50@1.60; Maine Green Mts., $1.75; Mich. Rurals, $1.40@1.50.

Apples.—Bbl. N. Y. Baldwin, $3@5.50; W. Va. Willowtwig No. 1, $4; No. 2, $2.50; bu., basket, N. Y. Baldwin, $1.75@1.85; Ohio Ben Davis, $1@1.05.

Cucumbers.—Ohio hothouse, basket, two doz., $3.50@3.75.

Lettuce.—Ohio hothouse, 10-lb. basket, $1.10@1.25.

Farm Condition

Bonne Co., Central Ind.
Mar. 1: Warm March but too wet ... sow oats. Some plowing for corn. ... and grass look good. Farmers busy ... ground is dry enough. Hogs mostly ... G. L. Tate.

Van Wert Co., N. W. Ohio.
Mar. 25: March has been a pretty ... month but not much spring work ... yet. Very few oats sowed and ... plowing done. A good acreage of ... and corn going out this spring. Corn ... selling high, hogs fairly well. Not ... wheat sowed. Spring pigs just a fair ... Ezra Hoge.

Lawrence Co., N. W. Pa.
Mar 27: Strong high winds with ... quent electric storms. Grass seed was ... on many wheat fields the 19th and ... Wheat looks quite favorable at ... Tree pruning and grubbing goes on ... waiting for the ground to dry ... to starting the plow. Mud roads ... in bad condition. Public sales are ... stock of all kinds selling high. ... and fresh cows in demand. M. L. ...

Lanraster Co., S. E. Pa.
Mar. 25: Fine spring weather. ... are sowing clover seed, rolling and ... hauling manure. Wheat looks fine. ... bacco growers are steaming their seed ... and preparing for the 1929 crop. ... will very likely be increased on ... of the good prices received for the ... crop. R. C. ...

Cumberland Co., Southern Pa.
Mar 29: Having very pleasant ... warm for the time of year. Things ... beginning to grow. Wheat fields are ... ing nice since the snow. Grass fields ... getting green. People plowing for ... and hauling manure. Public sales ... over. Stock of all kinds sold high. ... J. Brown Kelso.

Potter County, Northern Pa.
Mar. 28: Several large flocks of ... geese flying northward were seen ... March 21 and 22. Grass on lawns ... living fields getting green. Pheasants, ... meadow larks have followed the ... back. Dirt roads impassable for ... trucks. Many potatoes still in ... Growers: the last carload shipped ... 50c per bushel. M. C. ...

Ontario Co., Western N. Y.
Mar. 30: Some fine weather this ... Mercury has reached 80 degree ... Two heavy thunder showers had ... ency to firm the wheat ground. ... looking exceptionally good. ... plowing done yet. Farmers ... ple orchards and sawing wood. ... E. T. ...

Franklin Co., Southern Pa.
Apr. 3: Easter a fine day as ... of March. Fruit trees showing ... fields growing nicely. Wheat ... grain took well. Some plowing ... Clover seed nearly sown and some ... made and potatoes planted. The ... farm sales are over at which ... as much as $345 and horses from ... $50 to $200. Feed is holding out ... laying. Eggs selling for 28c, and ... heavy chickens about 30c. Public ... operating full and some farms ... vacant for lack of tenants. ... John B. ...

BOOK ON BUFF ROCKS

The American Buff Plymouth Rock ... is desirous in sending a copy of ... breed book postpaid to any one ... in Buff Plymouth Rocks. Write ... Edsjeld, Secretary, Alcester, So. Dak.

CASH GRAIN

Chicago, April 8.—The following ... prices ruled here today: No. 2 hard ... $1.21; No. 3 yellow corn, 87½c; ... white oats, 50c.

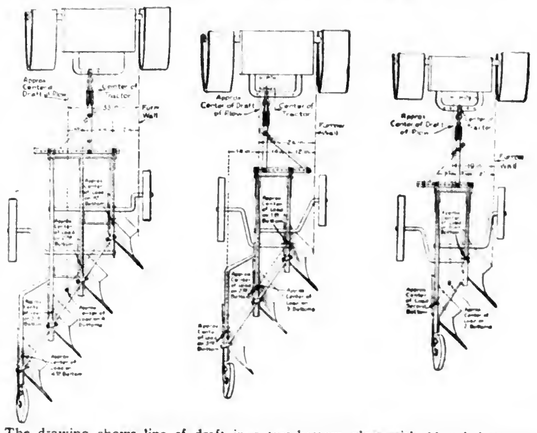
PITTSBURGH MILK

The Dairymen's Cooperative Sales ... pany announces the following base ... for April; f. o. b. Pittsburgh, ... $3.45 per cwt.: Class II, $2.8... country plants, Class I, $2.80; Class ... $2.10. Retail prices are reduced ... quart to 14c per quart and 8½c per ...

THE regular quarterly meeting of ... Guernsey Breeders' Association ... Western Pennsylvania will be held ... day, April 16, in Room 16, Chamber ... Commerce Building, Pittsburgh, Pa., ... p. m.

Produce Market Review

Apple markets in all sections were ... during the past week and prices ... new and old potatoes were lower, ... Virginia potatoes dropped sharply in ... Carolina and sold at 75c to $1.10 per ... bbl. sack. A few truck receipts of ... sack. A few truck receipts of ... sack. A few truck receipts of ...



The drawing shows line of draft in a two-bottom plow with 14-inch bottoms; line of draft and proper hitch for three-bottom, 14-inch plow, and proper hitch for four-bottom, 14-inch plow when the tractor drive wheel is run in the furrow.

Line of Draft in Tractor Plowing

By C. W. GRAY

PLOWING must be done under a very wide range of conditions. When tractor plows leave the factory they are set for average conditions. Naturally, some of them may need adjustment to meet special conditions on the farms they happen to reach.

One of the most frequent causes of failure to do good work is a wrong hitch. Nor does the damage caused by wrong hitch stop with the work. Nearly always there is also undue wear on the plow and heavier draft, resulting in higher fuel cost per acre of plowing.

To be able intelligently to hitch a plow to a tractor, it is an advantage to have an idea of the location of the center of load on the plow bottoms and its relation to the drawbar of the tractor, or, in plow parlance, the line of draft.

If the center of load would stay in one place for all conditions, hitching would be greatly simplified, but it won't. Most authorities agree that in a 14-inch bottom, under average conditions and at average depth, the center of load is two inches from the shin and just a little above the juncture of the moldboard and share.

The line of draft is an imaginary line from the center of load on the bottom to the point of hitch at the tractor drawbar. Regardless of how high or how low we hitch, the hitch is going to do its best to straighten out on this line.

Center of Load

Now we'll suppose we have plowed around once and that we have started on the second round, giving us the wall of a previously made furrow from which to measure. From this we shall locate the center of load for two, three and four-furrow plows, assuming that the plows are equipped with 14-inch bottoms.

The point two inches from the shin (the center of load on the first bottom) is 12 inches from the furrow wall. The center of load on the second bottom is 12 inches, plus 14 inches, or 26 inches from the furrow wall. The center of load on the two bottoms is, therefore, half way between 12 and 26 inches, or 19 inches from the furrow wall.

The center of load on a three-bottom plow is the center of load of the middle bottom, which, as we have just shown, is 26 inches from the furrow wall. In other words, when we add a 14-inch bottom the center of load of the gang shifts seven inches farther from the furrow wall, or half the width of the bottom added. Add seven inches to 26 inches and you have 33 inches for the center of load in a four-bottom plow.

The true line of draft is straight forward from the center of load. For plows with 12-inch bottoms the lines of draft are, from the furrow wall, 16 inches for the two-bottom, 22 inches for the three-bottom, and 28 inches for the four-bottom.

Conditions Will Vary

Keep in mind that these locations are based on the more or less arbitrary assumption that the center of load is two inches from the landside or furrow wall. Often it is farther to the right than that, and sometimes it is nearer the landside. For stubble plowing the figures are very close. In hard plowing or heavy sod more pressure is thrown on the moldboards, and the center of load may shift considerably toward the center of the bottoms. Conditions which might cause the center of load to shift toward the left are loose soil, shallow plowing, blunt shares, plowing in root-matted soil without rolling coulters, etc.

If the hitch is too far to the right on the plow when hitched to the center of the tractor, shifting the hitch four inches to the left on the plow and hitching in the first hole to the left of center on the tractor drawbar will favor the plow, while the effect on the tractor will be scarcely noticeable. We have shown the three and four-furrow plows hitched this way because we believe such a hitch covers a wider range of plowing conditions.

A tractor plow is not sensitive to slight off-side hitch under ordinary plowing conditions, and if the center of load on the plow does shift, the shift is usually toward the right, which is in favor of the hitches shown; that is, as the plowing gets harder, the center of load on the bottoms shifts closer to the line of hitch.

Often when plowing in loose, crumbly, or marshy land it is desirable to run the tractor on the land. When this is done it is customary to hitch in the first hole to the right of the center of the tractor drawbar, which is somewhat to the left of the center of draft of the plow.

Observe the Land Wheel

While we can't always hitch in the true line of draft, knowledge of where that line is helps the plowman to understand the action of his plow and to correct adjustments to meet conditions. More or less landside pressure results from running the tractor on the land, but it can be counteracted by leading the rear wheel (on three-wheel plows) away from the furrow wall.

Probably the best evidence of whether a plow is hitched right laterally is to observe the land wheel. If this wheel is running straight, it indicates proper lateral hitch. If the plow is hitched so that the front bottom is cutting its correct width and the coulters are set right, the furrows all lie alike, and there is a uniformity of appearance.

The front furrow wheel should run about two inches from the furrow wall. Because the front furrow wheel on a riding plow runs in the corner of the furrow bank, some folks reason that the tractor plow wheel should do the same. That is wrong. This wheel on a tractor plow stands straight. If it is run against the furrow wall, the front plow will cut about two inches too wide, and every third furrow will be ridged.

We have tried, in this article, to stick to factors having most to do with the quality and appearance of tractor plowing. Much that we have said applies to plowing with horses. Any man who can apply a few simple rules in setting his plow, and who can drive a tractor straight, can do first-class work with a tractor plow.



Electric Motor Helps Fill Silo

The above photo shows a 7½ horse-power motor filling a 12x32 foot silo, on the farm of C. H. McCall, Indiana county, Pa. A five-horse-power motor was also used during this demonstration which was put on by the power company. The 7½-horse-power motor used 13c worth of current per hour.

How to Plow Stony Ground

FOR several years the Horse Association of America has had a great many requests for practical methods of using two or three-bottom horse-drawn gangs in stony or rocky ground. Many men reported that when they struck rocks with powerful five, six or eight-horse teams they were thrown headlong from the seat, and that plow points were often broken or plow beams bent.

Plow companies were consulted, agricultural engineering departments of agricultural colleges were asked for aid, but without avail. Then, Ivan A. Hardy, agricultural engineer at the Saskatchewan Agricultural College, came into our offices on May 27, 1929. He has done a great deal of actual work in the field, adjusting plows and field machinery during the past five years, and has evolved a method of adjusting horse-drawn gangs so that they will ride over stones, roots or even ledges of rocks, without injury to the plow or driver. The result of this is so great to farmers in stony areas that the Horse Association of America asked Professor Hardy to prepare a statement for publication, as follows:

Set to Float

When plowing stony land with two or three-bottom horse gangs, the plow must be set to float. To set the plow to float, the adjusting screw on the locking lever must be screwed up sufficiently to prevent the plow from locking.

"The tilt of the bottoms as supported by the hails and frame must be so that there is at least one-half inch clearance between the heel and the land side of the sole of furrow. The shares must be kept reasonably sharp with at least one-eighth inch point at the point. The coulters should be set somewhat forward from the middle of the operating position so that the center of the bearing is directly over the point of the share.

"The coulter should be set for the depth of the furrow slice. It may be necessary to use a large diameter coulter and to keep the coulter sharp. The vertical clevis on the hitch should be so adjusted that it will not push the coulter out but lift up on the front end of the beam.

"With the plow so adjusted the bottoms will enter the ground and go down on to the frame supports without being locked in position. When a stone is struck it will first come into contact with the coulter. The coulter will lift the bottoms with the aid of the clevis, thus sliding the point of the shares over the stones. The plow will again settle to the ground on the other side of the stone.

"The points of the shares will not be injured and the operator will not be thrown off the plow. The plow will, of course, be kept bright and sharp at all times.

"This method will not apply to engine gangs nor disk plows, as they will not float."

The value of this is beyond estimation, for it means that a farmer can use big teams—five, six or eight horses—on two or three-bottom gangs without having to stop, and without any danger to the plow or driver. It is a method that should come into immediate and widespread use in all stony or rocky areas.

Wayne Dinsmore

Fence Simplification Work

AN example of the wonderful results being done by the trade simplification work of the Department of Commerce is shown in that of fence simplification. At the time the Department of Commerce experts held their first joint conference with members of the National Fence Manufacturers Institute there were 552 styles of fence being made and 2,072 different sizes and packages used in their distribution. By the end of 1928 the styles of fence had been reduced to 62 and the sizes and packages to 117. Think what this means in cutting down the overhead cost of fencing manufacture and distribution.

I. W. D.

ON page 868, issue of March 9, in reply to an inquiry by Z. B. McClung with reference to using waste carbide ice pans, I am operating a gasoline service station and use this waste carbide for painting bases of pumps, pillars and flower pots and find same very useful around the factory. I mix a little salt with same using hot water.

R. H. W.

For Shorter Hours and More Pay

(Continued from page 5)

[illegible] the custom-sister states will [illegible] fee and before one can realize [illegible] folks will be as good as the free [illegible] Saturday afternoon. The subject can be discussed at the various [illegible] of farm organizations and [illegible] will become established or demand [illegible] the plan to the attention [illegible] county agents.

[illegible] observance of the rule would have to [illegible] vote general in order to make it [illegible] If I shut down at noon sat[illegible] and the other fellow worked on [illegible] will be accomplished, but if [illegible] per cent of the farmers in Penn[illegible] adopt the plan and like it, as [illegible] taken by farmers in every state of [illegible] Union we will have attained at [illegible] the first half of the "shorter hours [illegible] more pay" objective and maybe [illegible] around half too.

[illegible] one agency will have to act as [illegible] boosters for the movement. We [illegible] our own plan as to how farmers [illegible] be lined up, catalogued and reg[illegible] in this heap yourself to help [illegible], but enough for the present.

[illegible] not display the matter in plain [illegible] of our literary "hounds" and let [illegible] lay it up or shred it as the case [illegible].

C. F. Preston.

[illegible] Lancaster county, Pa.

Litters Prove Practical and Profitable

(Continued from page 8)

[illegible] on feed and marketed [illegible] weights and lower prices [illegible] not bring any more [illegible] would if they had been marketed [illegible]. The profit on these litters was [illegible] but due to the additional feed [illegible] is a very striking illustration of [illegible] value of early marketing.

[illegible] is a result of the five years of ton[illegible] activities in Pennsylvania it has [illegible] definitely proved that pork pro[illegible] in the state is profitable where [illegible] methods are used. The most [illegible] of these are well-bred, pro[illegible] stock of proper type; semi-elastic [illegible] intelligent care of the bred sow [illegible] the gestation, farrowing and [illegible] periods in order to raise large [illegible] of pigs; the use of pastures to [illegible] sanitary environment and to [illegible] the cost of feed; heavy feeding of [illegible] balanced rations to produce [illegible] gains and reduce the number of [illegible] in the feeding period, and finally [illegible] marketing.

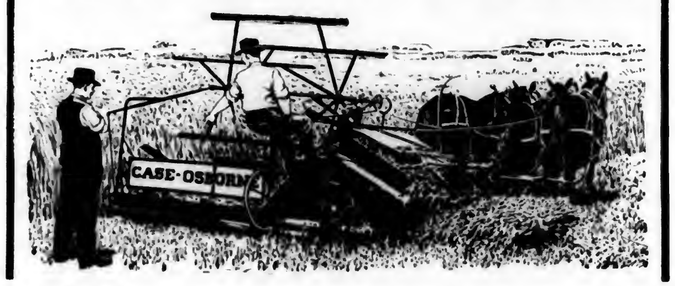
About Breaking Colts

[illegible] husband always broke colts [illegible] and he did (partly) the same way [illegible] S. R. advocates. But he usually [illegible] when the colt was a few [illegible] old and they could be harnessed [illegible] driven when a few months old [illegible] were taught to obey at the word [illegible] never was cross or harsh with [illegible]. He loved them and yet taught [illegible] that his word was law.

[illegible] he also broke full-grown colts for [illegible]. Some had been fooled with, [illegible] taught tricks from which it was [illegible] difficult to break them. It took [illegible] for some of these before they [illegible] safe for any one to drive.

[illegible] he purchased two colts one spring, [illegible] two-year-old and a three-year-old [illegible] had ever been haltered. He [illegible] enough time teaching them what [illegible] meant to be tied in the stalls. [illegible] They had never been taught anything [illegible] either good or bad; and as we [illegible] had no other team, he hitched those [illegible] green colts up together. He had [illegible] some days with them. But it [illegible] not take nearly as long to train [illegible] colts as some which had been [illegible] badly broken, resulting in the colt [illegible] losing bad habits. He hitched them [illegible] together, several times daily, and soon [illegible] had a team to be proud of, as they [illegible] go nicely.

GET IT ALL



THE DOWN GRAIN TOO

YOU can pick up the down grain clean as a whistle with the famous Case-Osborne Binder because the platform can be set to shave the ground and the reel can be lowered to within 6 inches of the cutter bar. A single spring-assisted lever lowers the reel, raises it up to 34 inches to handle tall grain and moves it forward or back—there's ease of handling for you!

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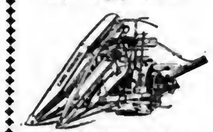
The binding mechanism is severely tested and set exactly right before it leaves the factory. The bronze bushing and oil hole in the knotter assure long life to this hard working part. No strain on needle because packers precede it and do the heavy work. Bundles are nicely shaped—easy to shock, load and pitch.

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BEST GRADE CHESTER, Berkshire and Poland China pigs, 6-8 weeks old, $7.00 each. Three months old, $12 each. Express paid. Bred sows and boars. C. E. Bosserman, York Springs, Pa.

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CHESTER WHITES.—Pedigreed big type Chesterwhite blood, all ages, 13 sows farrowed 153 pigs, picked low, must please. C. E. Cassel, Hershey, Pa.

Poland Chinas breeding stock, reasonably priced. Also Angus bull [illegible]

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—REGISTERED HAMPSHIRE PIGS— Spring pigs, either sex, not akin. J. J. RAILING, R. 2, Shippensburg, Pa.

DUROCS Big Type Reg. Durocs. Priced right. Shipped on approval. Visit us or write your wants. G.C.Saulley, Hummelstown, Pa.

DUROCS A few good fall boars, weight 175 to 200 lbs. Also spring pigs, either sex. J. Harlan Frantz, Waynesboro, Pa.

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Angus Cattle at reasonable prices. Write BAYARD BROS., Waynesburg, Pa.

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Registered Belgians Young stallions and mares. Also a good four year-old Percheron mare. Write foills your wants or better come and see. HYLLMEDE FARM, Beaver, Pa.

REGISTERED PERCHERON STALLIONS and mares. Jehovah and Hesitation blood. B. C. DOTTERER, Mill Hall, Pa.

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FOR QUICK SALE. Two Belgian Stallions, four years old. BAYTHARN FARM, Ronald Webster, Mgr., Huntingdon Valley, Pa.

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EARLY VEGETABLE PLANTS.—Frostproof Cabbage: Wakefields, Copenhagen, Golden Acre, Flat Dutch, Bermuda Onions, Beets, Lettuce. Postpaid: 100, 40c; 500, $1.25; 1,000, $2.25. Collect: 1,000, $1.00; 5,000, $4.50. Tomato Plants: Earliana, Bonny Best, Baltimore. Postpaid: 100, 50c; 500, $1.50; 1,000, $2.50. Collect: 1,000, $1.75; 5,000, $7.50. Write for prices on Potato, Pepper and Egg Plants. Carefully Packed. Varieties Labeled. Delivery Guaranteed. Piedmont Plant Co., Albany, Ga.

CABBAGE PLANTS, NOW READY.—My frostproof Cabbage plants will head three weeks earlier than home-grown plants. Varieties: Jersey and Charleston Wakefield, Succession, Flat Dutch, Golden Acre and Copenhagen Market. Prices by parcel post postpaid: 500, $1.25; 1,000, $2.25. Express: 1,000, $1.00; 5,000, $4.50; 10,000, $7.50. Bermuda Onion plants same prices as Cabbage plants. Roots wrapped in moss and shipped promptly. Satisfaction Guaranteed. P. B. Pridwood, Tifton, Ga.

TIFTON'S RELIABLE PLANTS.—Frostproof Cabbage, Bermuda Onion Plants, Wakefields, Dutch, Ballhead, Copenhagen, Golden Acre. Postpaid, 500, $1.50; 1,000, $2.50. Express paid, 500, $1.25; 1,000, $2.15; 5,000, $9.40. Early Tomato, Pepper, Cauliflower, Egg Plant later, write. Tifton Plant Co., Tifton, Ga.

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SURE CROP SEED CORN.—Field selected, carefully dried shelled and graded. Germination very good. First prize Doylestown, Bucks County, Fair. Express, $3.00 bushel; parcel post, first and second zone prepaid, $3.65 bushel. Direct from farm, not a dealer. Chas. L. Wiklinson, Rushland, Pa.

SET OUR FROSTPROOF CABBAGE and ONION Plants and mature crop 3 weeks earlier. 300, $1.00; 500, $1.50; 1,000, $2.50 Prepaid. 10,000, $10.00 expressed. Tomato plants 500, $2.00; 1,000, $3.50 prepaid. 10,000, $15.00 expressed. Prompt shipments, good plants delivered or money refunded. J. P Councill Company, Franklin, Virginia.

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WILSON BLACK SOY BEANS.—$2.60 bushel; Virginia Brown Soy Beans, $2.00 bushel. Bags, 12c each, f. o. b. Milford, Delaware. New crop and reclaned. Joseph E. Holland, Milford, Delaware.

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FROSTPROOF CABBAGE and ONION PLANTS. 200, 65c; 500, $1.00; 1,000, $1.75 prepaid, 5,000, $5.00 expressed, Tomato plants 5,000, $7.50 expressed. Good plants or money back. Add Onion Plant Company, Franklin, Virginia

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MILLIONS WAKEFIELD FROSTPROOF CABbage plants: 100, 35c; 500, 80c; 500, $1.10; 1,000, $1.75 Postpaid. 5,000, $6.00 expressed. Good order delivery guaranteed. Hygrade Plant Co., Franklin, Va.

PAY THE POSTMAN.—Send No Money. Frostproof Cabbage and Onion plants. Leading Varieties, 500, 65c; 1,000, $1.00. Albany Plant Co., Albany, Ga.



No Wonder He Wouldn't

"Lay down, pup, lay down" ordered the man. "Good doggie, lay down, I say."

"You'll have to say, 'Lie down', mister," declared a small bystander, "That's a Boston terrier."

• • •

Bobby: "What is that which occurs once in a minute and twice in a moment, but not once in a hundred years?"

Tommy: "I don't know. I'll give it up."

Bobby: "The letter M."

• • •

"Pawson," said Aunt Caroline, "I'd like to kill dat low-down husband o' mine."

"Why, Caroline, what's he done?"

"Done. Why he's done gone and let de chicken house door open, and all de chickens has escaped."

"Oh, well, that's nothing. Chickens, you know, come home to roost."

"Come home," groaned Aunt Caroline. "Come home? Pawson, dem chickens'll go home!"—Pittsburgh Chronicle

• • •

Nervous Musician: "Madam, your cat has kept us awake two nights with its serenade."

Mrs. Nextdoor (tartly): "What do you want me to do, shoot the cat?"

Nervous Musician: "No madam but couldn't you have him tuned?" Spokane Ad Bulletin

• • •

Always Come Down

Visiting an airport, two old ladies decided to go up for a short trip.

"You'll bring us back safely, won't you?" said one of them just before climbing aboard.

"Of course I will, madam," said the pilot. "I've never left any one up there yet."

• • •

The Hand Writing

Mike was working diligently on his potato patch when he saw the postman coming up the road, bearing for him a black edged envelope.

Mike became uneasy and showed it.

"Hope it's not bad news," said the postman.

"It is that," said Mike, glancing at the address. "It's upset I am entirely. My brother Pat's dead. I can tell by his hand writing!"

• • •

Cohen placed a ladder against the side of the house, and then called his son Abie, aged seven, and made him mount to the top.

"Now jump," commanded Cohen.

"I'm frightened," replied Abie.

Cohen held out his arms.

"Do as papa tells you—jump—papa is here."

Finally Abie did jump. Cohen stepped aside, and Abie fell with a bump.

"Let that teach you a lesson never to trust anybody," said Cohen.—The Humorist.

• • •

Wife—"My dear, you've forgotten again that today is my birthday."

Husband—"Er—listen, love. I know I forgot it, but there isn't a thing about you to remind me that you are a day older than you were a year ago."

—London Opinion

• • •

"Do Englishmen understand American slang?"

"Some of them do. Why?"

"My daughter is to be married in London and the earl has asked me to come across."—Boston Transcript.

• • •

Fierce, Too

They were holding mid-year examinations in one of the public schools. The subject was geography. One of the questions was, "What is the Equator?"

"The Equator," read the answer of a nine-year-old boy, "is a menagerie lion running around the center of the earth."

• • •

Ignorant

"Wha' brand o' bacca are ye smokin', Jock?"

"I did'na ask him."—Bison.



Kill R... Without P...

A New Extermina... Won't Kill Livestock, P... Dogs, Cats, or even Ba...

K-R-O can be used about the house, ... yard with absolute safety as it ... poison. K-R-O is made of Squ... mended by U. S. Dept. of Ag... the Connable process which ... strength. Two rats killed 378 rats ... state Farm. Hundreds of other ...

Cold on a Money-Back G... Insist upon K-R-O, the ... minator. All druggists, 75c. ... as much $2.00. Direct if dealer ... you. K-R-O Co., Springfield, O.

K-R-O KILLS-RATS-ONLY

HONEY

LONG'S PURE HONEY.—Direct from ... 5-lb. pail clover or buckwheat, $2.5... Wholesale prices on request. Jo... R. D. 6, W. C. Long, Milville, Pa.

FOR THE HOME

150 ASSORTED dishes packed in ... consisting of cups, saucers, plates, ... bowls, platters, etc. $10 outfit, ... for $5.50 prepaid. Send money ... mediate shipment. Home China Co., ...

SEEDS AND NURSERIES

STRAWBERRY PLANTS, ELSI... twelve leading varieties (Missionary, ... rites, Blackberries, ... sale prices. Chet Leaf Nursery, ... Michigan

FROSTPROOF CABBAGE PLANTS ... 500, 75c; 1,000, $1.00; 1,000, $1.75; ... tion varieties wanted. Mrs. Vinnie ... Pinkhill, Virginia

BEAUTIFUL FLOWERS—45 Gladiolus Bulbils, 12 different Iris, 12 Cannas, ... Chloxi, 5 Zo'ering shrubs, any ... $4.50. Rhoadsdale, Tyrone, Pa.

FROST PROOF CABBAGE PLANTS ... Bonita Onion plants. 500, 85c; 1,000, ... $1.00 and postage: 5,000, $3.5... charges. Tifton Farms, Tifton, Ga.

FROST PROOF CABBAGE and ... plants, Copenhagen, Golden Acre, ... Enkrossed: 5,000, $3.75; 10,000, $6.... Plant Farms, Tifton, Ga.

CERTIFIED SEED POTATOES ... and recleaned strain Carman No. 3 ... from grower. Write today to ... Baker & Sons, Fairport, New York

C. O. D. FROST PROOF CABBAGE ... Leading varieties now ready. ... $1.00; 5,000, $4.50. Farmers' Plant Co., Ga.

FROSTPROOF CABBAGE and ... Plants Strong, well rooted, ... rooted. $1.00 per thousand f.o.b. ... variety wanted. Guarantee Plant Co., ...

SEND NO MONEY.—C. O. D. ... lage and onion plants. All varieties ... 500 65c. 1,000, $1.00; 5,000, $4.... Plant Co., Tifton, Ga.

MILLIONS CABBAGE ONION ... Plants $1. 1,000. Pepper and ... ville, Ga.

HARDY ALFALFA SEED, 99% ... bushel, sweet clover, 95% pure, ... seed if not satisfied. Use. Everett, Kansas

CERTIFIED SEED POTATOES.—Pro... ing by Pennsylvania State College ... among the very best. Paul E. ... Pa.

FROST PROOF CABBAGE ... thousand. Porto Rican Potato ... thousand. Shipped same day ... Bullard Brothers Plant Farms, ...

WILSON BLACK SOY BEANS, ... per bushel F.O.B. Bridgeville, ... tion 98% Bags free. O. A. ... Bridgeville, Delaware.

WRITE FOR FREE SAMPLES ... Corn. Clarage produced World's ... Dunlap & Son, Williamsport, ...

PEACH $4.00 per 100. Apple, ... Pine, Small Fruits, reasonable. ... Farina Nursery farms, Ill.

SEED CORN. Best selection ... Crop money can buy. Write ... Parkesburg, Pa.

CHOICE DAHLIAS.—Circular ... tricks free. Pease's Floral Garden, ... dale, Pa.

SEED POTATOES.—Irish Cobbler, ... ral and Rural Russets. The Own ... Greenville, N. Y.

CERTIFIED SEED POTATOES.—... Ohio High yielding strain. Grown ... Bros., Canandaigua, New York.

SEED POTATOES. Cambria Cobblers ... sets eighty cents bushel. Jos. ... Manager, Bradley Junction, ...

GLADIOLUS 60, none alike, ... $1.25, evergreen trees, ... germination 98%. $5.00 P.O.D. ... Denlinger & Sons, Lemon Pa.

500,000 PURE WILLIAM ... plants, big, sweet berry, ... Plant Farm, Bayard, Del.

SOY BEANS.—Wilson and ... P. O. Westover, Maryland

10 BEAUTIFUL DAHLIAS ... variety mixed. Peter Lamb, ...

CERTIFIED SEED POTATOES ... Lunch, Coral, Montcalm ...

FOR SALE.—Mixed Gladiolus ... $1.50 per hundred. A. C. ...

BABY CHICKS

... from quality chicks. We cull ... not only large eggs. Use large, ... pedigreed flocks of from 190 ... which assures you the ... Livability. White, Buff, ... Reds, $13. Leghorns, ... $11 per 100. 5% discount ... three weeks in advance. Circular. Lincoln Hatchery, Blanchester, ...

BABY CHICKS and EGGS. Big ... now for spring shipment. ... hatch mates. Egg bred 29 ... to 50 egg contests. Shipped ... special price bulletin free. Thousands ... cockerels at low prices. ... 100 Union, Grand Rapids, ...

BABY CHICKS FROM THE BREEDER. Ten ... varieties carrying three generations ... to 300 egg eggs. DP3 contest head. ... Barred Rocks and red to the ... Every mating breeder ... and livability assured. Hatching ... Rocks. Rosenstein, R. F. ... Pa.

HIGH QUALITY CHICKS from ... money making stock. Reds, ... White, Barred Rocks Giants, ... Anconas. White and Brown ... Free. Low Prices. Pure ... Bros. Hatchery, Dept. H, ...

BROILER CHICKS. Butcher, ... our extra prices for your pure-bred ... Hybrids, Orpingtons. Description ... free, showing best varieties ... broiler chickens. Farm Service, ...

Barred English White Leghorns. ... Trapnested Birds. Hi-grade ... Also belgard from our Egg Bred ... Also Quality. Get free Catalog, prices, ... Wilbecker Leghorn Farm, ... Pittsburgh, Ohio

... breeds: Leghorns, Reds, ... our 800-acre Breeding Farm, ... equipment and expert ... on 4 years' profitable chick ... Mail Bud Brothers, Box 41, ...

EXTRA LARGE Single Comb ... Farm, Chicks, Eggs, Stock. ... have Lay exceptionally large ... Hatchings, low prices. Catalogue ... Farms, Hempfield, Pa.

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... OLD breeding 8 ... White ... Chicks are large vigorous ... and early broilers. Prices reasonable ... and hens. Trostle Farms, ...

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... BRED ANCONAS. Record Lay ... to 300 eggs. Extra large type ... Fine matings. Low prices. ... Ancona Farms, Greenspoint, ...

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... QUALITY Large Size Tancred Bar... Rock Cocks White Leghorn Cockerels, ... $4.00. Chevalier Iron R. I. ...

... REDS, Barred Rocks, Eggs, ... Pullets, Pine type Reds. ... Catalogue. Low prices. ... Farms, Greenspoint, Pa.

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... Box Andebenton, Thompson ... Barred White Leghorn Hi-grade ... Rocks, Barred Rock Eggs, Elizabeth ...

... CHICKS from a single flock, ... $10 per 100. Special prices on ... 1,000. Thompsontown Hatchery, ...

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... SINGLE COMB BROWN LEGHORNS ... Orpingtons. Excellent matings ... Essex, Grampian, Pa.

EGGS

GOLDEN BUFF ROCKS. The best all purpose fowl. Select hatching eggs from high egg record hens that are mated with males of no kin, which insures healthy baby chicks. Eggs, $1.50 per 15, $2.75 for 30, $5.00 for 60 Parcel postpaid. W. H. Shaffer R. 1, Box 94, Farmington, Pa.

SINGLE COMB WHITE MINORCAS, great winter layers. Pure-bred, heavy-boned, hardy. Eggs, choice, true to type. Eggs, $1.25 for 15, $5 per hundred. P. S. Gerhoe, Penn Run, Pa.

MY BARRED PLYMOUTH ROCKS are big, vigorous, fancy, high producing birds. Eggs, $2.00 per 15, $3.00 per 45 and $10.00 per 100 postpaid. Circular R. I. Evans, Spencer Ind.

JERSEY BLACK GIANTS. Chicks, 25, $5.00, 100, $18.00. Eggs, 15, $2.00; 30, $3.50; 100 $8.50 Postpaid. The Penn Poultry Farms, Barnhardt, Ohio.

BUFF ORPINGTONS, PARTRIDGE ROCKS, Silver Spangled Hamburgs 15 eggs, $1.75 Chicks 10c each. Springwater Farm, Kunkletown, Pa.

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12 MAMMOTH TOULOUSE GOOSE EGGS $5.00 ... postpaid $23.50 per 50. From large old breeders. ... Valuable instructions with each order. Satisfaction guaranteed. Hatch early for size. Highland Farm, Bellevueville Pa.

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TEN CHOICE BOURBON RED TURKEY EGGS $5.00. Ben Lehman, Hooversville, Maryland

BRONZE and NARRAGANSETT EGGS 50c each ... Brenhaw, Box 1024, Uniontown, Pa.

PURE MAMMOTH BRONZE TURKS, weigh 27 ... Price $12.00. T. F. Burkhart, Belmont, Ohio

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WANTED Experienced Farmer familiar with ... care of stock and riding horses. Preferably ... married man, between the ages of 30 and 40. Must be able to accept position at once. Write ... M. B. 1007 634 Smithfield Street, Pittsburgh, Pa.

WANTED Experienced couple. Care raise ... poultry, berries (truck on 50 fertile acres, build ... Must be satisfy monthly. Address Box 115 ... Penn's Farmer, Pittsburgh.

SINGLE MEN to work in modern cow barn. ... Must be good dry-hand milkers. Wages, $70 ... per month and board. Send full particulars in ... first letter. Winterthur Farms, Winterthur, Del.

WANTED: Farmer for farm near Cinnicville, Pa Venango County. Must have reference. Address Post Office Box 174, Oil City, Pa.

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SITUATION

DO YOU NEED FARM HELP. We have Jewish ... young men, able bodied, some with, but mostly ... without experience, who want farm work. If ... can send a good, steady man, write for an order ... blank. Dues to not a commercial agency. We ... make no charge. The Jewish Agricultural Society Inc., Box C 300 E. 14th Street, New York City

TOBACCO

GUARANTEED HOMESPUN TOBACCO. Chewing, 5 pounds, $1.50, 10, $2.50. Smoking, 10, $1.75. Pipe free. Pay Postman. United Farmers, Realwell, Kentucky

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COLLIE and FOX TERRIER PUPS. Handsome and intelligent. Leslie Kennels, Grove City, Pa

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FARM LAND

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DAIRY FARM—80 acres, Wayne County, A-1 buildings, Genco lights, rich soil, only $5,000. C. C. Chapman, Harrisburg, Pa.

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COUNTY SALES MANAGER—If you can sell farm trade each car, furnish references, will consider your application. No capital needed. Hygge Home Washer Corporation, Sycamore, Ohio

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PUREBRED TOGGENBURGS. Nubians. Healthy ... for milkers. Certificates. Geo. Shepherd, Montrose, Pa.









TIGHT BINDING TEXT CUT OFF MUTILATED PAGE



the bent backs of the world



"The Man With the Hoe"—Millett

The farm equipment industry is straightening the bent backs of the world.

Saving labor means saving life. A man can not only add years to his life, but by using labor-saving equipment he can accomplish more in the same length of time. And he will probably live longer and be happier on account of it.

To make profits these days, cost of production must be kept down. Labor-saving equipment cuts production cost. Modern tillage machinery, pulled by a modern tractor, will prepare the soil at lower cost. The same tractor hitched to a modern planter or seeding machine will put the seed into that same field, again reducing cost. All of this means profit.

Cultivation is done more cheaply, at the right time. During the heat of the harvest, power machinery travels fast, saves men's strength, gets the job done on time.

Stop in at your dealer's and look over the improved equipment. Inventors and designers are constantly at work. Every season brings little changes here and there, which do the job better, reduces operation cost and lengthens the life of the machine.

There are many advertisers of labor-saving equipment in the columns of this paper. These concerns have built their business on the saving of time and labor for farmers. Every one of them believes in a square deal, otherwise he wouldn't be found in these columns.

Make yourself an educated buyer by writing to these concerns for their catalogues, then stop in at your dealer's and look over the machinery itself.

You can add years and happiness to mother's life, too, by use of labor-saving equipment in the house. A water system, modern plumbing, electric lights—they cost little in proportion to what they accomplish.

OUR FARM EQUIPMENT ADVERTISERS BELIEVE IN A SQUARE DEAL

PENNSYLVANIA FARMER

Published Weekly — Established 1877

Consolidated with

PENNSYLVANIA STOCKMAN *and* FARMER

April 20, 1929

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The General Pulling Six-foot Double Disc Harrow

The GENERAL

Price $550 F. O. B. Factory

Can Be Used Every Day

From Plowing to Harvest

Most farmers have wanted a tractor for years—one with real power. But they have wanted one that would fit the ground—plant the crop, cultivate it, and then do the harvesting.

Few farmers can afford to invest a thousand or fifteen hundred dollars in a machine that will do only one or two jobs and must then set around idle for the greater part of the year. The more you can use a tractor the less it costs for each job.

This is just where the General comes in. It is low in first cost—gives ample power for any job a team of horses can do and for all ordinary belt work.

It is adjustable in height for orchard work, hillside work, or plowing; handles easily as a team but never tires out. It has one other great advantage—

Uses Horse-Drawn Tools

No large investment in new implements or attachments is required with the General. It uses your regular horse-drawn tools. All of the horse-drawn implements in the famous Ohio Line, manufactured by the Ohio Cultivator Co. of Bellevue, Ohio, have been fitted with a simple inexpensive hitch for use with this tractor.

Write today for our booklet telling what the General does—how it works.

THE GENERAL TRACTOR COMPANY
Sales Offices: **Bellevue, Ohio**

THINGS *the* General Tractor will do

Check below the jobs this tractor will do on your farm and note how it gives you dependable power for everything a team of horses will do.

	Check here
Plows	
Harrows	
Pulverizes	
Plants Corn	
Drills Grain	
Spreads Manure	
Spreads Lime	
Cultivates	
Mows Hay	
Rakes Hay	
Loads Hay	
Cuts Corn	
Harvests Grain	
Digs Potatoes	
Belt Power—Runs any machine requiring 12 horsepower or less.	

The **GENERAL TRACTOR**
Reg. U. S. Pat. Office
Makes the Crop from Plowing to Harvest

The General Tractor Co. *Sales Offices:* Bellevue, Ohio
Please send me complete description of the General Tractor and what it will do.
Name .....
Address, City ..... State .....

Farm Facts and Fancies

By ALVA AGEE

A CHANGE is coming in the government's relation to farming that is not based on sentiment. The weakness of the past has been too much dependence on protest, and appeal to sympathy, and dependence on leaders who were good pleaders. They produced flurries and stirred hope, but matters ran along much the same as ever. There is an influence working in our favor that gets little consideration, and it is gaining force every day. It is helping to put agriculture on a plane alongside of transportation and the industries in the minds of leaders in legislation and business. The attitude of those who really bring things to pass in this democracy is changing because new business methods bring the welfare of farming into prominence.



Outside the Lime-Light

I am afraid I shall put this matter in a crude and uninteresting shape, and yet I am impressed by the truth of it all. A generation ago local companies of manufacturers took care of farm needs. They made the supplies and were financed largely by local banking institutions. The buying power of the millions of farmers was considered in a general way, it is true, but it did not come home to the men who make public sentiment and through it control legislation.

Farming got into the headlines of financial and commercial journals when the size of the wheat crop became known because that affected the revenues of railroads, and railroads were something in the lime-light. It got headlines on the cotton yields because that affected manufacturing and also international balance of trade. Similarly it was in sight when supplies for the packing interests were concerned. Largely the interest was in the total output, and not in the net profit farmers might be getting.

I have known financial writers to comment in years of enormous wheat crops and low prices that anyway the wheat had to be moved and that meant revenue for the railroads. I am not even criticizing the comment, because it seemed to them a hard-headed business view, and no industry gets anywhere on sentiment. Farm buying power was largely out of sight, and naturally not fully considered.

Changed Business Methods

Within our generation methods have changed. The manufacturing companies dependent on farm buying have been converted largely into great corporations whose stocks are listed on the city exchanges and are owned by a great mass of people. The capitalization of concerns chiefly dependent on farmers' buying power has run into many billions of dollars, and the welfare of these corporations is discussed almost daily by the leading financial and commercial papers of this country. When the rural districts are able to buy, the shares go up, and hard times for farmers cut into profits of this big class of corporations. Chain stores, aggregating billions of dollars of capital, have their total sales used by financial economists as an index of farm buying power and one gauge of the country's financial condition.

This is no discussion of what should or should not be in the trend of the country's business methods, but a simple statement of fact. The importance of the farmers' buying power has got off Fourth-of-July platforms, and is in the middle of the consideration of bankers, investment trusts and other investors in an enormous line of industries whose success is tied up with [illegible]. It is not a matter hid in the [illegible] of small companies, with local [illegible] financing them, but is daily [illegible] eration in the discussion of the [illegible] of the great corporations that [illegible] taken the business over.

From Now On

Right or wrong, the best [illegible] of our biggest financiers, [illegible] and business men must be a great [illegible] fluence in legislation, and in the [illegible] ing out of programs in the [illegible] world. The great corporations that [illegible] directly dependent on the farmers' [illegible] ing power know at first hand [illegible] farm prosperity means to them. [illegible] agriculture now comes naturally [illegible] the consideration of the great [illegible] bankers. We owe much to leaders [illegible] farm organizations for bringing [illegible] ing welfare into the lime-light, but [illegible] lasting influence on the future [illegible] a high degree in the self-interest [illegible] those whose money is tied up with [illegible] corporations I have mentioned. [illegible] power on agriculture will be appreciable [illegible] present when the condition of [illegible] trees is considered.

Better Fertilizer Service

There is satisfaction in the [illegible] spirit shown by our [illegible] fertilizer corporations. They are [illegible] reduce sales on present efficiency [illegible] that means that they want [illegible] buy good goods. It wasn't [illegible] years ago. The best of them [illegible] take customers as they found [illegible] and the matters of price per [illegible] color were so outstanding that [illegible] stuff had to be offered along with [illegible] which was much better but [illegible] The worst of the companies [illegible] mind the compulsion and [illegible] carried nothing but poor stuff.

Our experiment stations and [illegible] papers gave us our education, [illegible] fertilizer people who wanted [illegible] only that which was a good [illegible] for the farmer gradually became [illegible] vinced that they could abandon [illegible] ranging from low grade [illegible] The business has been put on a [illegible] plane, and that is as much to the [illegible] faction of the high-grade man's [illegible] business as to the buyers. A poor [illegible] er has to hustle around quite a [illegible] find worthless stuff for his soil.

Courtesy

If I were a young man and [illegible] cash capital with which to make [illegible] in life, I would double what I [illegible] mixing it half-and-half with [illegible] The latter will not take the place [illegible] ability, 'tis true, but I have seen [illegible] young men of quite ordinary [illegible] make business success by [illegible] kindly interest in people and [illegible] ting their acts express their [illegible]

My own patronage isn't a big [illegible] but from bank presidents to [illegible] I let the gauge of common [illegible] determine whether I do business [illegible] elsewhere. Millions of people [illegible] same, and the fellow who has [illegible] interest in your welfare and [illegible] try to capitalize it, gets all that [illegible] ing to him, and a little thing [illegible] I chance to be watching a few [illegible] men who are doubling their [illegible] this way, and it seemed worth [illegible] tioning.

Carbide

IN your issue of March 9[illegible] a letter from Z. B. McChes[illegible] as to use of carbide. I wish to [illegible] it makes the whitest walls [illegible] as whitewash) of any wash [illegible] odor is disagreeable but [illegible] off. I think this carbide [illegible] off sooner than govern[illegible] it lasts quite well and [illegible]

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Blair	Brumbaugh & Kiesley	Martinsburg
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Butler	Charles H. Shive	Doylestown
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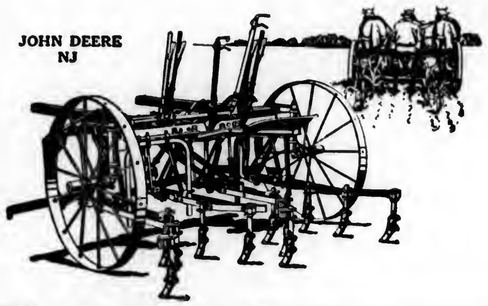
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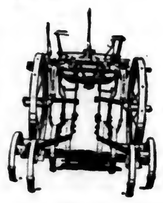
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One potato grower in Minnesota spent $35 per acre for seed and labor. His yield was 100 bushels per acre. At 20c per bushel, his gross return was $20 per acre—Loss—$15 per Acre.

His neighbor spent $55 per acre for seed, labor, fertilizer and spray materials. His yield was 360 bushels per acre. At 20c per bushel, his gross return was $72 per acre—Profit—$17 per acre.

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NESHAMINY GARDENS

By R. P. KESTER

CONCERNING my statements about raising chicks, W. A. B. of York county, Pa., asks:

"In March 30th issue of Pennsylvania Farmer I note you did not let chicks out on ground until nearly half grown. May I ask how you did this? Did you make use of a so-called 'sun porch'? In so describing it—the kind of floor, etc., whether of concrete, boards or wire. If no sun porch was used tell, in detail, how you do it."



I was not as specific as I might have been in discussing this question. The department used as a brooder house each year was built for laying hens to be used the following winter. This was done each year. The departments are each 16 feet, and the wire enclosures at first were gradually enlarged until the chicks had all the space. When the chicks were about eight or nine weeks old, most of the cockerels were sold as broilers. We kept only 25 and these were put outside. This is always done as Leghorn cockerels do not get along well together in confinement and under no circumstances should they remain with the pullets.

In this way the 245 young females had the entire floor space to themselves and this seemed to be fairly satisfactory until they were let out. We planned to build a covered run, using a glass substitute somewhat after the manner of a cold-frame, but since we did not start them until the first day of May it did not seem necessary. For early-hatched chicks more floor space would be necessary because of their larger size at mid-summer.

• • •

As I write what looks like a Burbank plum tree is in full bloom near my window. Maple trees are coming into leaf, and peach and cherry buds are swelling, almost showing the pink. Such forwardness at this time, April 9, is a matter for concern. But let us hope for the best.

• • •

A young friend of mine who seems to have more confidence in my judgment than I have myself (I find I am not so cock sure of it as I was twenty years ago) wants to know whether he should quit his fifty-dollar-a-week job and start a small truck and poultry farm. He has about one thousand dollars, and can get backing for more. He and his wife and two children have been living in a rented house, and have had a reasonable amount of leisure and luxury. The young man lived on a farm a while in his younger years, and thinks he has a great love for farm life.

• • •

Now, you see how delicate a matter is that of advising him one way or the other. He may have the stuff in him to make a success of farming and poultry. I do not know that for sure, and I certainly he does not know. One thing is sure however. If his greatest concern is the proper rearing of his family the indications are he will go into the venture with little more than fifty per cent in his favor. It is not his wife consider the future of the two little fellows of hers? I appreciate they will be willing to forego the leisure and luxury they have accustomed to, and lend all their energies to making a living and developing a home on a piece of land.

• • •

But it money and the things it will buy are of first importance with him, or if his enthusiasm for such work is only a passing fancy, he had better stick to his present job and try to create a home outside the city. Thousands of people are doing that very thing and developing commuting into offices. It begins to look as if this country is to be industrialized permanently and strides are being made toward stabilizing industry so that the workers are not so subject to lay-offs, strikes, costs and periods of unemployment.

Finally, I can go no further in advising the young man than to tell him to confer with his wife, sleep on it, pray over it, and use his own best judgment.

APPLE BLOSSOM FESTIVAL

THE sixth Shenandoah Apple Blossom Festival will be held at Winchester, Va., April 18-19. Due to the warm weather this spring the Festival is now scheduled about two weeks earlier than anticipated.

Features of this event will be pageants depicting episodes of the history and romance of this section from pioneer times to the present. The West Virginia section of the parade will be on the second day.



Master Farmer Amandus Larson of Elk county, Penna., farmed his 26 acres so intensively that he was able to grow most of the feed for 23 dairy cattle, educate his children and make his home attractive and modern. Labor-saving equipment helped him accomplish all this, and made farm life so attractive that his son, after graduating from the Penn State School of Agriculture, returned to go into partnership with his father on the now enlarged farm. This is the new sample of the type of oats and potato vines grown on the L...

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Vol. 100 Pittsburgh, Pa., April 20, 1929 No. 16



These young dairy cattle are intensely interested in something. What is it? They are anxiously awaiting the herdsman to let them into the bluegrass pasture. Why keep them waiting any longer?

Kentucky Bluegrass

Feeding Value and Carrying Capacity of Pasture

By J. W. WHITE

THESE articles on the development of intensive pasturage are written with the belief that a high-grade dairy cow or heavy type beef cattle are not rangeing animals and should be able to secure their full share having to go on a treasure hunt. Such animals should secure their feed with minimum effort, the less energy expended the more grass nutrients go into milk or beef.

Remember the picture of the little girl of Elmendorf knee deep in bluegrass? Well, that's the type of pasture that is most profitable. To secure such a pasture the stockman must get down in his jeans, but his money is wisely spent, as I will try to show.

A dairy cow of the better type is usually not interested in the process of grazing, but is entirely interested in something. Have you ever stood a while and watched a cow lying under the shade of a tree chewing her cud? Sure you have. Then have you watched a cow sitting in a comfortable chair chewing gum? No doubt you have. Do you know the difference between them? Well, the cow looks as if she's thinking. In reality the dictionary gives this definition of ruminating, to chew the cud, meditate or muse, to think again. So according to Webster this cow is actually thinking. There you have a contented cow as is pictured in our magazines.

A Scotch farmer was persuaded to develop a pasture at the expense of more shillings than he had ever spent before. He noticed that about ten o'clock the cows formed a habit of lying in the shade of a certain tree, something they had not done before. He finally removed the tree to keep his cows from ruminating time. I hope no Scotchman will read this article, for the shade tree is an important part of a pasture.

Feeding Value of Bluegrass

Our lack of knowledge concerning the economic value of intensive pasturage has been responsible for the general belief that the more fertile type of land can be utilized to better advantage in a grain rotation system. Pasture experiments conducted by the writer on three widely different soils have furnished information which indicates that highly developed bluegrass pastures are worthy of a more prominent place in our scheme of farm management.

The farmers of Pennsylvania, especially those in the southern half of the state, have for many years followed a four-year grain rotation of corn, oats, wheat and hay ("Dutch rotation") and have fully realized the economic importance of such a cropping system. At the same time the grazing land comprising 4,500,000 acres, including 1,697,000 of plowable land, has been neglected due to the lack of definite information concerning the possible feeding value of highly developed pasturage. It is therefore of utmost importance to emphasize the value of such pastures by studying the feeding values of the two cropping systems in relation to dairy feeding.

The feeding units produced by the same areas of pasture and grain rotation are secured by computing the digestible nutrients as suggested by Henry and Morrison's "Feeds and Feeding."

The figures in the next column should leave no doubt in the mind of the reader concerning the importance of pasture for the production of summer feed. The bluegrass pasture has as an average of three treatments produced about three times as much digestible protein as produced by a grain rotation. The total digestible nutrients produced on the pasture is greater also than that produced by the rotation system. The importance of nitrogen on the pastures is shown from the fact that it has caused a 41 per cent increase in the production of protein as compared to only an increase of six per cent in case of the rotation.

A system of oats, clover and corn alternated on Vaden soil has produced less total as much protein with complete fertilizer as produced with the same treatment on bluegrass pasture.

How many farmers can even suppose know the actual value of man and horse labor required to produce crops in a grain rotation? Professor L. E. Mooney has made a careful study of this subject in Lancaster county. He has found it possible to produce a four-year rotation yielding 61 bushels of corn, 3,000 pounds stover, 33.3 bushels of oats, 28.3 bushels of wheat and 3,200 pounds of hay on four acres requires 226 hours of man labor and horse labor at a cost of $59.61. To maintain four acres of an established pasture would require on an average not more than eight hours of man and horse labor for top-dressing mineral fertilizers and repairing fences, at an annual cost of $2.80. If we add $2.40 per acre for the cost of grinding grain necessary for cattle feed, the labor cost of the grain system would be increased to $67.

The above rotation excluding oats, clover and wheat straw would produce 765 pounds digestible crude protein on four acres compared to 1,744 pounds produced on the same area of a Kentucky bluegrass pasture in which complete fertilizers are used.

On the basis of the above figures the approximate cost of producing a ton of digestible crude protein in the grain rotation including the labor involved in production, harvest, hauling and preparation of feed would amount to $178.22, compared to only $3.21 on pasture.

To produce four acres of silage corn yielding 37.2 tons involves a labor cost of $106.04. Such a yield would produce 744 pounds digestible crude protein and 9,880 pounds total digestible nutrients. The total digestible nutrients would be produced at a labor cost of $21.20 per ton compared to $0.72 per ton on pasture.

These figures are given to show the importance and economy of pasture feeding and not to discourage the use of grain rotations or silage feeding, both of which are vital factors in successful livestock production.

It has been shown that a Kentucky bluegrass pasture is capable of supplying nearly three times the protein and slightly more total digestible nutrients than produced with the same fertilizer in a grain rotation. Also that the labor cost of pasture is negligible. The next point of interest is to determine the number of animals that can be maintained on a definite pasture area and thus arrive at some figures concerning the actual value per acre. We are then in a position to determine the most economical treatment.

The value of a pasture area may be estimated in two ways, (1) by feeding a number of grazing animals and determining the value of the products produced for a definite period, (2) by determining the total weight of grasses produced in each area and computing the feeding value in terms of digestible nutrients required for maintenance of animals and production of animal products such as milk, beef, pork or mutton and wool.

Second Method Used

The first method by grazing is exceedingly difficult due to so many factors involved. It is very difficult to divide animals into groups and have each group uniform. Again, if young cattle are used such as dairy or beef calves, the increase in weight of animals does not measure the amount of grass consumed since considerable grass is required for body maintenance without increased weight. It is very difficult to determine under pasture conditions this factor. On account of the many difficulties involved in this method [illegible] available in this country no definite information of a practical nature on the actual feeding value and carrying capacity of highly developed pastures exists. In the absence of definite information [illegible] this practical way the writer has attempted to estimate the values of different areas by the second method. The results are not claimed to be accurate but he believes this method [illegible] the truth yet obtained.

The feeding value and carrying capacity are estimated in terms of dairy cattle producing different quantities of milk. Eighty pounds of green immature Kentucky bluegrass per head each day is used as the basis of computation. This amount of grass represents the maximum weight of grass that would likely be consumed per day, and also this amount of bluegrass contains sufficient digestible crude protein (2.0%) pounds to meet the demand for maintenance and milk production of an average 1,200-pound dairy cow producing from 35 to 40 pounds of 3.5 per cent milk per day.

Three types of 1,200-pound (Continued on page 27.)

Average Annual Production in Pounds per Acre of Digestible Nutrients in Excess of the Unfertilized Soil—General Average of Three Soils.

Soil Treatment	Pasture Total Crude Protein	Pasture Total Nutrients	Rotation Total Crude Protein	Rotation Total Nutrients
Superphosphate	232	1097	87	1003
Superphosphate and Potash	309	1419	124	1456
Superphos., Potash, Nitrogen	436	1994	131	1586

TIGHT BINDING TEXT CUT OFF

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IN A SAFE PEN

LAST month Max W. Clugston, working on the C. E. Frey farm in Lancaster county, Pa., was attacked and injured by a bull which he was about to tie in its stall. Fortunately Mr. Clugston was able to get over a partition and out of the bull's reach. He says: "In a few days this bull will be in a safe pen where he will make his home. Such a pen should be the home of every bull."

A WELCOME CROP

FOR years farmers have been told that wheat does not pay and impressive figures have been cited to prove it. But those whose crop failed last year learned something by experience that they could not get from figures. They missed the cash from the wheat crop, and the crops they planted in its place didn't plug the hole that wheat failure created. Maybe wheat is unprofitable but it is mightily missed when it freezes out. This year's crop will be welcome to many farmers no matter what the economist's figures say.

UNDER BUSINESS MANAGEMENT

WHEN owned by the government and operated by the Shipping Board the great steamship Leviathan carried a crew of 1,038 persons. On her first voyage under private ownership last week her crew numbered 957, the reduction having been made "without affecting the efficiency of operation in any way." The wages and the subsistence of 81 employes represent the initial difference between public and private operation of one ship. And doubtless private management will find some more economies that the official operators didn't see.

POSSIBILITIES

A FEW rather recent developments of science are of possible interest to producers of livestock. The application of nitrogen to grass appears to be a way of increasing its protein content as well as its growth. Maybe we shall feed protein through grass and hay. The claim is now made that by application of electricity vitamins can be added to feeds, and that may solve this problem in nutrition. The effect of rays of light on animal bodies promises substantial benefits too. These and other things may be just around the corner so far as their practical use is concerned.

A BEEF QUESTION

THE Bureau of Agricultural Economics finds that the number of cattle on feed [illegible] per cent of the number on feed a year ago. Also that feeders expect to market cattle, prior to July 1st, in about the same proportion as last year. Neither official nor commercial authorities expect large supplies of cattle, and on this are based some rather sanguine expectations as to prices. So far as the supply is concerned there is a basis for such expectations, but the other and equally important side of the market is unknown. Beef must be comparatively dear when all cattle by-products are cheap. So the question is likely to be how far upward the public can or will follow beef prices if other and cheaper meats are available.

A ROAD PROBLEM

SOME motorists appear to think that they have the sole right to our public highways, to the exclusion of horses, droves of livestock and pedestrians. On our main roads it is so inconvenient to move livestock that it is being shipped by truck whenever possible. But we can't always load animals into a truck to take them across the road or along it a little way. Nor can everybody ride everywhere. School children must still walk on the roads sometimes and so must others. One of our future highway problems, if not a very present one, is to provide for the safety of those who are entitled to use the roads and can't go on wheels.

MARKETING BY MONOPOLY

AMONG the many propositions which will come before the public in the near future is monopoly in marketing food products. Its advocates will cite the railroads, telephones, bus lines and other public utilities which are given exclusive franchises under public regulation and will ask why the marketing of agricultural products cannot be so carried on. They will cite the many existing marketing agencies and their apparent duplication of service and ask why a single agency, of the nature of a public utility, can't do it better and cheaper. What's the answer? Why have any competitive business at all in any line? Why not put everything, in each branch of industry, into the hands of some organization of the nature of a public utility and regulate that? What's the use of business anyhow?

THEY DREAM OF MIRACLES

THE chiefs of the American Farm Bureau Federation, the National Grange and the National Farmers' Union recently laid their heads together and evolved the following statement of essentials or requisites for farm relief, which they submitted to House and Senate committees with the declaration that "any legislation which stops short of this will not suffice:"

1. It should make the tariff effective on all farm crops so that surpluses will not be permitted to depress the domestic price to the world level of prices.
2. It should be of such nature that the control and disposition of agricultural surpluses are adequately provided for.
3. It should contain provisions, automatic in their operation, to check overproduction.
4. It should provide for farmer ownership and control of marketing organizations with due consideration to cooperative associations already established.

Having told Congress the essentials of farm relief why didn't these wise men go a step farther and show Congress how to put these essentials into a workable piece of legislation? There is one good reason why they stopped short of that point—they couldn't go the rest of the way. Not any of the legislation proposed or supported by any of them, not all the legislation proposed or supported by all of them, could accomplish the things they set forth as essentials or requisites. For neither they nor Congress can frame legislation that will work the concurrent miracle of maintaining prices, disposing of surpluses and automatically checking production. Dreaming of such things for agriculture may be creditable to the hearts of these gentlemen, but seriously demanding such impossibilities of Congress is no tribute to their understanding.

THE HOUSE BILL

THE preamble to the House Committee's farm relief measure contains this declaration of policy:

"That it is hereby declared to be the policy of Congress (1) to promote the effective merchandising of agricultural commodities in interstate and foreign commerce so that the industry of agriculture will be placed on a basis of economic equality with other industries, and (2) to that end to protect, control, and stabilize the current of interstate and foreign commerce in the marketing of agricultural commodities and their food products, by minimizing speculation, preventing inefficient and wasteful methods of distributing, and limiting undue and excessive fluctuations, by encouraging the organization of producers in cooperative associations and promoting the establishment and financing of a farm marketing system of producer-controlled cooperative associations and other agencies, and by aiding in preventing and controlling surpluses in any agricultural commodity through orderly production and distribution, so as to maintain advantageous domestic markets and prevent such surpluses from unduly depressing prices for the commodity."

The Federal Farm Board created in the bill is authorized to get and publish all sorts of information relating to production, marketing and expansion of use or demand, to make loans to cooperative marketing organizations for carrying commodities and for purchase of storage facilities, etc., to help and extend cooperative organizations, and to help in the formation of agricultural clearing houses or associations. A fund of $500,000,000 is provided for the use of the Board. The Senate, it is understood, proposes to add a few features to the House bill.

THE COST OF BLOOD

THE Department of Agriculture gives each year a summary of the trade in pure-bred livestock. That which deals with dairy cattle was issued last week and it reveals some interesting facts about the sales of 17,136 pure-bred animals. From the breeder's standpoint how many of these cattle were sold at a profitable price? From the dairyman's or the beginner's standpoint how many were available at a price he could afford to pay? These questions are fairly well answered by the figures, which show that 37 per cent of the 2,502 heifer calves were sold for below $50 per head, 33 per cent between $50 and $100, 38 per cent between $100 and $200, and only two per cent above $300. Of the 2,750 heifers one year and under three years old 16 per cent sold below $100, 54 per cent between $100 and $200 and 26 per cent between $200 and $500. Only four per cent brought over $500. Of the 4,225 mature cows only six per cent sold below $100 but 57 per cent between $100 and $250, while 23 per cent went between $250 and $750 and only 4 per cent above the last figure.

Can dairymen afford blood? Compare the prices with the cost of grades and blood is cheap. It is cheap, the cheapest product available to the dairyman in comparison with its potential value. How about dairy blood through the sire? It is cheap too. Of the 1,481 bulls one year old and under three, 61 per cent sold between $100 and $200 and 31 per cent below $100. Bull calves are cheaper, 59 per cent of them selling below $100 per head. All who really want dairy blood can get it—if they are willing to take it young and wait awhile. The bologna market will pay for it at these prices [illegible] service ought to be worth the [illegible]

New Jersey Farm Comment

By G. W. HARRIS

[illegible] several weeks fleets of motor trucks have been bringing to the Philadelphia and New York markets broccoli greens from the Eastern Shore. Growers in South Jersey started cutting about two weeks ago. The acreage planted to this crop, which as a relatively new one in these sections, has been rapidly increasing during the past two or three years. It has been a very profitable crop for those who have started growing broccoli and is one of the first greens on the market, coming before spinach.

An increasing number of growers on the Eastern Shore and in South Jersey are cutting and crating the head instead of packing it loose in hampers. It is packed in crates like asparagus and packed in bunches of 24 bunches. This type of package brings a little more as much on the market as the hamper. During the shipping season the broccoli fields are gone over every two or three days. Most of the broccoli is tied by hand in the field as it is picked. Some growers are using tying machines with success but others find hand tying an easier and more rapid method. The bunches are brought to the side of the field where the stems are cut evenly and the bunches packed in the crates. The crates are then iced and loaded on trucks ready for a trip to Philadelphia or New York markets.



Broccoli Being Cut and Tied in Bunches for Packing in Crates. Twenty-Four Bunches Are Packed to a Crate.

• • •

HAROLD T. STOWELL, instructor in vocational agriculture in the Paterson High School, has received an appointment to the extension staff of the New Jersey Agricultural Experiment Station as 4-H Club agent for Passaic county. This appointment is effective May 1.

Mr. Stowell graduated from Massachusetts Agricultural College in 1917 and has studied in the graduate school of Harvard University. From 1919 to 1923 he taught vocational agriculture at New Salem, Mass., resigning to take a position in the Essex County Agricultural School at Hathorne, Mass.

• • •

THAT the New Jersey crop report for April shows an intended decrease in acreage of Irish potatoes in the "second early potato states" in 1929 as announced by all potato growers. The 117,070 acres planted in 1928 will probably be reduced to 100,840 acres in 1929. The "early potato states" follow the same line as the "second early states." They plan to decrease their acreage from 283,350 acres planted in 1928 to 195,810 acres in 1929. New Jersey intends to cut its acreage from 45,000 to 40,500; Maryland, from 17,240 to 14,650 acres; Virginia, from 30,900 to 25,340 acres; North Carolina, from 34,000 to 27,840 acres; South Carolina, from 24,000 to 13,920 and Florida from 30,350 to 22,000 acres. For both the "early" and "second early" states the decrease is estimated at 27 per cent.

The April 1st U. S. D. A. report on potatoes in the southern states (except Virginia) which harvest their crop before September 1 shows an average condition of 7% per cent, as compared with an average of 80 per cent at this time last year. Reports are particularly unpromising from Alabama to Louisiana as a result of excessive rain.

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A NEW act making it a misdemeanor to throw lighted cigarettes from an automobile has been signed by the Governor of Idaho and becomes a law in that state. The bill was passed by the Legislature with a view of reducing fire hazard in forests where motorists are blamed for numerous fires. Just how effective this act will be remains to be seen. Surely if a motorist is punished once for such carelessness he will think twice before repeating the offense.

• • •

NEW JERSEY'S second bull association has been formed in Gloucester county and will be known as the Mullica Hill Bull Association. The officers of this association are: Charles Kirby, Harrisonville, president; J. Willard Gardiner, Mullica Mill, vice-president; and Henry Edwards, Mullica Hill, secretary-treasurer. The two other members of the association are Russell Skinner and Robert Duffield, of Mullica Hill.

Three outstanding Holstein bulls have been purchased by the members. These bulls are King Aaggie Ona Pride, King Piebe of York 44th and Sir Homestead Pontiac Beets 18th.

There has been a constant growth of bull associations in the United States ever since the first was organized in 1908. In Europe such associations have existed for a long period.

THE pledges which the poultrymen and business men throughout Hunterdon county made last fall for the third New Jersey Egg-Laying Contest came due on April 15th. The Legislature has included in its appropriations bill the amount necessary to continue this contest, and construction of the plant will begin early in May.

• • •

ROLLIN O. HOOVEN, Jr., of Lambertville was awarded the dairy library offered by the Director of Short Courses, Professor F. G. Helyer, for the best report on an assigned problem in dairy farming. This prize was competed for by dairy short course students from various sections of New Jersey.

• • •

THE Hunterdon County Holstein Association elected officers for 1929 when they met with the Dairymen's League at Flemington on April 5th for their annual banquet. Martin Sheridan of Lebanon is president of the association. The other officers are John Van Doren, Three Bridges, vice-president, and R. S. Schomp of Sanford, secretary-treasurer.

• • •

A GIFT of approximately $1,000 worth of shrubbery has been made to the New Jersey Agricultural Experiment Station by the New Jersey Nurserymen's Association in appreciation of services rendered by the Station during the past two years. In addition, the nurserymen drew up plans for setting the shrubs and provided the necessary labor.

The nature of the service given nurserymen by the Experiment Station has largely been in the prevention and control of diseases of ornamental plants. This service was undertaken two years ago when Dr. R. P. White, research specialist in diseases of ornamentals, became a member of the department of plant pathology.

A. J. Jennings of Springfield, president of the nurserymen's association, in telling why his organization decided to make the gift, said:

"The prevention and control of disease is one of the nurserymen's greatest problems, and one on which we have received much assistance during the past two years from the Experiment Station.

"On rhododendrons alone, this assistance has been worth thousands of dollars to nurserymen. Before Dr. White's services were available, disease was responsible for the loss of thousands of rhododendrons annually, but through his efforts such losses have been greatly reduced. In another year, it is expected that losses of these plants as a result of disease will be insignificant. It is service of this kind that led the state nurserymen's association to make their gift to the Experiment Station."

Plans for the setting of the shrubs were drawn by the Meadowbrook Nursery Company, winners of the first prize for miniature landscaping at the International Flower Show, held in New York last month. Their layout at the Experiment Station will be seen by the public on the annual Field Day of the institution, June 12.

New Jersey is the only state having an agricultural experiment station with a research worker devoting full time to diseases of ornamental plants.

• • •

THE Northeast Conference of Research Workers in Poultry Husbandry will meet this year at the New Jersey Experiment Station on May 16 and 17. This meeting will attract research workers from New Jersey, New York, Pennsylvania, Delaware, Maryland and the six New England states. W. L. Slate, Jr., director of the Connecticut and Storrs Experiment Station, is chairman of the conference.

• • •

LIVESTOCK men rather hesitate to feed sweet clover hay to their animals because occasionally a batch of it will not cure properly and develops a poisonous substance injurious to livestock. While puzzling over this fact, a noted scientist has evolved this method of testing sweet clover hay. Feed it first to rabbits. If they survive on it, it is safe for larger animals. This test is fine if you have sufficient rabbits at hand.

• • •

IN general the size of the brooder house should be planned on the principle of allowing two chicks per square foot of floor space, says C. S. Platt of the New Jersey State College of Agriculture. On this basis a 10x12 brooder house will accommodate 250 chicks quite conveniently. More chicks can be placed in such a house but as the number increases the difficulties also increase. If units of three, four or five hundred chicks are desired, appriate house should be built. Under most conditions the young stock will make up about one-half of the total flock in the fall of the year and if this half has not been properly reared, the flock as a whole will be unprofitable.

• • •

ACCORDING to F. B. Treck, extension forester for the state of Maryland, there are at least 180,000 acres of waste land in the state that have been cleared and that are neither producing lumber nor reproducing trees. This acreage is about equal to the area of Kent county, one of the leading counties on the famous Eastern Shore.

Maryland forests are now producing lumber at the rate of 64,000,000 cubic feet a year, which with proper forestry methods and an ambitious reforestation program could in a few years be increased to 158,000,000 cubic feet a year. Increased interest in forestry throughout the state, especially in the planting of forest trees and the protection of timber from fire, makes it seem not impossible that this goal will some day be reached. T. H. B.



The Right Sort of a Foundation for a Co-Op

TIGHT BINDING TEXT CUT OFF



Bottling department of the Rieck-McJunkin Dairy Co., Pittsburgh. The milk comes through pipes to the round white tanks. The bottles move on conveyors and arrange themselves on the small stands underneath. The mechanism lifts them up against the spring valves and the milk flows in until the bottle is just full. The filled bottles are capped by another apparatus to the right of the white tanks. Unfortunately the machines are not completely set up and no bottles are visible. This elaborate and costly machinery may some day be obsolete, if the new paper milk bottle becomes as popular as predicted. An account of the paper bottles will be given later in another article by Miss Brinton.

The City End of the Milk Business

By ELLEN S. BRINTON

EVERY shipper of milk should know something of the other end of the milk industry. The city distributor can do little to improve milk received in poor condition. The quality of milk finally delivered to the consumer primarily depends on the kind and condition of the milk sent in by the producer. In order then to continue the sale of his own milk and also to increase the consumption of milk generally, the producer should cooperate closely with his city dealer.

Up until some 20 years ago many individual farmers had their own milk routes in Philadelphia and were in personal touch with their customers. But the city has grown immensely in population. The suburban sections have been transformed from dairy farms into thickly settled towns and are now buyers of milk instead of producers. Formerly the territory supplying Philadelphia with milk lay within a 25-mile circle, shipments being made mostly by railroad and trolley. Now about 82 per cent of the milk comes through receiving stations, many of them located far from the city, and instead of several hundred small milkmen, the bulk of the 1,000,000 quarts of milk used daily in Philadelphia is distributed by four big dealers.

Three of these milk companies serve milk to all of Philadelphia and surrounding suburbs. Great pasteurizing and bottling plants are established at central points and from there the bottled milk is trucked to convenient sub-stations. From these branches the customer is served by horse and wagon, or perhaps by a light delivery truck in the outlying sections where houses are far apart. Forty to sixty routes start from each branch serving some 400 customers each.

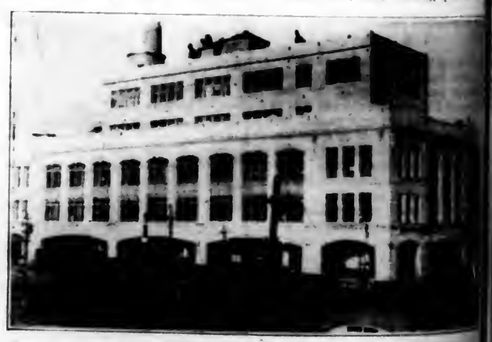
It has been customary to deliver milk in time for breakfast and that is what the housewife expects and demands. But to accomplish that means that the milkmen (or salesmen as the companies try to call them in order to raise the standard of the job) must start on their routes by one or two o'clock every morning. Just as with milking the cows it must be done every day, week days, Sundays and holidays, regardless of weather. It is a constant wonder to me how the delivery gets done with so little interruption of schedule. One could almost set a clock by our milk man. He places the bottles on our back porch at 3 a. m. daily and not even a blizzard seems to delay him.

If you would visit the receiving department of a large city milk plant you would find it resembled very closely a country milk station. Some of the plants have railroad sidings and get the milk direct from the car, but over half of the milk from the country stations now comes to Philadelphia by motor truck.

Milk cans are slowly disappearing as the efficiency of the glass-lined tank becomes more apparent. These big tank trucks resemble gasoline trucks, and carry 5,000 quarts of milk. The milk is cooled to 36 degrees in the country and the tanks are so well insulated that regardless whether the thermometer registers ten degrees below zero, or 100 degrees above, the milk arrives



The girls are plating samples of milk for a bacterial test. One cubic centimeter of milk has been added to 1,000 cubic centimeters of sterile water, and thoroughly shaken. A portion of this mixture is being transferred, by means of a glass pipette, to a sterile glass plate. Some special gelatine (agar-agar) will be added to the plate and then it will be placed in an incubator for 48 hours. Any bacteria will show on the gelatine in the form of white mold spots that can be readily counted. It takes from seven to nine pieces of glassware for every sample. All must be washed and sterilized after every use.



New City Milk Plant, Bronx, New York City, courtesy of Sheffield Farms Co. The new paper milk bottles are being filled and distributed from this plant.

in the city, perhaps after a run of 125 miles, still within two degrees of the shipping temperature. Some dealers use similar tanks on express cars on the railroad and find them also a great improvement over can shipments, on account of being so much easier washed and sterilized.

Exactly the same inspection is given milk

[illegible] from a receiving station as is given milk in cans from a farm. Factors considered are flavor, temperature, bacteria count, fat test, solids, sediment. Some of the dealers have their own laboratories and research departments equipped to handle every problem that may arise in connection with distributing dairy products. Samples are taken daily and continually through the process so as to check on the [illegible] apparatus and work of different operators. That is really the only way to secure a uniform product, but smaller dealers cannot afford such overhead and must depend on [illegible] ing fewer samples to commercial laboratories for analysis.

The inspection is done by a man who has had [illegible] experience in judging milk, and he decides whether the milk is accepted. He takes a hasty sniff at it, but as it comes from the can, or else a quick test by means of a teaspoon carried in his jacket pocket. These inspectors become very sensitive to the [illegible] and odors of milk, and can often report difficulties that are afterwards confirmed by close laboratory examination.

One man told me that he can readily tell by color milk from different parts of the country. He claims that the best flavored milk comes from the mountain sections of Pennsylvania, and the striking contrast to the milk received from other sections where warmer weather and poorer [illegible] facilities are general. Methods of caring for [illegible] the kinds of feed used, and cooling practices contribute to the flavor of milk as finally received in the city.

The temperature of the milk received is [illegible] watched—not entirely because the Philadelphia Board of Health requires it to be under 60 degrees, but because it is significant of the condition of the milk. Milk received warm will invariably have a high bacteria count and this in turn affects [illegible] and flavor. In production of milk many factors [illegible] fat, solids, bacteria and sediment can be absolutely controlled by applying certain scientific principles, but flavor is illusive and most difficult to [illegible]. Most people eat because things taste good, and the milk distributor knows (Continued on page [illegible])

What Ails Our Pennsylvania Raspberries?

By GEORGE L. ZUNDEL

(Photos by Bonsall)

THIRTY years ago Pennsylvania was growing 1938 acres of raspberries which produced 5,360,530 quarts of fruit. The latest figures show only 2,775 acres producing 2,569,789 quarts of fruit. This is a reduction of about thirty per cent in acreage and a fifty-two per cent in yield. The question of "Why?" naturally must be asked. People still eat raspberries with cream and since the population increased about forty-eight per cent from 1899 to 1919 one would naturally look for a slightly increased production instead of a decrease. But the industry has gone down. We have very good berry growers in the state using good cultural methods, so that cannot be the cause for the decline. Please note that production in quarts decreased fifty-two per cent, while the reduction in acreage was only thirty per cent. What factor or factors caused a greater reduction in yield by twenty-two per cent? Evidently there is only one answer—disease and insects of which disease has caused the greater loss.

In order to substantiate this claim let us see what has happened in other areas. In New York the reduction in acreage was fifteen per cent, while the yield was reduced thirty-three per cent, or eighteen per cent more than the acreage reduction. In Ohio was reduced [illegible] per cent, while the yield was reduced sixty-six per cent. In New Jersey where an [illegible] per cent loss in yield is [illegible] ing the reduction in acreage was twenty-six per cent, but only thirty-three per cent reduction in yield. The difference of seven per cent can be attributed to disease since [illegible] is found in the state.

Now going to the Middle Western states where virus diseases are very prevalent we find that the decrease in Michigan decreased 18 per cent, while the reduction in yield per acre was 58 per cent or more than three per cent loss due to disease. On the Pacific Coast, where the winter weather [illegible] and found no virus diseases the acreage increased 273 per cent and the yield per acre increased 25 per cent.

Let us now consider the nature of the diseases that cause such great loss in yield. For many years [illegible] farmers have noted what was termed "the running out of plants" but what has recently been proved to be definite diseases now spoken of as virus diseases since they are caused by a virus in the sap. The disease producing organism spreads from diseased to healthy plants by means of plant lice.

There are two types of virus diseases that attack the brambles, (a) the leaf curls and (b) the mosaics.

The leaf curls are characterized by a downward curling of the leaves and by a gradual stunting of the diseased plants through a series of years. Early in the spring diseased leaves have a light green color but later turn to a bronze yellow color. The yield in fruit is gradually reduced during successive years until it finally fails entirely. There are types of curl that attack both the black and the red raspberry and occasionally the blackberry. The symptoms of this disease are so conspicuous that they cannot be easily passed unnoticed.



Raspberry Plant Affected by Leaf Curl

The mosaics are of several types such as mild mosaics, raspberry yellows and mottled mosaic. This group of diseases are not so easily recognized as the leaf curls. They are characterized, (a) by a blotchy yellowing of the leaves, (b) by a bushy stunted growth with sometimes a killing of the plants and (c) by a mottled leaf with light green and dark green areas on the leaf and frequently a curling of the leaf between the veins. The berries on diseased plants are usually small and crumble easily, having a more or less sour taste. Frequently diseased berries dry up prematurely. This symptom is frequently incorrectly attributed to dry weather.

All brambles are subject to mosaic attack, but frequently the symptoms on red raspberries do not show and in this case are said to be "masked". When mosaic crosses from red to black raspberries it is very destructive to the latter, so that it is advised not to plant red raspberries closer than 1,000 feet to any black raspberries.

The appearance of mosaic symptoms is frequently determined by temperature. During [illegible] low temperatures are associated [illegible] leaves are colored in one type of mosaic, [illegible] during the higher temperatures [illegible] tures an apparently normal growth occurs. Such types of mosaic can easily be overlooked unless there is early spring or late fall inspection. High temperatures also tend to mask the mottling on the leaves so that early morning or late evening is the best time to [illegible] such mosaic plants.

The berry production is greatly reduced on mosaic plants since besides fewer berries being produced, they are smaller, tend to crumble and are rather unpalatable to eat.

Control. How are the virus diseases to be controlled? It is known that spraying will not do the trick. The only way the leaf curls and the mosaics can be controlled is by the use of disease free plants. But it is not easy to produce disease free plants.

According to the best information available the method of producing disease free plants is as follows. First select [illegible] that are [illegible] per cent or more of all fruiting canes and bear quite [illegible] wild berries. Any of the wild berries may be growers of the virus diseases. Second, secure plants from the best disease-free source available. It will [illegible] be necessary to rogue these plants and remove any diseased or [illegible] plants. The best method [illegible] is to use a hoe [illegible] and [illegible] all the leaves of the [illegible] plants before [illegible] them from the patch. Be sure to burn all refuse so that there is no danger of [illegible] them in the patch during the [illegible] diseased plants are being pulled and carried out of the patch.

In order to make roguing effective the [illegible] must be gone over [illegible] seven or eight more times during the season. Blue stem does not show up till late fall, so late roguing is necessary for this disease and as mentioned low temperatures [illegible] [illegible] [illegible]

The Farm Home

"A Place of Pleasant Memories"

By JANE M. BUSH

THE suggestion of "Pretty new things for the house," as an idea for a special feature during April and May, appeals to me. A recent incident revealed the fact that there are women who feel that this is just a senseless craze. And so many homes need prettying!

I was in a department store among the cretonnes. A worried-looking, tight-lipped woman sat precariously on the edge of a counter stool. Beside her stood a young woman absorbed in bolts of bright material on the counter.

"Do hurry, Dorcas," the older woman suddenly exclaimed, "or I'll be late home."

"I am trying to hurry, Aunt Martha, but I can't seem to find just what I want. Don't worry, though, you'll be home in plenty of time for supper." She leaned over with a reassuring smile, a mischievous sparkle in her eyes. "I'll step on it after we get out of town."

"These are pretty enough," Aunt Martha snapped. "Why not select one and come along?"

"Because the decorator told me to choose something gay but not bold, something cheerful and alive but not jazzy. You know quite well, Aunt Martha, that my little living-room is now dull and dingy instead of bright and cheerful."

"Humph!" from Aunt Martha.

"I want Little Bill to always remember his home as a place of pleasant memories, and if a particular kind of cretonne will help me out, I must try to find it."

"Nonsense, Dorcas! If you bring up Little Bill in the way he should go, keep his mind and body strong and clean I guess his welfare doesn't require you to spend the best part of an afternoon looking for a certain kind of cretonne. This talk about the moral influence of the way a house is furnished is all bosh. I never had any time nor money for such things, and you won't either, my girl, after you've kept house a few more years."

Just then the salesgirl laid another pattern before the women. Dorcas' face lighted. A few critical, long-distance inspections, the decision was made, and the women hurried away.

How many Aunt Marthas there are in the world! Aunt Marthas who view with scorn the earnest efforts of those women who strive to bring greater good taste and color harmony into their homes. And often with very little experience for materials. Yet those same Aunt Marthas could not deny the influence of their childhood homes. Some of those homes may have been of the most humble, others may have been better furnished, but memories that have warped and stunted lives.



The Dining-Room in the Home of William G. Mendenhall

As we come to our life's last each one of us, Aunt Marthas and all—entered an ugly, cheerless modern room and had our emotions and energies get cluttering down into our galoshes? Then again haven't we felt that we could go out and swim the Channel or compose a new and more beautiful Spring Song, or write a play that would bury Hamlet's ghost so deep it would never have the courage to walk again, all because we had spent an hour or two in the glow of a pretty, homelike home.

Home-owned lodges of [illegible] emotional power.

Good luck and more power to the homemakers of the Dorcas clan who realize that paint and paper, rugs and curtains, furniture and upholstery do indeed exert a moral influence. Let us give thought to the selection of even the simplest of furnishings, that our homes may be places of pleasant memories.

✣

The talent of success is doing what you can do well, and doing well whatever you do.—Longfellow.

The Trouble Buster

By HEPSY NEFF

THOSE of us who lived through the Great [illegible] and had one or more loved ones in it can never forget how we made endless work a means of [illegible] ing the days out and sustaining our courage. Keeping hands and minds busy really is one means of keeping fears and anxieties in the background. Sometimes we talked about the new lessons we were learning and told each other we would never again waste our time in the foolish ways that were common when life was safe and easy.

War-time saving proved to us all that we might be well fed and comfortable on a surprisingly small sum of money. Some of us find much that we had learned still valuable. But trying as were the experiences of the home folks the sufferings of men in camp and hospitals were far worse. Even to stand on their feet and shatter in the daily drills the monotony and unnaturalness of it all were almost unbearable. We heard much of the various ways used to sustain the morale of the men at the front as well as the men in the rear, in those terrible years.

Among the efforts made to provide something that our disabled men could do and something for them to think about were weekly publications of cartoons and hospital news. Among these were "Carry On" and "The Trouble Buster." The latter came to us regularly because my enlisted son was one of the editors. Its title was particularly challenging as a large part of the daily business of life, for us all was learning how to be a trouble buster.

The flowers we are planting now are one means of bringing us something to do; something to think about and fill the days with interest and pleasure. Gardens, crop planting, fence building, improvements of whatever kind are "trouble busters" rules. The first cry of a healthy child is: "Mamma, what can I do?" and every thoughtful mother or teacher knows that the answer to that cry is the secret of success in child-training. In fact, we never outgrow the need. The aged, the frail and the invalid are helped by having something which they can do: even a common, daily routine is better than nothing. But a creative task is best, if nothing better than building a new gate or repairing an old one.

While the things we see and touch gain from every improvement we make the great gain is in the trouble buster himself—or herself; a gain in alertness of mind and a larger vision of worthwhile things to set against a mere, dull drifting with the winds. The evidence of such a state of things is not far to seek in the absence of a trouble buster. We can greatly help our children by making them junior partners in our work, explaining the gain and picturing the loss. Business men are more and more putting the human idea into the word "service," which means keeping in mind the needs of others and fitting business to their real needs. There is still plenty of room for progress everywhere but our first task is to plant the seed and protect while we continue to plant and cultivate.

When Warm Days Come



READY for the first warm spring days—in a crisp, new, gingham bloomer dress with short sleeves and loose neck—is Miss Five-Year-Old. She has a new straw hat, too, with a turn-down brim, just wide enough to shade her eyes from the sun without cutting off many important ultra-violet rays.

The dress she is wearing was designed by a clothing specialist of the Bureau of Home Economics. It is made of blue and white checked gingham, trimmed with white. Any of the cotton wash fabrics such as printed zephyr, colored crepe, or broadcloth could have been used. Pongee silk is another good wash fabric for this style. The pattern selected has raglan sleeves, which are excellent because they do not limit the stretch of the arm or the width across the chest and do not tear out at the underarm seam if the child climbs a tree or swings on a piece of playground apparatus. Gathers at the neck provide additional body fulness. These gathers can be put in any plain raglan pattern very easily by allowing extra material along the front fold. The short front opening is bound with bias gingham and has only one button, which fastens through a loop of tape attached double.

Care has been taken to make the white collar, cuffs and leg-bands wide and loose, for at Miss Five-Year-Old's age, every few months there is a marked increase in every part of the body. The bands on the tops of the gathered pockets are also white and the same width as the cuffs and leg-bands. They prevent articles in the pockets from falling out.

At first a very deep hem is put in, to be gradually let down as need arises. Some mothers put a tack in the first hem or turn the goods under its full width for later lengthening. Hems look best if sewed by hand, and are more easily ripped out when necessary. Allowance tucks, too, should be hand-sewn or stitched with a large, loose stitch. If they are stitched at half-inch intervals, opening up the first line of stitching will let the garment down an inch if growth allowance is being made in the upper part of a bloomer dress a tuck should also be taken in the bloomers on a level with the plaster, where it will not show. Then both parts will be lengthened proportionately.

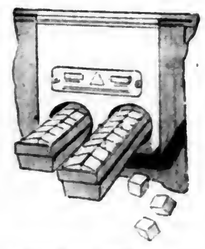
Bloomers should be cut with short sides to prevent their slipping down over the knee, but the leg-bands should be loose and the length through the crotch should always be ample. The inside leg seams will be stronger if a straight piece of material is stitched across from knee to knee.



Crisp, chilled salads—dainty frozen desserts, fresh fruits—a myriad of culinary delights are possible with SUPERFLEX



The illustration shows Model KLP 30. Other sizes, models and finishes from $198.00 up



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Operates from kerosene alone, and only about a pint of that a day. No electricity—no gas required. Almost incredible, yet true. This wonderful new device will forever free rural homes from dependence upon cisterns, caves, cellars and spring houses for the preservation of foods.

For the trifling sum of from one to three cents a day—the mere cost of a stamp—you can safeguard your family's health by keeping foods of all kinds cold, clean and pure—fresh meats and vegetables—sweet pure milk—chilled salads—fresh, delectable fruits—frozen desserts—cold beverages and sparkling ice cubes.

Year around refrigeration is necessary to prevent food spoilage and safeguard health. SUPERFLEX gives 365 days' refrigeration at the cost of less than two months' ice supply—*the most economical household refrigeration ever known!*

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It is a particularly sturdy washer that will wash cleanly the heaviest, dirtiest clothing, yet its action is so gentle that you may safely entrust your daintiest garments without fear of injury.

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Visit the VOSS Dealer in your neighborhood. He will explain the tremendous advantage of the Bouyancy Washing principle which is entirely different and can be had only in the VOSS. He will demonstrate the economical gasoline engine, which starts easily and unfailingly at the pressure of your foot, and point out the 12 big features of VOSS superiority.

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Now for a Picnic!

WHEN apple trees are in bloom the orchard is an ideal place for a picnic; on the banks of the little brook that babbles through the pasture; under the maple trees that border the lane from the barn, up on the hill that overlooks the country side. On every farm there are innumerable places for picnics.

A big market basket is ideal for carrying supplies. Baked beans in an earthen pot that keeps them hot. Cook macaroni and cheese en casserole. Bake individual pies in the gem pans. Cookies, sandwiches, pickles must go too. So many good things can be planned for a picnic day.

From violet time until the last red leaf drifts from the maple trees the picnic season invites the country mother. Perhaps father is busy in the field farthest from the house. Why not have him take a bag of feed for the horses, or put in extra gasoline for the tractor and just before noon spread a picnic dinner under the big trees in the corner of the field. The children will enjoy it, it will break for him the monotony of the days of toil, and if mother thinks of it as an added privilege rather than as an added task she will be planning her next picnic before the last crumb is eaten and the paper plates burned before leaving.

Picnic Menus

I

Baked Beans
Bread and Butter Sandwiches
Spice Cakes Milk
Pickles or oranges pared and cut in thick slices

II

Scalloped potatoes Meat sandwiches
Cookies Carrots Milk
Cook the carrots, cut them in quarters lengthwise and drop in vinegar for an hour.

III

Macaroni and cheese
Vegetable filled sandwiches Individual pies
Fruit of any kind Milk

These menus give a main dish that may be served either hot or cold. An egg sandwich may be used with the first and a fruit filling substituted for the vegetables in the third. A few dishes carefully prepared are better than too great a variety in any picnic offering. L. M. Thornton

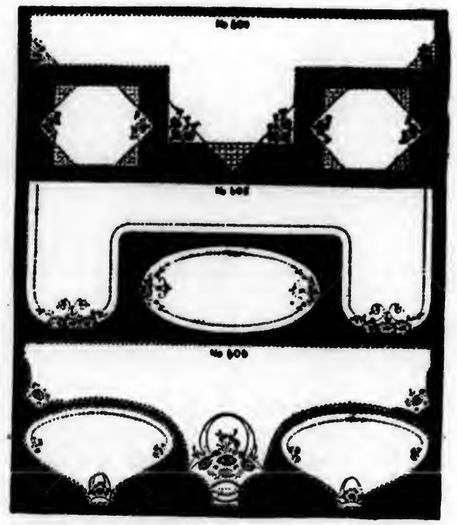
Basting Threads in Beans

BECAUSE all our fore-mothers considered it certain that there could be only one proper way for removing "basting-threads" from our green string beans and wax beans, we go on, in docile fashion, and nip off a bit at each end of the bean, in order to pull away with it the tough thread like fibers that are so uncomfortable in the mouth. Naturally, the best remedy for them is to plant only the "stringless" varieties, such a blessing to the modern kitchen gardener.

But one cannot always grow one's own beans; and unless it is possible to make sure that only young ones are offered for sale and bought, the only comfort is in strict de-threading. And with each breaking into shorter lengths, more fibers are found.

One thing can be done, where a housekeeper has been "stuck" with beans that seem full strings. Just for once, try washing them well and boiling them whole, not stringing them beforehand! Have plenty of boiling water, soften it with a generous pinch of baking soda, and omit salt until they are nearly done. When tender turn the "cold things" out in a stove or colander, and cool a little, or turn into a pan of cold water. Then take hold of the stringing question. All the fibers will be found to come free of the tender part of your beans with very little handling, but with the ends, leaving no waste at all. It is a trifle fussy to do, but it saves the day. When all done, the beans can be reheated, either with a little butter, or in cream sauce; or they will make a very delicious salad, which one's family can eat and relish, with no covert remarks about "bastings". Aldis Dunbar.

Newest Scarfs and Buffet Sets



Originality and beauty are shown in the designs of scarfs and buffet sets shown herewith and any of them will be a most welcome addition to the furnishings of the home. Each scarf is of a different shape. They are all hemstitched on an excellent quality material and are suitable for either dresser or buffet. These sets come in two sizes and are priced as follows: set with scarf 18 by 45 inches, only 65 cents; set with scarf 18 by 54 inches $1 postpaid to any address.

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Novelty Snapdragons A new group of Antirrhinums with extra large flowers on strong stems. Salmon, Yellow, White, Crimson, Rose, Pink, Red, Variegated, Dark Pink and other beautiful colors. 40 plants (transplanted). 22 different colors **$1.10**

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SIEB'S GUARANTEED CHICKS CERTIFIED NOBAN TESTED HEAVY LAYING FLOCKS



SEE OUR LOW PRICES WHY PAY MORE?

Sieb's OVERSIZE CHICKS all From Blood World's Famous Bloodlines. Will grow larger, mature quicker, lay better, pay higher profits. 100% live delivery. Immediate shipment. Catalog Free.

PRICES PREPAID	25	50	100	500
Wh. Bf. Bf. Leg. Anconas	$2.00	$3.75	$13.00	$62.50
R. C. Reds, Wh. & Bl. Wyn.	1.75	1.25	14.00	67.50
Bld. Wh. & Buff Rocks	2.50	4.75	18.00	82.50
Wh. Min. S. C. Reds	2.50	4.75	18.00	82.50
Wh. Orps.	1.75	1.25	14.00	67.50
Bf. Orps.	2.75	5.25	14.00	77.50
Black Min.	1.25	6.25	12.00	57.50
Hvy. Asst'd.	1.00	1.75	11.00	52.50
R. & L. Asst'd.	2.25	4.25	16.00	77.50
Lt. Asst'd.	1.00	1.75	9.00	42.50

Sieb's HATCHERY Box 1A5 LINCOLN, ILL. *Members I.B.C.A.*

BIG CHICKS *from High Record Matings*



1909-1929 First to ship Chicks in U. S.

200 326 eggs S. C. White Leghorns. Also Special Tancred Matings and 15 other varieties. Bf., Br., Bl. Leghorns; Anconas; Wh., Bf., Bl. Minorcas; Bird. Wh., Bf., Rocks; Wh. Wyandottes; S. C. & R. C. Reds; Bf. Orpingtons; Jersey Bl. Giants. Write today for free catalog before you buy. Prices low and good genuine personal service to each customer. Satisfaction Guaranteed. 38 years shipping chicks to satisfied customers. FREE! 1000 Chicks in prizes for best photos of Pioneer Chicks or Flocks.

UHL PIONEER HATCHERY & EGG FARMS New Washington Ohio Dept. P

BARRON LEGHORN CHICKS

From Large Type Barron English S. C. White Leghorns. Hens weigh up to 7 pounds. Extra quality chicks from free range selected stock at 113 per 100. $62.50 per 500, $120 per 1000. Hatches May 7-14-21-28. Chicks 100% Live Arrival Guaranteed. 10% books order. Catalog Free.

ROBERT L. CLAUSER, Box N, Kleinfeltersville, Pa.

BARRED ROCK CHICKS

A Big modern Breeding Farm and Hatchery devoted exclusively to the production of BARRED PLYMOUTH ROCKS

MARVEL POULTRY FARM, GEORGETOWN, DEL.

WYCKOFF STRAIN WHITE LEGHORNS CHIX

$12.00 per 100 $57.50, 500 $110.00, 1,000

100% prepaid safe delivery guaranteed.

J. M. Nace Poultry Farm, Box A, Richfield, Pa.

Penn'a State "Supervised" CHICKS

Flocks inspected by officials from the Penna. Dept. of Agri. Our 19th year—established 1910. Get our low prices on Reds, Rocks, Leghorns and Minorcas. Member I. B. C. A.

Catalogue free. THE KEYSTONE HATCHERY, (The Old Reliable Plant). Richfield, Pa.

LOOK—QUALITY CHICKS

This quality is bred in the chick through rigid culling and breeding. Guaranteed satisfaction. 13 varieties. Light breeds, 12c. Heavies, 14c. White Wyandottes, 15c. Send for our instructive catalogue. MILTON POULTRY FARM, Hatchery, Dept. 7, Milton, Pa.

Baby Chicks From Free Range Selected Flocks

	50	100	500	1,000
S. C. White Leghorns ..	$6.50	$12.00	$57.50	$110
S.C.B. Rocks & Reds ..	7.50	14.00	67.50	130
Light Mixed	4.50	8.00	37.50	75
Heavy Mixed	6.00	11.00	52.50	100

100% Prepaid Safe Delivery Guaranteed. Fair View Poultry Farm, R. 3, Millerstown, Pa.

HERBSTER'S QUALITY CHICKS

Barred Rocks and R. I. Reds ... $12.00 per 100 White Leghorns and Mixed ... 10.00 per 100 Good, strong, livable chicks. Can ship C. O. D. Herbster's Poultry Farm, Box 171, McClure, Pa.

PENNA. STATE CERTIFIED LEGHORN CHICKS

Pure Hanson and Hanson-Wyckoff Strains. The Best. Catalogue describing our 200-ee stock. Records. Prices. Prepaying. E. O. P. Estrin. RIDGEWAY POULTRY FARM, Ridgeway, Pa.

QUALITY S. C. Wh. Leghorns, $11-100. S. C. CHICKS Barred Rocks, $13. Light Mixed, $9. Heavy $11. Special prices on larger lots. 100% live delivery Prepaid. Free circular. Free.

Housecleaning Hints

There is no better varnish cleaner than this—one third turpentine to two-thirds paraffin oil. Both may be purchased at your local drug store, cost very little and keep your furniture and wood work "spick and span".

• • •

Did you know you could make your own parchment paper for lamp shades? Well, you can, and very cheaply, too. Use heavy smooth wrapping paper of the ordinary variety. Dip it in a solution of one part normal sulphuric acid to ten parts water. Completely submerge the paper for ten minutes. Then rinse thoroughly in clear water, and dry.

• • •

Concrete paint is excellent for renewing old badly worn linoleum. It is cheap, quickly and easily applied, very effective. Only two coats are necessary, and the second may be applied just twenty four hours after the first. If you then finish with one coat of water proof varnish, your floor will be easily taken care of, very neat and durable.

• • •

If your rugs curl at the corners and along the edge, you can re-size them and make them flat again. At your drug store, buy flake glue. Dissolve it in your double boiler in hot water—one-fourth pound glue to one-half gallon water. Sprinkle this solution generously over the back of the rug which you have stretched tight and straight, face down. Tack it down where the curls appear. Let the rug dry without disturbing for two or three days. It is then ready for use again. G. S. S.

Dustless Cleaning

"I'VE found out how to do it," said an elderly mother in our club of forty women. "Electricity has solved the problem. Electric lights never smoke. Electric cleaners eat the dust instead of scattering it. I am heartily grateful for this boon to housekeepers in my old age."

Another club worker said she found a good carpet sweeper of the vacuum type very valuable while she waits for electricity. She uses it each day, thus keeping the dust cleared away.

The third speaker suggested that her dusting has been greatly reduced by doing away with many useless and unnecessary things that require care. She went through her house asking herself, "Do I need this? Is this beautiful?" And so on.

A very cheerful wholesome looking member said she had studied each room in her house, noting mentally where "dust" showed the most. Then on busy days she mops and dusts those conspicuous spots and calls it done for the day.

The idea of buying furniture of plain design, easy to keep clean was brought out, and usually keeping tables covered with colorful artistic tapestry or even suede is a time saver. Linoleum in country dining rooms and bed rooms is far better than worn rugs.

If soft old cloths are kept in a tight covered tin box, and a little polishing oil dropped on them, in a few days, you have dustless dusters. When we adjourned, all felt sure there had been a great deal of dust shaken out of dusting if we would only adopt these sane ideas of better living. Mrs. J. P. N.

LITTLE TOT'S APRON NO. 1845



Here is a wonderful design in apron for the little one. It is stamped on good quality small checked gingham and can be had in blue, lavender, tangerine, green and pink. Enough material is included for the applique patch for pocket. The apron in any of the colors specified and in size three years only, will be sent postpaid on receipt of 50 cents. Address Embroidery Department, Pennsylvania Farmer, 7301 Penn Avenue, Pittsburgh, Pa.

Just Paint it on the Roost

—Before the chickens come. Only a small paint bill needed. While chickens roost, fumes are applied and penetrate the feathers; killing lice. No individual handling of birds. Ask your dealer.

Tobacco By-Products & Chemical Corp., Inc., Louisville, Ky.

"Black Leaf 40" Kills Poultry Lice

Save Baby Chicks



by giving them daily a tablespoonful of Bourbon Poultry Remedy in drink or feed. For worming, preventing of Diarrhea and as a tonic and conditioner for baby chicks strong and vigorous. There is no equal. Money back if it fails to cure any disease of chicks or to keep them healthy. Hundreds say they can't raise chicks without it. Also cures and prevents blackhead, gapes or indigestion in turkeys. Full directions in package. Only $1.50. At druggists, or sent by mail postpaid.

BOURBON REMEDY CO., Box 6, Louisville, Ky.

HOW TO KEEP Turkeys From Dying



Valuable Turkey Book FREE

Thousands of turkey raisers in all parts of the United States have found that Rayzon Turkey Remedy is a standard and reliable remedy for blackhead, bowel worms and other troubles. Use Rayzon and you get your money back. Large trial size (enough to treat 50 turkeys) postpaid for $5.00 C. O. D. if you prefer. If not satisfied, Order now.

back if you are not satisfied. Order now.

EVERARD-MORRIS Co. 120 Rice St., St. Paul, Minn.

5 Lb. LEGHORNS

The old reliable heavyweight strain. Produced high up on Pennsylvania's healthy mountain top. Get your chicks from certified record stock, above 300 eggs. R. O. P. Hollywood Tancred, Barron Matings. Get our weekly pure white eggs up to 30 ounces per dozen. Beautiful Catalog Free. Plate Leghorn Catalogue Free.

FARM SERVICE Route S-10 TYRONE, PA.

WOOL Wanted

Have your wool manufactured into beautiful Blankets and Comfort. Basing rate Rocky. We make the new rug and make the wool like new. Also buy wool in exchange for our work.

SHIPPENSBURG WOOLEN MILL Shippensburg, Pa.

BROILER—RAISERS

SHIPPING CRATES LOANED FREE

SHIP YOUR LIVE BROILERS and other poultry to New York's oldest Live Poultry House. We are headed commission merchants. Highest returns made daily. Highest prices. Satisfaction unlimited. Inquire about us. Write for shipping tags, shipping instructions and Price Folder P 2. KRAKAUR POULTRY CO., Inc. West Washington Market, New York City.

Navy Brand Concentrated Buttermilk

From Tuberculin Tested Cows

24 per cent milk solids. 88 per cent buttermilk. Use as custard with no fat eggs ingredient. Use for egg-producing and growing mash. Increases egg production and promotes rapid growth. Saves hatchability. Used for chicks, broilers or turkeys. Some Solid cars from its factory to customers in about 445 lbs. Write for prices

TITUSVILLE DAIRY PRODUCTS CO. Titusville, Pa.

Valley View Chicks

Tancred Strain Wh. Leghorns, $13.00 per 100; S. C. W. Leghorns 12.00 13

R. Rocks & R. I. Reds 13.00 14

Heavy Mixed, $10.00; Light Mixed (50) lots 5c less, 1,000 lots 1c less. Prepaid 100% live delivery guaranteed.

VALLEY VIEW POULTRY FARM, N. J. Ehrenzeller, R. F. D. Hellertown, Pa.

EGGS, Etc.—Small consignments from growers in your territory bear our attention. We pay spot cash. Prompt returns same day we receive your shipment. Ship or write for Quotations.

ZENITH BUTTER & EGG CO. 37 West Street, New York City.

BARRON and WYCKOFF STRAIN CHICKS

S. C. White Leghorn chicks for May. Immediate delivery. Order now. Prices reduced. Circular free. If books are closed when you write, send $2.00 per 100 deposit and we will ship later. Prepaid and guaranteed. Order direct from this ad. Circular free.

THE PENN'A HATCHERY, Dept. 6, Pittsburgh, Pa.

ADVERTISING is the modern intelligencer. It informs you informed, advises you of new things, suggests new ways for articles you already use and prepares you today for wise and useful purchases tomorrow.

Veiled Beauties

WE often hear the remark made that the thrills of the city life is much greater than those of the country, but why are such remarks made? Because those people have not learned the inner chords of God's great universe. Let us then, together, permit our souls to look for a moment behind the veil to view the real beauties of God's wonderful masterpiece.

Let us ramble in the woods over vales and hills and note the wonderful carpet which surrounds us, gives us a restful feeling, one that is able to give us the great pleasure just to ramble

Come travel with me to the meadow, and watch some of the rare sights to be seen. To note the fairy like butterfly as it flits from one bright untarnished face to another, fills us with rapture and a feeling of awe. The merry chirp of feathered songsters, and with the gentle breeze fanning our cheeks we feel ready to restart living.

Have you ever sat and questioned within yourself thoughtfully, what made the leaves so blue. Why the birds sing so happy? Why the brook trickle so gently? Who sends the showers that makes the flowers and grass look so gay?

Beauty is as a blushing bride whose face is hid behind a veil, and when at last we behold her in all her vanity. So, we must get beyond nature's veil. That is only possible by looking on it as something supernatural, something that man must take care of but cannot improve. It is the finished piece of artistic work that has been wrought. How can it be otherwise? It is not only through the eye that we may think it foolish to question these things, for to look on and understand our Maker's works is impossible, but in taking note of these deeper beauties it has a tendency to lift us from the lowly earth to the vaulted skies. It does not tend to satisfy the mere desires our friends find in the cities, but far greater, it gives us a feeling that we have been admitted to a higher court, to a realm beyond this commonplace life where all is of serene beauty. I have just mentioned some of the ways in which, even though you do not appreciate the country, you may learn to love it and worship it as something that will never grow old, something that always contains new mysteries which you may solve. Then if you have learned this, to leave it would be a life's disappointment and to remain with it you will always be living and enjoying the real beauties of a pure country life.

Mae Dressler

MY BLUES

I look out from my kitchen door,
I have the "blues"
Chickens run my garden o'er;
How they abuse
Sweet William flowers I love so well,
More sad'ning blues.
The hens scratched out I've none to sell
To pay my dues.
Snapdragon plants my sister gave,
Of many hues.
The bees ate off. It makes me rave,
For change I muse.
Not one tomato can I grow,
That's kitchen blues.
No substitute for them I know.
Search I've and Q's.
I bend and steam to wield the hoe,
Back-breaking blues.
But very little it seems to show,
HENS are the cause.

• • •

If I had chick-proof fence alway,
I'd have no blues.
My troubles all would flee each day,
Like morning dews.
I'd wear a most becoming smile,
No whining blues.
For life and work would be worth while,
With brand new views.

Peggy Short.

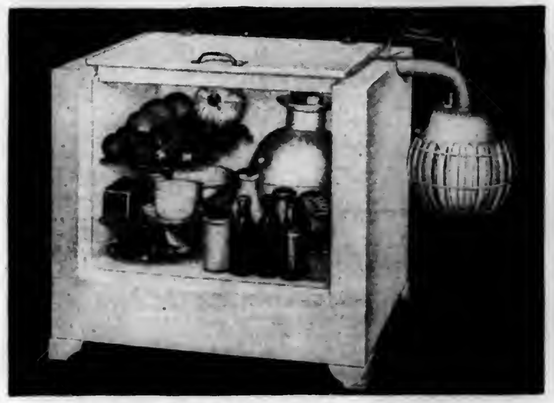
ICE, 2¢ a cake!

The proper preservation of food prevents the growth of disease germs and bacteria.

The harvesting or cutting of natural ice is costly. In many parts of the country natural ice is not available and the cost of transporting makes it prohibitive. Artificial ice is also expensive.

The modern Icyball way gives you constant refrigeration at low first cost and low cost of operation. A clean labor-free method of refrigerating. Icyball does not require electric current.

There are also many homes not close enough to the thickly populated districts, to be served with the regular deliveries of artificial ice. Up to the present time, for these homes, there existed no efficient refrigeration.



Now comes a revolutionary invention. A device known as the Crosley Icyball Refrigerating Unit, which in combination with a refrigerator cabinet of attractive design becomes a Crosley Icyball Refrigerator. The Crosley Icyball Refrigerating Unit keeps the contents of the refrigerator cabinet cold, preventing the formation of dangerous germs or bacteria, protecting the health of babies and children as well as the more hardy grown-ups. The Crosley Icyball Unit keeps the refrigerator cabinet cold so that foods which in ordinary room temperature would quickly spoil, can be preserved indefinitely. Bacteria and germs do not develop rapidly in a cold temperature.

The Icyball Refrigerator unit will freeze deserts and chill salads. In fact, it will do anything that any other modern refrigerator will do. The Icyball unit is made operative by removing the unit from the cabinet and heating it for one and a half hours on a gas or oil stove. This period is known as cooking.

After the cooking operation, the unit is placed in refrigerator cabinet where it immediately goes to work removing the heat from the cabinet interior, producing a clean, dry, cold temperature which cools the foodstuffs and preserves them. Water placed in the ice cube tray in the lower part of cooling unit, is frozen into ice cubes.

Over twenty-two thousand of these devices have been sold. Some of them have been shipped to most every nation of the globe. Most of the twenty-two thousand have been sold, however, in the United States, where they were in use all last summer. Witness this testimonial from an owner:

"We are milking seven cows and have been able to deliver Grade One cream all summer. This has averaged $2.20 more per week than I would have received in the past for Grade Two or Three."

Since last summer several definite improvements have been made in the Crosley Icyball Refrigerator, making it even better than it was a year ago. One of these improvements is the addition of the stabilizer which prolongs the cycle of clean, dry cooling, extending the life of each cooking.

The Crosley Icyball Refrigerating Unit in operation needs no renewing of the liquid it contains. The cost of the complete device is low, surprisingly less than any other device for the purpose of refrigeration ever offered.

The price of $85 includes the unit, the refrigerator cabinet, a cooling tub, and the stabilizer. Nothing else to buy if you use your regular oil or gas cooking stove for heating it. The amount of fuel consumed in cooking the device daily is approximately the same as that which would be used to boil a tea kettle for one hour and a half—about two cents worth of kerosene or gas a day. One two-cent cooking of the Icyball is equivalent in refrigeration to the use of about 35 pounds of ice. It is, therefore, equivalent to the purchase of a 35-pound cake of ice for two cents.

The Crosley Icyball brings the lowest cost refrigeration into any home anywhere. It is adaptable to many uses—homes everywhere, camps, farms, dairies, stores, restaurants and road side stands. Special models are shown by Crosley dealers for dairy use—cooling soft drinks and cooling water in stores and offices.

The Crosley Icyball Refrigerator is made by one of the largest radio manufacturers in the world. It is sold by the distributors and dealers who handle Crosley radio receiving sets in all parts of the world. There is a Crosley dealer near you who will be glad to demonstrate this device to you and show you why you should have one in your home. Use the coupon for further information about the Crosley Icyball Refrigerator.

$85 COMPLETE WITH CABINET F.O.B. FACTORIES

The Crosley Radio Corp., Dept. 156. Cincinnati, Ohio.

Gentlemen: Please send me all information about your Icyball Refrigerator, without any obligation on my part.

Name _____

Address or R.F.D. Route No. _____

City _____ State _____

CROSLEY ICYBALL REFRIGERATION

Wholesale Distributors for Western Pennsylvania:

U. S. RADIO CO. OF PENNSYLVANIA Inc.,

134 Ninth Street, Pittsburgh, Pa.

CHERRY HILL CHICKS

	100
S. C. W. Leghorn—Wyckoff Strain	$12.00
S. C. Everlay Brown Leghorns	12.00
Barred Rocks—Wm. Nace's Select	14.00
S. C. Rhode Island Reds	15.00
Mixed or Broiler Chicks	9.00

5c less in 500 lots. 1c less in 1,000 lots. 25 chicks add 2c. 50 chicks add 3c. Full count. 100% live arrival guaranteed. Parcel Post prepaid. Bank reference. Order direct from this ad or write for free circular.

CHERRY HILL POULTRY FARM, Wm. Nace, Prop. McAlisterville, Pa.

BABY CHICKS

	50	100	500	1,000
White Leghorns	$6.50	$12.00	$57.50	$110.00
S. C. R. I. Reds	7.50	14.00	67.50	130.00
Barred Rocks	7.50	14.00	67.50	130.00
White Rocks	8.50	16.00	77.50	
Buff Orpingtons	8.50	16.00	77.50	
Heavy Mixed	6.50	12.00	57.50	110.00

Our White Leghorns are from Tancred and Barron stock. All our chicks are from free range flocks. We sell either cash with order or C.O.D. and guarantee 100% live delivery.

MONROE HATCHERY, Box 19, Richfield, Pa.

CHIX from large Breeders

	100	500	1000
Ferris Strain W. Leg.	$12	$57.50	$110
Everlay Brown Leghorns	12	57.50	110
Basom's Barred Rocks	14	67.50	130
Owens' R. I. Reds	14	67.50	130
Mixed Chicks	9	42.50	80

Our breeders are selected for size, type and egg production. The kind that lay and pay. Send for literature. It is free. Tells all about our great egg machines.

JUNIATA POULTRY FARM Box P, Richfield, Pa.

FOR GREATER PROFITS Hatchery Chicks

CHICKS FROM JANUARY TO SEPTEMBER, 1929

Barred and White Rocks, White Wyandotte, Rhode Island Reds, White Leghorns, Anconas and heavy mixed. Our flocks have been culled by Mr. Lloyd Baker a graduate of Pennsylvania State College, also having several years practical experience. Write us your wants and guarantee 100% live delivery.

L. R. WALCK HATCHERIES Dept. G. Greencastle, Pa.

Linesville Gold Medal Chicks still on top, after winning State Gold Medal they are winning cash for others. You can win with Our Sturdy Chicks.

The Old Reliable LINESVILLE HATCHERY Linesville, Pa.

Write today for free booklet and prices, also free book on brooding.

BABY CHICKS

	25	50	100	500	1,000
S. C. W. Leghorns	$1.25	$2.50	$12	$57.50	$110
Bld. Rocks & S.C. Reds	1.75	1.25	14	67.50	130
Heavy Mixed	1.25	2.50	12	57.50	110
Light Mixed	2.50	4.75	9	42.50	80

A Special Discount on orders placed in advance

PINECREST POULTRY FARM & HATCHERY Herbert Miller, Prop. Box 2, Richfield, Pa.

TIGHT BINDING TEXT CUT OFF

20TH CENTURY "MARVEL" CHICKS

from Special Mating Imported Barron White Leghorns

This Superb Mating consists of 350 Yearling hens, imported from TOM BARRON of England. The hens weigh not less than 4½ pounds and up to 8 pounds and produce better than 250 eggs per year per hen.

Big Healthy Chicks from the World's Best Strains

11 varieties. Matings sired by pure-bred Males from the **World's Great Trapnested Egg Strains.** Dams of high production, 250 to 302 egg lines. Park's Barronite, Fishel, Sheppard, Dustin, Pape and others of similar famous breeding. **I Guarantee Satisfaction** and give you personal service. Prices reasonable. 100% Live Delivery Guaranteed. Ref.: Commercial Bank, Dun or Bradstreet.

	50	100	500	1000
S. C. White, Brown, Buff Leghorns; Anconas	$7.00	$13.00	$60.00	$115.00
Barred and White Rocks; S. and R. C. Reds; Black Minorcas	8.00	15.00	70.00	135.00
White Wyandottes; Buff Orpingtons; Buff Minorcas	8.50	16.00	75.00	145.00
Imported Barron Leghorns; White Minorcas; Park's Rocks	9.50	18.00	85.00	160.00

Heavy Mixed, $12.50 per 100; Light Mixed, $9.00 per 100

Ship C. O. D. if desired (pay postman on delivery). FREE Illustrated Catalog tells all about our big size Winter Laying Chicks and profits you can make with them. Send for your copy.

20th CENTURY HATCHERY Box Y NEW WASHINGTON, OHIO

WOLF SELECTED CHICKS

CHICKS C. O. D.—Send only $1.00 and pay Postman the balance.
Special pen mated and extra high bred chicks at slightly higher prices. Shipment made any time you wish.

	25	50	100	500	1000
S. C. W., Br. & Buff Leghorns, S. C. M. Anconas	$7.25	$6.50	$12.00	$57.50	$110
Rd. and Wh. Rocks, S. C. and R. C. R. I. Reds, Bl. Minorcas	7.75	7.25	14.00	67.50	130
White Wyandottes, Buff Orpingtons	8.25	8.00	15.00	72.50	140
Jersey Black Giants	8.80	9.50	18.00	87.50	170
Assorted Odds and Ends, Mixed Chicks	3.00	5.00	9.50	47.50	95
Assorted Heavy Mixed Chicks	3.50	6.25	11.50	57.50	115

Immediate Delivery.

WOLF HATCHING & BREEDING CO., Box 43. GIBSONBURG, OHIO

BUY EARLE CHICKS

and you have made the first step in 'making poultry pay'. These pure bred quality chicks come to you from the best of parent stock, bred to lay and guaranteed to please. We offer the following popular breeds and best strains at the Lowest Prices, considering our quality supreme:

	100	500	1,000
Leghorns and Anconas	$13.00	$62.00	$120.00
Barred and White Rocks	14.00	68.00	130.00
R. Reds (Owens and Tompkins)	14.00	68.00	130.00
Jersey Black Giants	20.00		

References: Richland Natl Bank. Book today on chicks that pay. You may order direct from this Ad or will mail literature. We ship C.O.D. or upon receipt of 10% will send P. Post prepaid with 100% live delivery guarantee. EARLE F. LAYSER, Prop., Richland Poultry Farm & Hatchery, P. O. Box 1, Richland, Pa.

NATIONAL "SUPER-BRED" CHICKS

Insure Your Future Poultry Profits by Ordering NATIONAL "SUPERBRED" CHICKS NOW

	50	100	500	1,000
S. C. White, Brown & Buff Leghorns	$6.75	$12.00	$62.00	$120.00
Tancred & Hollywood White Leghorns	7.25	14.00	67.00	130.00
Barred & White Rocks, R. I. Reds	7.75	15.00	72.00	140.00
White Wyandottes, Buff Orpingtons	9.00	17.00	82.00	160.00

Light Mixed, $9.00 per 100, Heavy Mixed, $10.00 per 100. Also Black Minorcas, White Minorcas, Anconas, Blue Andalusians and Jersey Black Giants. Send for our free catalog and prices on our Special Mated Chicks. We guarantee 100% live delivery. Member International Baby Chick Association.

NATIONAL CHICK FARMS, Box 604, MIFFLINTOWN, PENNA.

HERE: NEARLY EVERYONE RAISES Full Blooded "AMERICAN" Quality Chicks.

Write now for our new low prices. Your opportunity to get our special flock mating chicks at utility prices. Chicks shipped C. O. D. Catalogue and prices on request. 100% live arrival guaranteed. 15 breeds. Write now.

AMERICAN CHICKERIES, Box 318, GRAMPIAN, PA.

YOU NEED THIS CATALOG!

Big Poultry Manual Given Free to All Buyers of Chicks

Write for details. Every chick buyer should know about Hoytville Chicks. Our beautiful illustrated catalog tells all about them. Your copy sent on request. Guaranteed chicks.

OHIO ACCREDITED CHICKS — ALSO BABY DUCKS

Every bird in our breeding flock is banded and a record kept. Our flocks are inspected by experts trained and authorized by Ohio Poultry Improvement Association. Find out about our guarantee plan. 16 breeds. We have limited number Chicks from Ohio R. O. P. pedigreed stock. Write today.

HOYTVILLE ACCREDITED HATCHERY, 117 MAIN ST., HOYTVILLE, OHIO

Chicks C.O.D. $1 Down

LET us ship you our chicks, $1.00 with order, balance C.O.D. Our chicks are from some of Ohio's best flocks that have been carefully culled for type, color and egg production. 100% live arrival.

PRICES DELIVERED	50	100	500	1000
LEGHORNS, WHITE, BUFF and BROWN; ANCONAS	$4.50	$12.00	$57.50	$110
ROCKS, BARRED, WHITE, BUFF and PARTRIDGE; R. MINORCAS	5.00	14.00	67.50	130
S. C. and R. C. REDS, B. ORPINGTONS, S. L. and W. WYANDOTTES	7.50	14.00	67.50	130
HEAVY MIXED 10c; B. J. GIANTS 18c. Order direct or send for illustrated circular.				

EMPIRE HATCHERY, Box 70, COLUMBUS GROVE, OHIO

Buy C·M·L·Chicks

C. M. L. CHICKS Cost no more than ordinary chicks from the average hatchery and the quality is far better. We have specialized for years in BARRON LEGHORNS. Imported direct from Barron. Pedigrees 285 to 314. BARRON & C. W. LINES have ample range which insures large, hardy chicks. They are carefully selected and mated. They mature early. Our fine quality chicks can be had at a price that will surprise you. Get our low prices. They will interest you. Write today for FREE catalogue.

C. M. LONGENECKER, Box 45, ELIZABETHTOWN, PA.

BABY CHICKS

FROM HEAVY LAYING FREE RANGE FLOCKS

Wyck. & Tancred Strn.,	50	100	500	1,000
S. C. W. Leghorns	$6.50	$12.00	$57.50	$110
S. C. Brown Leghorns,	$6.50	$12.00	$57.50	$110
S. C. Reds & Reds	7.50	14.00	67.50	130
S. C. Buff Orpingtons	7.50	14.00	67.50	130
Assorted Chicks	5.00	9.00	42.50	80

100% prepaid safe delivery guaranteed. Order from this ad or write for circular.

J. N. NACE POULTRY FARM Richfield, Pa. Box 3.

BABY CHICKS

Order direct from this ad and save time

Free Range bred	25	50	100	500	1000
White and Brown Leghorn	$3.25	$6.25	$12	$58.75	$110
Anconas & Black Leghorn	3.25	6.25	12	58.75	110
White and Barred Rocks	3.75	7.25	14	68.75	135
Rhode Island Reds	3.75	7.25	14	68.75	135
Heavy mixed broilers	2.25	4.25	8	38.75	75
Light mixed broilers	2.25	4.25	8	38.75	75

Full count and quality guaranteed. Catalog free. For Greater Profit Utah Poultry Farm & Hatchery, Hatchery chicks Box 14, Fort Trevarton, Penn'a

BABY CHICKS

Tancred Str. Wh. Leg'rns, $10 per 100
White Leghorns ..... 9 per 100
Barred Rocks ..... 12 per 100
R. C. Reds ..... 12 per 100
Heavy Mixed ..... 10 per 100
Light Mixed ..... 8 per 100

500 lots ½c less—1,000 lots 1c less, 100% live delivery guaranteed. Order from this ad or write for free circular.

C. F. LEISTER, McAlisterville, Pa.

TANCRED STRAIN White Leghorn Chix

$10.00 per 100; $47.50 per 500. Extra nice healthy chix, shipped cash on delivery. Write. Brookside Poultry Farm, McAlisterville, Pa.

BABY CHICKS

13 Leading Varieties—White Leghorns, Black Minorcas, Rocks, Reds, Wyandottes, Hamburgs, Spangled Sussex, Buff Orpingtons.

$9.00 per hundred and up.

Price Catalog and Price List.

Lantz Hatchery, Tiffin, Ohio

PENNSYLVANIA COOPERATIVE LEGHORN FARM

Breeding COCKERELS with RECORDS to 303 EGGS. PURE TANCRED-HOLLYWOOD-BARRON STRAINS White Leghorns—Brown and Buff Leghorns—QUALITY EXTRAORDINARY—PRICE WAY DOWN. Ship C. O. D. Get our prices quick.

Pennsylvania Cooperative Leghorn Farms Box 310, Grampian, Pa.

ULSH'S Superior CHICKS

White Wyandottes	$13.00 per 100
Wh. & Red. Rocks	12.00 per 100
Heavy Mixed	9.00 per 100

100% live delivery guaranteed. Postage paid.

JAS. E. ULSH, Beaver Springs, Pa.

Chicks from Blood-Tested Stock

Pennsylvania Supervised Flocks. Shipped C. O. D. Free Circular.

Sunnybrook Poultry Farm, New Berlin, Pa.



The Colony Brooder at State College

Modern Brooders

By H. C. KNANDEL

METHODS in brooding chicks today are vastly different from those employed a decade or two ago. Farmers who raise a few chicks each year may still rely on the old hen as a brooder. The commercial poultryman and the farmer who raises thousands of chicks have long since discarded the natural method of brooding.

The colony gasoline heater was in use twenty years ago, but it did not prove efficient or satisfactory. It was not until the advent of the colony coal-burning brooder that commercial poultry keeping began to make rapid strides. Then came the oil-burning brooder. Both have proved economical, satisfactory and efficient. The colony brooder, whether it be heated by coal, kerosene or electricity, has a definite place on most farms.

The colony poultry house, properly equipped, can be moved from place to place as the soil about the building becomes contaminated. Provided the building is well constructed, early-hatched chicks can be raised successfully. It is essential, however, that the chicks are not crowded. Not more than 300 to 350 chicks should be brooded under one stove. Overcrowding results in a high mortality and a large percentage of cull pullets.

The Continuous Type

Since the colony brooder has proved its worth, another stride forward has been made, namely, the long, continuous type of brooder. Instead of brooding chicks in a number of buildings with many fires to attend several times daily, the chicks are placed in one building with one fire as the source of heat. This building may be divided into numerous pens so that chicks of various ages may be kept separate. Heat is supplied by hot water. The central heater may be located in the center or at one end of the building. Pipes running the entire length of the building furnish ample heat at a uniform temperature.

In a system of this sort, less labor is required, a more uniform temperature is maintained and sufficient heat is always available. For successful brooding, these factors are essential.

The accompanying picture shows the new brooder house now in operation at the Pennsylvania State College. This brooder house is 243 feet long and 27 feet deep. The heater is placed in a pit at one end of the building. A concrete slab, ten feet in width, runs the entire length of the front of the house. On this slab are placed fly-screened sun porches. The chicks have access to these from the time they are a few weeks of age until they are placed in their laying quarters. In the gable of the building ample storage space is available for litter and equipment. The brooder house is equipped with running water, electric lights and labor-saving devices. Five thousand chicks are now being brooded in this building.

Battery Brooder

Still another type of brooding is the battery brooder which has recently made its appearance on the market. In this system chicks are placed on wire trays, one above the other, similar to fattening batteries. As the chicks develop, they are removed to [illegible] or to colony houses. Some battery brooders are equipped with feeding devices, while others are not. In the case of the latter, the [illegible] must be placed in a room where temperature is sufficient to [illegible] needs of the chicks.

The practice of raising chicks in battery brooders is becoming more general. The chief advantage of [illegible] brooders lies in the fact that they are sanitary. All droppings pass through the wire floor on which the chicks stand. Besides this the feed hoppers and water receptacles are attached to the outside of the brooder house so that the chicks in order to eat are compelled to force their heads between the [illegible] wires. From a sanitary standpoint, the battery brooder has no equal.

Before you purchase any brooder equipment, talk with several poultrymen who have used the type of brooder you desire to buy for some time. Then go out and look over their chicks. The quality and number of chicks produced may be used as a measuring stick to determine the type of brooder you should require.

Chicks and Ducks

I have an incubator set with chicken and duck eggs. I had thirty-five chicken eggs in it and got only seven chicks. Now it is time for the ducks to come off, but they don't seem to be able to get out of the shell. The shell seems too dry. What temperature should I keep it at, and also how often should I sprinkle the eggs? J. C.

IT IS not a good plan to hatch duck and hen eggs in the same small incubator because it is next to impossibility to maintain the proper temperature for each. Chicken eggs require a temperature of approximately 103 degrees throughout the [illegible] weeks, depending on the type of machine and location of the thermometer.

It is always well to follow the manufacturer's instructions. In the case of duck eggs, the temperature should be approximately 101 to 102 degrees for the first five days. After this the temperature should be maintained at approximately 103 degrees. The thermometer should be so placed that the bulb is on the level with the tops of the eggs, preferably touching the egg. In the thermometer [illegible] an infertile egg, the temperature recorded will be lower than the temperature of the fertile egg, as the animal heat which develops the embryo develops.

In most modern incubators it is necessary to turn the eggs [illegible] the fifth day. From this time on duck eggs should be turned [illegible] until they begin to pip. A certain amount of moisture is required in incubating duck eggs. They are usually sprayed with warm water after the fifth day. Sufficient water is used that it may run out of the nest. Duck eggs are usually sprayed each day until they begin to hatch.

In the future, be sure not to attempt to hatch duck and chicken eggs in the same incubator. Best results are usually obtained by keeping each class of fowls by itself. In this way it is possible to provide conditions exactly suited to the ducks, chicks, or turkeys as the case may be.

Now is The Time — to Get Ready for Early Winter Egg Profits

May and Early June Hatched "KERLIN-QUALITY" S. C. W. LEGHORNS

Guaranteed to Start Paying You Egg Profits in 5 Months

50% Production at 6 Months if Properly Fed and Cared For

Kerlin-Quality" Leghorns. World Famous—Big Winter Egg Producers. Big Chalk White Eggs—26 oz. to the Dozen. Get Premium Prices for Them.

Pennsylvania Farmers have long profited with Kerlin's high quality leghorns. They know that "Kerlin-Quality" Egg Records are the pride of the owner and the envy of the neighbors. These high egg records are also proved by our many cups, ribbons, and certificates won at National Egg Laying Contests. Mountain bred "Kerlin-Quality," Disease Free Birds are easy to raise, live and grow to quick maturity.



May and June are ideal months for brooding and raising chicks. The weather is good. Feeding and brooding operations cost less. You get nice big pullets ready to lay in 5 months—that will not go into a fall molt. And they will be in greatest production when egg prices are highest. In 6 months, if properly fed and cared for they will be laying 50% and over.

Read what a few of our customers have done with "Kerlin-Quality." You should do as well.

John Sikaski, Tyler, Pa., got over 70% production last December. From 280 "Kerlin-Quality" pullets he sold eggs for $254.05 in just one month. Think of it.

Mrs. R. T. Tomer, Murrysville, Pa., raised 94% of her Kerlin Chicks. She says they developed into the nicest, largest, layers she has ever seen.

Miss. Mayhall, Rockport, Ind., got nearly a 200 egg average from 165 "Kerlin-Quality" pullets—14 of them laid over 200 eggs each; 7 laid over 250 eggs each; and one laid 306 eggs—according to the trapnest record. The net profit was $5.10 each.

Big Reductions in Price for May and June Delivery

Our big 4-color catalog tells all about the World Famous "Kerlin-Quality" 300 Egg Blood Line S. C. W. Leghorns. It's free. Write for it today. It tells how you can make big profits with "Kerlin-Quality". Get our greatly reduced prices for May and June—100% live delivery.

FREE FEED with chick order. 20 lbs. Buttermilk starting feed free—prepaid with each 100 chicks.

Enter Our $1000.00 Cash Prize Contest

for letters on your experience with "Kerlin-Quality" Leghorns. Details on request.

Kerlin's Grand View Poultry Farm
Box 99-E Centre Hall, Pa.

R. R. Sitzinger, Ashland, Pa., got 243 egg average from his "Kerlin-Quality" pullets—net profit over $4.00 each.

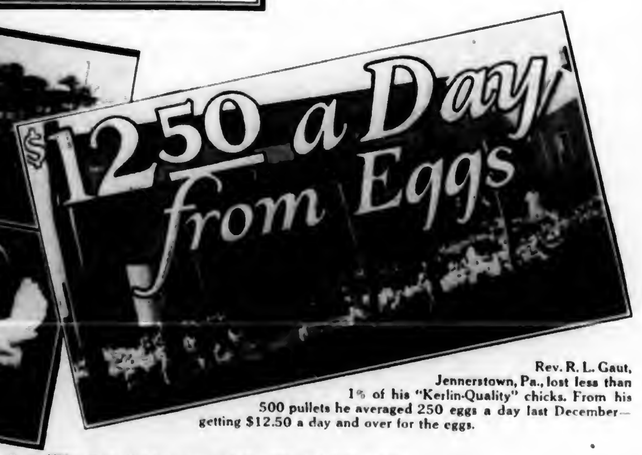
P. J. Thomas, Clover, S. C., made $5.35 each and on top of that his Kerlin pullets were so finely developed that he won 7 first prizes; 4 seconds; and 1 third prize at the Bethany, S. C. and Clover, S. C. fairs.

Mrs. Thos. Bates, Burghill, S. C., averaged 4700 to 5000 eggs a month from October to March, from 225 "Kerlin-Quality" pullets. Net profit $4.50 each.

Rev. R. S. Troxler, Lexington, N. C., got 3260 eggs last January, from 160 "Kerlin-Quality" Pullets—chicks delivered in May.



Kenneth N. Tracy, Hampstead, Md. bought 1000 "Kerlin-Quality" Chicks. His total net profit, from eggs, cockerels sold, and value of pullets at the end of their laying year was $2492.90. Mr. Tracy says: "Success in poultry is not an accident. You must have good chicks with years of vitality and egg breeding back of them. 'Kerlin-Quality' is away near the top."



Rev. R. L. Gaut, Jennerstown, Pa., lost less than 1% of his "Kerlin-Quality" chicks. From his 500 pullets he averaged 250 eggs a day last December—getting $12.50 a day and over for the eggs.

Stop "Keeping Chickens"—Let "Kerlin-Quality" Chickens "Keep You"

TIGHT BINDING TEXT CUT OFF

5% **LOST** 5%

Thousands of farms each year--

Consumed by high rate of interest and enormous commissions

The Federal Land Bank of Baltimore

SAVES FARMS

The best loan for the farmer

Interest 5%—semi-annual payments

5% 5%

- Write the Bank or confer with the Secretary Treasurer of your County National Farm Loan Association

List of Associations in Pennsylvania and West Virginia follows

PENNSYLVANIA

Name of Association	Secretary-Treasurer
Adams Co.	C. E. Stahle, Gettysburg
Allegheny Co.	Henry S. Bepler, Wexford, RD 1
Armstrong Co.	G. H. Burns, Jr. Burns Bldg., Kittanning
Beaver Co.	H. H. Wilson, Beaver
Bedford Co.	B. F. Madore, Bedford
Berks Co	J. W. Forry, 616 Washington St., Reading
Blair Co.	John Woodcock, Hollidaysburg
Bradford Co.	A. Carl Fanning, Towanda
Bucks-Lehigh Co.	Linford Foulke, Quakertown
Butler Co.	E. W. Humphrey, Butler
Cambria Co.	Ivan J. McKendrick, Ebensburg
Cameron Co., (Inc. in Clinton & McKean Co.)	
Carbon Co.	Alan S. Loose, Mauch Chunk
Centre Co.	Miss Alice I Thompson, State Col.
Chester Co.	S. E. Howell, West Chester
Clarion-Forest Co.	F. M. Mohney, Clarion
Clearfield Co.	J. A. Frank, Curwensville
Clinton-Cameron Co.	W. E. Shaffer, 144 E. Water St., Lock Haven
Columbia-Montour (inc. Northumberland)	C. W. Dicksun Berwick Sav. & Trust Co. Bldg., Front St., Berwick
Crawford Co.	Leland Culbertson, Mendsville
Cumberland (inc. Franklin), Emmett Woods, Carlisle	
Dauphin Co.	W. R. Zimmerman, 1827 North St., Harrisburg
Elk Co.	C. R. Rickard, Box 177, Ridgway
Erie Co.	Thos. W. Spofford, 512-515 Masonic Temple, Erie
Fayette Co.	M. B. Porter, Scottdale
Forest Co.	(Included in Clarion Co.)
Franklin Co.	(Included in Cumberland Co.)
Greene Co.	Allan A. Iams, Deer Lick, Pa.
Huntingdon Co., C. D. Fetterhoof, Huntingdon	
Indiana Co.	D. B. Tomb, Fourth Floor, Indiana Theatre Bldg., Indiana
Jefferson Co.	Mrs. Kathryn Hoffman Brookville
Juniata-Perry Co., Edgar A. Ulsh, Port Royal	
Lackawanna Co.	Mrs. J. O. Barrett, Room 308 Connell Bldg. Scranton
Lancaster Co.	N. E. Garber, Mt. Joy, R. 3
Lawrence Co.	D. E. Gleaner, 8 East St., New Castle
Lebanon Co.	Saylor F. Hartman, N. Railroad St., Palmyra
Lehigh Co.	(Included in Bucks Co.)
Luzerne Co.	E. D. Sutliff, Shickshinny, R.D.
Lycoming Co.	W. F. MacVeagh, R.D. 3, Muncy
McKean Co., C. W. Catlin, Port Allegany	
Mercer Co.	Jos. J. Weber, R. 1, Mercer
Mifflin Co.	P. Utley, Lewistown
Monroe Co., L. A. Achterman, Hollinshead Bldg., 2 N. 7th St. Stroudsburg	
Montgomery Co.	A. R. Krieble, Worcester
Montour Co.	(Included in Columbia Co.)
Northampton Co.	S. J. Cooper, Portland
Northumberland Co., (Included in Columbia-Montour and Union-Snyder)	
Perry Co.	(Included in Juniata-Perry)
Pike Co., (Included in Wayne and Monroe Co.)	
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Schuylkill Co.	G. M. Pearson, Pottsville
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Susquehanna Co., C. L. Van Scoten, Montrose	
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Venango Co.	Miss Helen Guyton, Franklin
Warren Co., P. E. Nelson, Allen Block, Warren	
Washington Co	J. C. Judson, Washington, 9 Court Square
Wayne-Pike Co., A. G. Rutherford, Honesdale	
Westmoreland Co., A. Scott Christner, Scottdale	
Wyoming Co	R. E. Frear, West St., Tunkhannock
York Co.	S. C. G. McCreary, R. D. 5, Dillsburg

WEST VIRGINIA

Name of Association	Secretary-Treasurer
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Berkeley-(Potomac)	J. T. Nadenbousch, Martinsburg
Braxton Co.	Included in Calhoun)
Brooke Co	(See Pan Handle)
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Calhoun Co.	Elliott Chenoweth, Grantsville
Clay Co.	(Included in Calhoun)
Doddridge Co.	(Included in Ritchie Co.)
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Greenbrier Co.	Miss Florence Gobeen Lewisburg
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Jackson Co. (Putnam), M. C. Archer, Ripley	
Jefferson Co.	F. L. Bushong, Charlestown
Lewis Co., G. N. Linger, 12 McGary Ave., Weston	
Lincoln Co.	Mrs. Lillian F. Sieffer, Hamlin
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Marshall Co.	(See Pan Handle)
Mason Co.	B. H. McNeill, Point Pleasant
Mercer Co.	W. W. Rogers 1st Nat'l Bank Bldg., Princeton
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Monongalia Co.	T. Nelson Stewart, Morgantown
Monroe Co.	R. M. Humphreys, Union
Morgan Co., Roy A. Everett, Berkeley Springs	
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Pendleton Co.	(See Pan Handle)
Pleasants Co.	(Included in Ritchie Co.)
Pocahontas Co.	P. T. Wiel, Marlinton
Preston Co.	I. F. Everhart, Terra Alta
Putnam Co	(See Jackson Co.)
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Upshur Co., Will T. Burnside, Buckhannon	
Wayne Co	C. E. Walker, Wayne
Wetzel Co.	(Included in Ritchie Co.)
Wirt Co.	High Prather, Elizabeth
Wood Co.	A. B. Ireland, Parkersburg



Nest Box Notes

IN BROODING chicks it is important to regulate the stove so that the temperature will be sufficient under the hover, but at the same time the temperature of the rest of the house must not be too high. I noticed in some of my brooder houses the other day that the temperature was about at 70 degrees, and the chicks were not comfortable. In fact some under the hover were dead. Plenty of ventilation is necessary, but there must be no draft.

• • •

ON MOST farms there is plenty of room for a colony house on clean ground. Old orchards have been ruined by some chicks. The edge of a wood lot is an excellent place. A clean range gives the chicks a chance to grow, keeps them away from infestation and contagion. It is good policy to set the brooder house on the leeward side of the fence to the prevailing winds, and to see that a porch is provided to keep the chicks off the ground. Even then there is the danger of carrying in contaminated dirt on the feet.

• • •

SPEAKING of sanitation reminds me that a wire screen floor is perhaps the best type. One-half inch square mesh wire is the kind to use. Even small chicks will walk on it without trouble and it is coarse enough to let droppings through and so keep sanitary.

• • •

IN TALKING to poultrymen whom I meet I am surprised to find how many of them are interested in improving the quality of their birds by trapnesting, blood-testing, purchase of pedigreed cockerels for use in their breeding flocks, etc. Those who buy chicks are patronizing hatcheries which employ these methods of flock improvement. Not so long ago it was sufficient to advertise "farm raised, free range pure-bred stock, but those days are over. Intelligent buyers take those things for granted now and are asking about production records, pedigrees, flock averages and such things.

• • •

BREEDING up a good strain of poultry is not a matter to be accomplished over night and the men who have been at this or are starting now will be in on the ground floor when the demand for improved strains becomes general.

• • •

THE time has come to get out the lawn mower and put away the hoe shovel. Any one who has a nice lawn will be assured of plenty of green feed for the young chicks, for short lawn clippings make one of the best forms of green feed to be had. It is always a satisfaction to be able to do two jobs at once, as happens when you are cutting the lawn and getting greens for the chicks at the same time.

• • •

KEEP a watch on the layers. Any bird which is not producing eggs at this season of the year is no good, and is better off in the pot or in the butcher's crate than anywhere else. At this season of the year, while production is heavy, eggs are low and there is the added expense of rearing the chicks, so this is no time for loafers in the laying flock.

• • •

Will you please tell me how to prevent blackhead in turkeys?

Russell Hannah.

IF you are going to raise turkeys, let me suggest that you hatch the eggs in incubators, brood the poults in brooder houses, and keep the young turkeys on clean ground entirely away from old turkeys and common chickens, as by these methods you will make turkey raising as safe as possible.

R. L. S.

BABY CHICKS

For March and April Delivery. 100% live arrival guaranteed.

	25	50	100	500	1000
White Leghorns	$3.50	$6.50	$13.00	$57.50	$110
Barred Rocks	4.00	7.50	14.00	67.50	130
Rhode Island Reds	4.00	7.50	14.00	67.50	130
Silver Laced Wyandottes	4.50	8.50	16.00	75.00	
Light Mixed	3.00	5.00	9.00	42.50	80
Heavy Mixed	3.50	6.50	12.00	57.50	110

These chicks are hatched from healthy free range stock. Write for Catalogue.

THE RICHFIELD HATCHERY, Box 166, Richfield, Pa.

PENN'A CHICKS FOR MAY

Have vim and vigor—hatched by men with 18 years experience. Prepaid and 100 per cent live delivery guaranteed. S. C. White and Brown Leghorns, 9c each; Rocks, 10c; Reds and Minorcas, 12c; Heavy mixed, 8c; Light breeds, 8c; $70.00 per 1,000. Circular free.

THE PENNA. HATCHERY, Liverpool, Pa.

CHICKS

8c up. Healthy, free range stock. Reds, Wyandottes, Leghorns, Mixed. Circular and price list. Delivery guaranteed.

LONG'S RELIABLE HATCHERY
Box 16, Millerstown, Pa.

BABY CHICKS

	25	50	100
Tancred Str. W. Leghorns	$3.00	$5.50	$10
S. C. Brown Leghorns	2.00	3.50	10
S. C. Barred Rocks	2.50	4.50	13
S. C. White Leghorns	2.75	5.00	9
(May Prices) Assorted chicks	2.50	4.50	8

100% live delivery. Postpaid. Per 500 and 1000 lots we have a special price.

Chester Valley Hatchery, R. 2, McAlisterville, Pa.

Chick Prices for May deliveries. S.C. Leg'n, $9.00,-100; Brd. Rocks and Reds, $11.00,-100; Heavy mixed, $10.00,-100; Light mixed, $7.00,-100. 100% live arrival guar. Cir. free. Penn's Creek Hatchery, Selinsgrove, Pa.

Klines' Barred Rocks

Healthy stock, Penna. State College males. Strong chicks guar. Summer prices, $12.,-100; $110.,-1,000; $500.,-5,000. S. W. KLINE, Box 29, Middlecreek, Pa.

Baby Chicks from High Egg Laying Flocks

11 years reliability. Satisfied Customers our specialty. Prices Reasonable. Write for catalog and price list.

BUCYRUS HATCHERY CO.,
Box 415. Bucyrus, Ohio

STOP! LOOK! and take notice to the special low prices on Cleveland's husky chicks for May delivery.

	25	50	100
Tancred strain White Leghorns	$3.00	$5.50	$10
Everlay Strain Brown Leghorns	3.00	5.50	10
Barred Rocks and S. C. Reds	3.50	6.50	12
Light mixed	2.75	4.50	8
Heavy mixed	3.00	5.50	10

100% live delivery guaranteed, parcel post prepaid. Special prices on 500 and 1000 lots. Free circular.

COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

ZELLER'S EXTRA QUALITY CHICKS

from Large Type S. C. White Leghorns. Trapnested, production bred matings $10 —100; $17—500; $150—1000. Also quality Rocks and reds 10% books order.

EDGAR A. ZELLER,
2014 Manada St., Harrisburg, Pa.

CHICKS from heavy laying strains.

	100	500
S. C. White Leghorns	$10	$46
Barred Rocks and S. C. Reds	10	48
Heavy mixed	10	45

Mitchells Reliable Poultry Farm, Millerstown, Pa.

BABY CHICKS

100% Arrival.

	25	50	100	500
W. Leghorns and B. Mixed	$2.75	$5.25	$10.00	$47.50
Barred Rocks and Reds	3.25	6.25	12.00	57.50
Light Mixed	2.50	4.75	9.00	42.50

JOHN SHADEL HATCHERY, R. 2, McAlisterville, Pa.

Chicks, Barron Eng. Wh. Leghorns 9c

W. Leghorns 8c; Barred Rocks 10c; heavy mixed 8c; Half-c. Reduced on large orders. 100% guaranteed. "New Circular Free." May 20th and later delivery.

TWIN HATCHERY, McAlisterville, Pa.

Something New in SEED CORN!

A different Seed Corn—bigger and better crops

Prepared in the only Testing Plant of its kind in the East. Hoffman's Seed Corn gives your crop a running start. Vitality that means 100% germination tests the usual thing. Vigor that starts your crop off with a dash and keeps it growing ahead. A better seed at regular corn prices.

It is money in your pocket to investigate before you plant. Ask us for folder describing this new proposition and for free samples of your favorite varieties.

A. H. HOFFMAN, Inc.,
Box 743, Landisville,
Lancaster Co., Pa.

HOFFMAN'S Super Seed Corn

THE BRUNER WEEDER AND SPACER



R. G. BRUNER MFG. CO.
230 W. Bennett Blvd. Peoria, Ill.

STANDARD GARDEN TRACTOR

Plows Seeds Cultivates Mowing and Lawns

A Powerful Tractor for Small Farms, Gardeners, Florists, Nurseries, Parks and Estates

DOES 4 HEAVY HORSE JOBS

Weighs 4 Times Less Than Other Tractors—Does Best Work

Free Catalog Tells Why

STANDARD ENGINE COMPANY

2621 Como Ave., Minneapolis, Minn.

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RAISE YOUR CHICKS



STOP THAT BOWEL TROUBLE

Wacker Remedy Co.,

C.O.D. Orders Postage Paid. PREPAID in Parcel Post Zone

Be Sure It's WACKER'S and Genuine

BABY CHICKS

WILL SHIP C. O. D.

S. C. White Leghorns ..... $10.00 per 100
Barred Rocks ..... 12.00 per 100
Heavy mixed ..... 10.00 per 100
Light mixed ..... 9.00 per 100
Special prices on 500 and 1,000 lots. One hundred per cent live delivery guaranteed.

SWARTZ POULTRY FARM
Earl Swartz, Route 2, Hillsboro, O.

LOOK!

Baby Turkeys and Hatching Eggs



Mammoth Bronze, Bird Bros. strain of prize winners. White Holland, prize winners at Interstate Show, Chicago, Ill. Narragansett, Adell's strain of prize winners. Bourbon Reds, Arndt's strain of prize winners. Hundredth weight. Prices reasonable and guaranteed. Catalogue free.

NAGOR POULTRY FARMS, Box Z, Sunbury, O.

FAIRMONT'S BETTER PURE BUTTERMILK

EASTERN DISTRIBUTORS CARLOADS ALWAYS FRESH. WE QUOTE SOLICITED.

ONWARE BROS., GREENSBORO, PA.

PARKS BRED-TO-LAY

Leaders in the production of high quality chicks. Pullorum tested breeds. 95% to 100% live delivery guaranteed. Write for catalog and prices. Let us help you about your chick problems.

J. W. Parks & Sons, Box C, Bloomington, Ill.

FERRIS STOCKS WHITE LEGHORNS

CHIX

Our breeders are large, vigorous, rectangular bodies. Selected for size and egg production.

$12.00 per 100; $57.50, 500; $110, 1000

JUNIATA POULTRY FARM, Box F, Pittsburg, Pa.

Hampton's Black Leghorns

The kind that lay.

A. E. HAMPTON, Box F, Pittstown, N. J.

TANCRED WHITE LEGHORNS 12c each; 8c; White Leghorns $9.00-100; Assorted $11.00-100; Barred Rocks $11.00-100; R. Rocks $11.00-100; Heavy Mixed $11.00-100; Light Mixed $9.00-100. Heavy Mixed $11.00-100; Light Mixed $9.00-100. Sixteenth season.

Eclipse Hatchery, Port Trevorton, Pa.



Mr. Harry M. Woodside, Dictator Ventures, Proprietor of WOODSIDE'S GUM, writes:

"My first car was a [illegible] It surrounded with Goodyear Tires. I am still using Goodyears and would like them almost exclusively on my passenger cars and trucks. I should indicate my confidence in Goodyear tires with the fact that [illegible]

Goodyear contains [illegible]

Here's a *low-price* tire you can't call a "*Second-liner*"!

Outstanding quality makes the new Goodyear Pathfinder superior to many makers' highest priced tires

If that headline is true, you'll admit it's great news for the tire-user.

Well, it *is* true. Just you try the new Goodyear Pathfinder tire and you'll see how completely true it is.

Goodyear considers this great new tire for the moderate-price field an economic triumph, and is proud to mark it with its name and seal.

You'll agree—when you experience the benefits of the new Pathfinder's massive and rugged construction, its deep-cut thick tread, and of other important features like these:

1. **A *balanced* tire, with all parts equally durable.**

2. **The powerful carcass is made of genuine Supertwist cord, with its matchless vitality and resistance to fatigue.**

3. **The heavy tread is wide, designed for slow even wear, and it delivers exceptional traction and non-skid protection.**

4. **Tread materials embody the same principles of rubber toughening as distinguish the famed Goodyear All-Weather Tread.**

5. **Materials, workmanship, and inspection are to the strict Goodyear standard.**

6. **Available in both High Pressure and Balloon sizes.**

No, even if it is low-priced, you can't call the new Goodyear Pathfinder a "second-liner" tire—it is "first-line" quality and superior in most cases to the highest price tires built by many manufacturers.

Try it—and your home-town Goodyear Dealer's money-saving service—and see how much farther your tire money goes than ever before!

GOODYEAR

Copyright 1929 by The Goodyear Tire & Rubber Co., Inc.

THE GREATEST NAME IN RUBBER

No story makes more fascinating reading than "The Story of the Tire," which, as a tire-user, you will find it to your advantage to read. We have prepared a very complete and interesting book for you on this subject, which we shall be happy to send to you free upon request.

The Goodyear Tire & Rubber Co., Inc., Publishing Department, Akron, Ohio

Gentlemen: I should appreciate your sending me a free copy of "The Story of the Tire."

Name ..... Address .....

TIGHT BINDING TEXT CUT OFF

"Cheap" paint, like "Cheap" seed, "Cheap" land and "Cheap" help is money wasted!









Only the best paint, skillfully applied, is ever economical

"*Cheap*" seed will produce a cheap harvest. "Cheap" land will be comparatively unproductive. "Cheap" labor will be shiftless, incompetent and more of a loss than a profit. These are self-evident facts.

And so it is with "cheap" paint. It is offered at a "low" price—with claims that are usually extreme—with reasons that are sometimes plausible in a superficial way. But it is always *a waste of money*.

"Cheap" paint isn't cheap at all

Price per gallon has little to do with economy. It is service *on the wall* that counts.

"Cheap" paint can't cover because of its poor body. Where fine old SWP House Paint covers 360 sq. feet per gallon (2 coats) the best of "cheap" paints covers only 250 sq. feet per gallon (2 coats).

Where 7 gallons of fine old SWP will do a two-coat job on an average size house or other building, 4 gallons *more* of "cheap" paint are required.

Figure that out and you'll find that the "cheap" paint required costs just as much or more than fine old SWP.

***BUT* a beautiful SWP job needs renewing only once in five years, on the average. "Cheap" paint begins to chip, chalk, peel *—in no time.* In five years, it may have to be done over completely, one, two or even *three times.* And it always has a *cheap* look.**

So fine old SWP—even at a little higher price per gallon—costs only about half as much as "cheap" paint *on the wall*.



See "Paint Headquarters" before you buy any paint

Don't fall for any "slick" paint propositions. They are terribly costly—as many a man has found to his sorrow. You will save money by calling upon your local Sherwin-Williams dealer at "Paint Headquarters." He is a reputable dealer whose integrity is established and whom you know personally.



The extravagant "low price" offer is usually "cheap" paint

Let him give you an estimate on the gallonage of fine old SWP that you will need. Compare it with what "cheap" paint will cost you. And for real economy have your painting done by an experienced Master Painter, if possible.

If you do not know the local Sherwin-Williams dealer, write us. We will send his name and address and a copy of the famous Sherwin-Williams "Farm Painting Guide," which saves costly mistakes. It is free.

THE SHERWIN-WILLIAMS CO.
CLEVELAND, OHIO
Largest Paint and Varnish Makers in the World

SHERWIN-WILLIAMS
SWP HOUSE PAINT
PAINTS · VARNISHES · ENAMELS · INSECTICIDES

Poultry Problems

Chick Mash

An writing in regard to a mash for baby chicks. Here is the mash: Seven hundred pounds ground yellow corn, 100 pounds ground wheat, 200 pounds wheat bran, 250 pounds flour middlings, 200 pounds dried milk, 200 pounds meat scrap, 200 pounds alfalfa leaf meal, 50 pounds bone meal, 25 pounds limestone grit, 20 pounds cod liver oil, 30 pounds charcoal, 25 pounds salt.

The approximate cost of this mash here without dried milk is $2.50 per 100. Can I feed liquid sweet milk in place of dried milk? We ship milk [illegible] hence the question of whether it were a any financial gain or loss. Should I feed this mash wet or dry. If you advise feeding liquid milk, what and how much shall I use for [illegible] this mash is for Rhode Island [illegible]

A. G. H. C.

I BELIEVE that it will pay you to ship your liquid milk and buy dried milk for your mash. Dried skimmilk or dried buttermilk are really by-products in dairy manufacturing and are hence cheaper per unit of feed available than whole milk for human consumption. In addition, liquid milk is somewhat troublesome to feed to chicks. The mash should be fed [illegible] and ample hopper space must be provided so that all the chicks can have access at the feed. One inch per chick is the allowance when the chicks are small, and this should be increased as they grow older.

R. L. S.

Cod-Liver Oil for Turkeys

Should cod-liver oil be added to the turkeys' feed in the beginning or wait until they are about three weeks old? Which would you prefer to let little turkeys run with a turkey hen or a chicken hen? Would you keep them off the ground until they are about eight weeks old? Mrs. John F. Myers.

I WOULD prefer to start in at once with the cod-liver oil, certainly no later than the first week.

Turkey raisers who have had outstanding results in bringing their poults through with low mortality have raised them under artificial conditions, entirely out of contact with both chickens and adult turkeys, as these may be carriers of various diseases and parasites which affect poults. Of course when not enough poults are raised to make the use of incubators and brooders a paying proposition, either a turkey hen or a chicken hen must be used to incubate and brood. Under these circumstances I would prefer a turkey hen, even though she is more intractable than a chicken. It would probably be better to keep them all off the ground for six or eight weeks, unless you are sure of absolutely clean range, in order to avoid chance of still further infection.

I wonder if it would not be possible for you to invest in some inexpensive brooder equipment, however, in order to take as much risk as possible out of raising the poults?

R. L. S.

Sun Porch

I am going to try to raise my chicks in a sun porch and am interested in the information and plans you referred to in a previous issue of the Pennsylvania Farmer. I was thinking of making the bottom of the porch of one-fourth-inch hardware cloth, and sides and top with one-inch poultry netting (that of course does not make a fine screen), porch about 6x12 or 14 feet. Is the above near right for porch?

J. C. Vite.

YOUR plans for a sun porch are all right, except that I would recommend from my own experience the use of one-half-inch mesh wire for a floor. The chicks will do very nicely on it, and the coarser mesh will let the droppings through better and keep cleaner.

R. L. S.



FOR more than ten years we have been helping our customer-friends to fill their egg baskets, for, right from the start, we determined to make Bull Brand Poultry Feeds the finest quality, the most productive of any on the market. And because we have always stuck to that policy and put our level best into our feeds, B-B has a world of friends who swear by it and will not use any other.

Results Are What Count

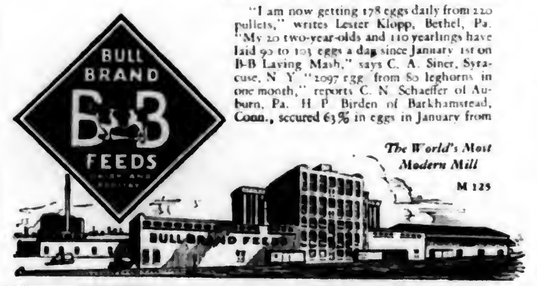
No wonder these poultrymen believe in B-B! Read this letter that I got from one of them the other day:

"In October, I became dissatisfied because my birds did not produce. I was using a high grade, highly advertised commercial Feed. I decided to put 50 birds on B-B All Brand, 50 on my own mixture and keep [illegible] the feed I had been using. During October the B-B hens led the contest by 85 eggs. Then I took the poorest pen and put them on B-B and they came right up to the other B-B pen. Now I am using B-B exclusively."

(Signed) CHAS PIKE, Spring City, Pa.

How We Filled Their Baskets

"I am now getting 178 eggs daily from 220 pullets," writes Lester Klopp, Bethel, Pa. "My 20 two-year-olds and 110 yearlings have laid 90 to 101 eggs a day since January 1st on B-B Laying Mash," says C. A. Siner, Syracuse, N. Y. "2097 eggs from 80 leghorns in one month," reports C. N. Schaeffer of Auburn, Pa. H. P. Birden of Barkhamstead, Conn., secured 63% in eggs in January from his 6-month-old pullets. "B-B Poultry Feeds will double the profits of any poultryman," say Woglom Brothers, Prince's Bay, N. Y.



A Feed For Every Age

There's a B-B Feed for every period of a chicken's growth. Start your chicks on B-B All Mash starter Ration or B-B Chick Starter and B-B Chick Feed, and at the proper time change over to B-B All Mash Growing Ration or B-B Growing Mash and B-B Developing Feed. Then follow with B-B Laying Mash and B-B Scratch Feed for early and steady egg production.

All of these feeds are guaranteed. You will get better results from the chick and growing feeds and bigger production from the poultry feeds per dollar of feed cost or you can go to your dealer and get your money back. You are to be the sole judge of results.

FREE to You: Book on Care and Raising of Poultry

"Making Poultry Pay a Profit" is the title of a 64-page booklet written by Professor L. N. Gilmore of Syracuse University, a noted poultry expert. How to select eggs for hatching; how to get most out of the incubator; brooding problems; how to tell vigorous chickens; increased laying records; poultry diseases; marketing eggs for bigger profit—these are a few of the subjects it covers. It also contains a complete system for keeping record of flock production and expenses.

Simply fill out the coupon below and it will be sent to you without cost or obligation. Mail it today so that you will have it to help you with your chick problems.

Maritime Milling Co., Inc., Buffalo, N. Y.

"UNCLE CHARLIE"
Care of MARITIME MILLING CO., INC.
1004 Chamber of Commerce Bldg.
Buffalo, N. Y.
Send me a copy of your Professor Gilmore's 64-page book, "Making Poultry Pay a Profit." There is no charge or obligation to me.

Name _____
Street or R. F. D. No. _____
City _____ State _____

WHITE CAMPINES — Greatest All-Year-Round Layers
Surprise to Leghorns. One customer writes: "243% net profit on 5 months." Another "A flock of 31 hens laid an average of 199 eggs in a year." Still another: "219 Leghorns had 54% production in Dec. and 51% production in Jan. while 315 White Campines had 42% production in Dec. and 70% in Jan." CATALOG FREE; stamps appreciated.
NABOB POULTRY FARM, Box 22, Gambier, Ohio

QUALITY CHICKS
Chicks From winter laying farm raised mature stock. S. C. White Leghorns, R. I. Reds, Barred Rocks, White Wyandottes, Anconas, Black Langshans, White Minorcas, White Plymouth Rocks, Black Minorcas, Polish and Indian Runner Ducks. $12.00 per 100 up. Late delivery guaranteed. Parcel Post prepaid. Hatching eggs $7.00 per 100 up. Several breeds rabbits. Circular free. Shipments will be made from our 40 acre hatcheries, located the home.
GLEN ROCK NURSERY & STOCK FARM, 709-B Ridgewood, N. J.

Chick Bargain — IMMEDIATE DELIVERY
FREE Course in Poultry Raising — 7½¢
BIG-BE CHICKS (if desired). Three breed Mixed Chicks 100, $6.00; 500, $27.50; 1000, $50.00. World's Lowest Prices for quality offered. Write us on Prize cards. $1.00 per 100 less. Progressive chicks from high-producing stock. Big-Be Chicks are hatched right, fed right, developed right and shipped right. 100% alive, prepaid. Poultry course, 10 lessons, free with records of poultry raising, FREE to customers. Write now for FREE CATALOG & BARGAIN PRICES.
SMITH BROS. HATCHERIES, Box 385, BRENHAM, TEX.

BEST CHICKS YET
Ohio Accredited chicks. Every breeding bird banded. Strong, healthy and well bred flocks carefully bred for high production.
WE SHIP C. O. D. $2.00 books order. Pay the postman for your chicks when they are delivered. Illustrated catalog and price list on request. Prices reasonable. Quality high. Write today.
BLUFFTON HATCHERY, Box H, Bluffton, O.

HILL SIDE CHICKS
Will Ship C. O. D.
May Chicks as Low as 8c.
S. C. R. I. OWENS STRAIN REDS
S. C. W. L. TANCRED and WYCKOFF Strain
HEAVY MIXED LIGHT MIXED
100% live delivery P. O. Paid All free range stock.
T. J. EHRENZELLER, Prop.,
United Phone Box 11, McAllisterville, Pa.

BABY CHICKS C.O.D.
Send no money, just mail your order. We ship C. O. D. and guarantee 100% delivery of chicks. From purebred, inspected and culled flocks.

Prices as	25	50	100
S. C. Wh. and Br. Leghorns	$3.00	$5.50	$10.00
Rd. Rocks and R. I. Reds	3.50	6.00	12.00
Wh. Rocks and Wh. Wyandottes	4.00	7.50	14.00
Broiler Chicks	2.50	4.50	8.00

Bellefonte Poultry Farm, Box 900 Bellefonte, Pa.

TIGHT BINDING TEXT CUT OFF

McCORMICK-DEERING Corn Planters and Drills

are famous for their reliability



A well-prepared seed bed, tested seed, and favorable weather are not enough. The crop must be planted right! A planter that misses, mixes hills, or scatters, makes you lose money. Play safe—use a reliable McCormick-Deering Corn Planter.

THE McCormick-Deering "100 Series" planter will plant corn accurately any way you want it planted. It has a simple, three-speed seed-plate drive that enables you, without stopping the team, to plant 2, 3, or 4 kernels to a hill when checkrow planting. The variable-drop drive and three gear-and-chain combinations provide 9 different seed spacings when drilling, without changing the seed plate. A built-in, power hill-drop enables you to bunch-drop-drill by making a simple change in the heavy-duty clutch.

The planter boots are of approved design. Sure-shot, plunger-type valves deposit the seed without fail each time the check-wire button trips the release. Valves can be locked open for drilling.

If you prefer a planter for checkrows only, ask the McCormick-Deering dealer to show you the McCormick-Deering No. 8 Wire-Drive Planter. It is one of the simplest planters built—very practical and durable. The seeding mechanism is operated by a dependable check-wire drive. Flat, edge, or full-hill drop plates, combination pea-and-bean hoppers, fertilizer attachments, runners, stub runners, and disk openers can be supplied.

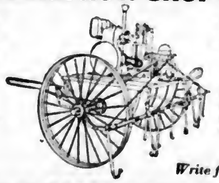
INTERNATIONAL HARVESTER COMPANY
606 So. Michigan Ave. of America (Incorporated) Chicago, Illinois

Our 16-page Corn Planter folder describes the No. 8, the "100 Series", and the special equipment in detail. Also tells how to test seed corn. Write to the address above for a copy.

Mount Gilead
HIGH PRESSURE ROW CROP SPRAYERS

Cylinders, Valves and Piston Rods of STAINLESS STEEL for longer life.

Only Mount Gilead rigs have this feature.



Fully enclosed pump, self oiling, completely accessible. Welded steel frames.

A complete line—2, 3, 4, 6 and 8-row crop sprayers including traction driven rigs and combination orchard and crop outfits.

Write for catalog and prices.

THE HYDRAULIC PRESS MANUFACTURING CO.
505 LINCOLN AVENUE MOUNT GILEAD, OHIO

PLOWS ROCKY, HILLY LAND
OR MONEY BACK!

Hitch the 16-inch single bottom Ferguson WHEEL-LESS Plow to your Fordson and go into any field that you can plow with horses. We guarantee to plow it, no matter how rocky or hilly it is, *or money back!* You can't lose. Neither can we because the Ferguson always makes good! A great corn borer plow.

Delivered Direct from Factory to You—Price reduced from $88.00 to $69.75—you save $18.25! Plow shipped complete, set up, ready to put in field. Backed by our guarantee. Order now. Only a limited number will be sold. Write for free booklet: "The Turning Point in Power Farming."

FERGUSON-SHERMAN, Inc., P.O. Box F, Evansville, Ind.

Information on 2-Gang WHEEL-LESS Plows on request.

NOW $69.75 (SAVE $18.25) easy terms



Genuine Ferguson WHEEL-LESS PLOW

Certified Seed Potatoes

Quaker Hill Farm

NORTHERN MICHIGAN RUSSETS—PRINCE EDWARD ISLAND COBBLERS AND MOUNTAINS—NEW YORK RUSSETS AND RURALS

High-yielding strains—Officially inspected and certified. Let us quote prices on your requirements of potatoes and other farm seeds.

E. C. LIVERMORE, BOX P, HOMEOYE FALLS, N. Y.

Garden and Truck Crops

By GILBERT S. WATTS

"PRECISION" hoeing cuts growing costs, reads a current advertisement of wheel hoes. What truth there is in that simple ad! It not only commends an essential tool which should be on every home and commercial gardener's list but introduces a word which should be made to apply to gardening operations to the fullest possible degree. Exact, accurate wheel hoeing or other cultivation now at the beginning of the season will wipe out at small cost weeds that could not be removed later without great expense and injury to the crop. In fact precision may be the means of cutting costs or increasing returns in many phases of gardening. Precise seeding at correct depth and at an exact rate insures good stands. Precise thinning to proper distances results in earlier maturity and a more fancy product. And so forth. Slip-shod gardening cannot win in the keen competition that prevails.



• • •

THE fertilizer distributor has been busy. It is a tireless, accessible piece of machinery on every vegetable farm yet it ordinarily does its most rapidly. The chemical nature of most fertilizers may induce heart rust and corrosion. Extraordinary care is required to prevent an excessive mechanical deterioration, with the attendant delays and loss of use. Without good care the inherent long life of the machine never can be realized.

One of the best systems is to run the distributor empty each time it is used. Then if possible it should be turned upside down and bumped to knock out adhering fertilizer. Finally, if a good strong stream of water is available from a hose nozzle I believe there is no better plan than to wash thoroughly with water, allowing the machine to dry in the sun or in an airy place. At the end of the season when the machine is stored similar procedure should be followed but all metal parts should be well oiled after drying.

• • •

IT IS interesting to watch the great increase in the use of lettuce. In 1899 the total lettuce acreage in the United States was only 2,631. By 1927 this had increased to 76,410 acres. In recent years the variety New York, known in the stores as Iceberg, has become most important. Solid heads and ready sale but often are difficult to produce in our relatively humid eastern climate with the chance of hot days. However, in spring and fall good crops of this variety are fairly common and even though the heads do not always become as solid as the western product the quality is unexcelled.

On my roadside market, for example, we have developed a large trade for loosely headed New York 12 since. Home gardeners should take notice of the wonderful qualities of this variety when used just before it reaches the hard headed stage. Plant early in the spring and again about the middle of July or the first of August.

• • •

FEED the asparagus liberally if you would have a large proportion of thick, first-class spears. Remember we cheat the asparagus plant out of the best part of the growing season by cutting off all the growth it sends up for many weeks. Then we expect it to store enough plant food in its roots during the remainder of the summer to make a satisfactory crop next spring.

Anything less than 1,000 pounds per acre of 5-8-7 or a similar mixture is inadequate on most soils. Some growers apply double this amount. A common practice is to work the fertilizer well into the soil at the close of the cutting season and make one or two additional applications of nitrogen, sometimes potash also, at intervals of several weeks.

• • •

"STARTING Early Vegetable and Flowering Plants under Glass" is the title of a new book which is certain to prove most useful. Mr. C. H. Nissley, the author, has had personal experience in growing plants and in addition has enjoyed unusual opportunities to observe the plant-growing operations of others. A wealth of photographs and sketches has been included. The book is worthy of study by experienced plant-growers and beginners will find it indispensable not only as a guide to the growing of plants but for suggestions and information in erecting plant-growing structures. Available from Orange Judd Publishing Company, 15 East Twenty-sixth Street, New York.

• • •

THE 1929 convention of the Vegetable Growers' Association of America will be held in Philadelphia during the week beginning August 19th. Details of the program will appear in these columns at a later date. Every Pennsylvania grower who specializes in vegetables should begin planning now to attend these meetings. Any one who is not a member of the Vegetable Growers' Association of America and wishes to join should communicate with Mr. Frank Heid, 367 North Ninth Street, Philadelphia, Pennsylvania.

• • •

Parsnips

I wish to ask your advice about growing parsnips. Which is the best way to prepare the soil for them, what kind of fertilizer to use, when to get the seed? We have a splendid market and demand for them. W. S.

PARSNIPS are not difficult to grow but will be smoother and more free from small roots and branches if grown in a sandy loam. Plow fairly deep and fertilize with a standard potato or truck mixture that does not contain a too large proportion of nitrogen.

Sow fairly early in the spring, probably about May 1st, in rows 18 to 30 inches apart as may be convenient. Thin the young plants to stand four or five inches apart in the row. This operation is extremely important. If it is neglected the crop will be small and misshapen.

• • •

Sweet Clover

Will you please give me some information about scarified sweet clover? When is the best time to sow? How much per acre, and do you mix the clover with timothy? Guy E. Erskine.

SWEET clover is no longer an experiment. Thousands of farmers are growing it and are greatly pleased with it. No other crop is equal to it as a soil builder. Sow 15 pounds of scarified, inoculated sweet clover per acre. It can be sown in the spring with wheat or oats and about the first of August with a nurse crop or alone.

• • •

Bush Lima Beans

The past two seasons we have been having trouble trying to grow bush Lima beans. The bushes are full of bloom but no beans form in the pods. The soil is sandy. The season have been very wet. U. N. Wemer.

THE trouble you have experienced with your Lima beans becoming mouldy is very common in wet seasons. Although I have never done so I understand that this disease may be controlled by spraying with Bordeaux mixture. I also would suggest that you be very careful to discard all spotted or diseased bean seed in planning.



Isbell's New Muskmelon for 1929
SUGAR ROCK

A valuable New Variety of a Distinct Type. *Sweet as sugar and solid as a rock.* Sells on sight and its marvelous flavor brings the buyers back for more. A splendid long distance shipper. On account of its heavy netting and tough rind, can be thoroughly ripe before picking. A remarkable heavy yielder, 5 to 7 perfect fruits to the vine. *A real money maker.*

Sugar Rock was developed and named by an experienced melon grower, who sold $1000.00 *from fourteen acres.* This was the best paying crop he ever grew. Our seed was grown by the originator and bears his seal.—Prices: Oz., 50c.; ¼ lb., $1.25; lb. $3.95, postpaid.

ISBELL'S 1929 CATALOG contains a full description of this and other valuable varieties. A copy is yours for the asking, also Market Gardeners Special Price List.

ISBELL SEED COMPANY
188 Mechanic St. Jackson, Mich.

"SAFETY FIRST"



"Run away! That's no place for a little bug like you! Can't you see those vines are sprayed with Pyrox?"

PYROX, the scientifically prepared triple-duty plant spray KILLS BUGS, prevents the development of blight and disease, and stimulates plant growth. Users report $25, $35, and $50 EXTRA PROFIT per acre from potatoes and other vegetables sprayed with PYROX. Safe, quick, and easy to use—and sticks. All sizes from 1 lb. pail to barrels. Now priced lowest in 20 years' successful use. Write us or ask your dealer for new Spray Guide—free. Bowker Chemical Company, 429 Fourth Avenue, New York.

Pyrox

LE ROY
(Evans-Superior)
Potato Planter



High percentage of accuracy in operation—a leader since 1895. Extra for all old models.
Ask for circular.
LeRoy Plow Company, LeRoy, N.Y.
Makers of Farm Implements

STRAWBERRIES
100% HEALTHY. TRUE-TO-NAME
Prepaid from dest. for your order. Satisfaction guaranteed.

	50	200	500	1,000	5,000
Premier (Early)	$0.60	$1.30	$2.25	$4.50	$21.25
Fairfax (Early)	.50	1.00	2.00	3.75	17.45
Big Joe (Early)	.60	1.30	2.25	4.50	21.25
Chesapeake (Early)	.60	1.30	2.25	4.50	21.25
Dunlap (Early)	.65	1.40	2.50	5.00	24.25
Gandy (Late)	.50	1.25	2.00	4.00	19.00
Marshall, E. H.	1.10	3.00	5.00	10.00	47.50
Progressive, E. H.	.80	1.75	3.00	6.00	28.50
Order direct or send for free catalog	.80	1.75	3.00	6.00	28.50

RAYNER BROS. Salisbury, Md.
"Plants that Please"

For Sale All kinds of fruit trees, shrubs, privet, etc. Improve your Property. Catalog. Orders shipped promptly.
MITCHELL'S NURSERY, Beverly, Ohio

The MARKET PLACE
By W. R. WHITACRE

OUR MARKETS are constantly changing both in this country and abroad. In a recent report, Edwin Smith, fruit specialist of the Bureau of Agricultural Economics, tells of recent changes in the apple markets of Europe. For many years it was considered that only small apples should be shipped to Europe but there is a trend toward larger fruit. The British and Scandinavian markets prefer the smaller sizes, but Germany and surrounding markets want medium sized apples. Barrels of apples measuring 2½ inches will better than 2¼ inch stock, and the 125 size in boxes brings more in Germany than 163.

The French markets are the most particular. Mr. Smith states that the French consumer is more particular about bruises than any he has ever encountered. "In buying a pound of Winesaps in a Parisian market I have seen the salesman throw back apples which had the smallest pressure areas, or smaller diameter than a fountain pen. On being told that those apples were quite satisfactory, the salesman has given me the most expressive look of astonishment.

"It was in Paris where I encountered the objection to marking barrels '2¼ inch min.' because it was claimed that the barrels marked '2¼ inch min and up' meant that all sizes as picked from the tree were packed, whereas minimumsize marking meant that the large apples had been sorted out. The Frenchman wants large apples as well as small ones. Marking barrels with the full range of sizes would meet the requirements of this trade admirably."

The barrel seems to be more popular than the box with the French buyer. It is less expensive and the bruised apples may be sorted from the perfect ones. The perfect apples are sold as de-luxe fruit and the bruised fruit goes to the poorer trade.

• • •

THE early spring has added to the growers' problems in New Jersey. Last Sunday peaches were in full bloom and apples were beginning to show pink. The hot weather of Monday and Tuesday brought many of the apples into full bloom and gave very little time for spraying. Many growers who have both fruit and truck find that they must take care of their fruit trees, but at the same time they should be getting early vegetables into the ground. One large grower told me that he would lose heavily on his early vegetables as the season had rushed them so that they had not been able to get them planted.

The season is fully three weeks earlier than last year and at least two weeks earlier than normal. Asparagus receipts from New Jersey are increasing rapidly and there is now more New Jersey asparagus offered on the Philadelphia market than there was the first week in May last year.

• • •

HARVEY LEONARD of Thorofare, N. J., shipped the first nearby asparagus of the season to the Philadelphia market on April 8th. This is the second year that Mr. Leonard has had the first New Jersey "grass." The shipment was handled by Wesley Brown, Little Dock Street, and sold at 35c to 60c per bunch.

The first asparagus last year arrived on April 17 and sold at 40c to 50c. This, however, was a lot of less than a dozen bunches and the first crates did not arrive until April 28. This indicates that the season is about three weeks earlier than last year. The hot weather has brought the asparagus along rapidly and this quick growth is resulting in better quality than a year ago. The season in 1928 was backward and growing weather was unfavorable for quality production.

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TIGHT BINDING TEXT CUT OFF

THE YOUNG PEOPLE

Do Animals Think?

By NELLIE R. NESSELROADE

SURELY no family with children and the accompanying pets could deny the fact that animals think, reason and arrive at conclusions. From a number of unusually (?) intelligent pets I'll only tell you of one, although it is hard to make a selection.

A large male cat, Jerry by name, belonged to one of the children and early in life differed from the rest of his ilk by his quickness, so he came to be a "family cat" having rights and privileges of his own. Perfectly clean and trustworthy, going with the children to play, after the cows, fishing, like a dog and never known to "snoop."

My husband was working away and usually got home for Saturday and Sunday. I raised lots of chickens and we used all our young roosters on the table, having, throughout the "fried chicken season," one for Saturday supper and Sunday dinner. And it is an absolute truth that when Jerry saw the man coming or knew he was at home, he deliberately waltzed out to the wood-yard and sat on the chopping block, waiting and watching for the decapitation act. Not once or twice, but time after time, till it was established in the mind of the most skeptical one of the family that it was reason, not chance that led him to the guillotine.

One winter he was missing for several days and we feared he was trapped and killed for his fur as he was so large and glossy with only a tiny "necktie" of white, otherwise a blue Maltese. One night while all were away except the youngest child and myself, I heard a clanking sound on the back porch, with peculiar voice sounds. When I cautiously opened the back door a disreputable object limped in, dragging a steel-trap, chain-post and all and with queer moans piled down in the middle of the floor. It was Jerry and he was about at the end of his perfect day.

I collected a tub of hot suds, cloths and brushes and went after him, first releasing his leg from the trap. He was matted with leaves, mud, twigs and minus much fur and skin, but he submitted gratefully to being made presentable, his leg bandaged and enjoyed his frugal lunch of milk. And until the wound was entirely healed we had no trouble with dressing it and caring for him. And it was tender for so long a time old Jerry had no compunctions of conscience whatever in sitting down in the path or wherever he might be and meowing lustily till someone carried him.

Jerry was a good hunter but never so much as when there was a family of kittens to be supplied with game, when he was indefatigable in his industry, bringing in rabbits, ground squirrels, birds, rats and mice. And we noticed another element of reasoning when there were little kittens. Usually one of the first to lap milk of morning and evening, he sat back until every kit was content with its supper before he ate. Occasionally one of the children would play a joke on him. In place of the usual whole milk, would put separated milk in his pan. Such a sitting back and spitting as he'd do! He did not care for separated milk, thank you!

He lived to be nine years old when fate in the guise of a trapper succeeded in getting him.—We still speak of "Old Jerry" for his like has not been since. And these are but a few instances of the whole nine years of sagacity.

WHAT CAN YOU TELL?

Now is the time to write about your pets and how clever they are. THE MOST INTELLIGENT ANIMAL I EVER SAW is the subject for our new contest which closes April 27th. Send a photograph if you can.

The FISHERMAN'S LUCK cartoons are beginning to come in and we will try to publish all the best ones.

Five prizes for each contest!

Send your letters to Young People's Editor, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Telling Time

If a father gave 19c to one of his sons and 6c to the other, what time would it be?

Why, a quarter to two, of course.

• • •

If a postmaster went to a menagerie and was eaten by one of the wild beasts, what would be the hour?

Nothing could be easier. Eight P. M.

• • •

If a guest at a restaurant ordered a lobster and ate it, and another guest did the same, what would be the second guest's telephone number?

Absurdly simple. 8-1-2.

Fifteen Hidden Vegetables

AROUND the town pump, kin folks and friends gathered to hear Tom tell of his travels. Tom at once began the yarn to spin.

"Ach," said an old German, "he an honest boy."

"I hope always to be," replied Tom, and proceeded with his narrative.

"After I had ordered my cab, bag, etc., I started on my trip and soon found myself on Ionion shores. We had not gone far, however, when we found the wheels of our car rotted off; but the driver said to a boy nearby, 'Bring me a brad, I shall soon fix it.' But I decided it would be more safe to travel by boat, which I [illegible] but a leak could hasten us. We had a pleasant voyage around the shores of Greece, where I heard of Jupiter, Saturn, Iphigenia and other mythical beings. I could not distinguish the various styles of architecture and continually asked, 'Is this Doric or not?' In Egypt I sighed for a cloth pot at our hotel, as the meals were poor. At a dance I gave a start, I choked and found I had almost swallowed a beetle." Can you find them?

Boston Proverbs

THE other night at a party a hostess, who comes from Boston, gave us a few examples of what she called "Boston as a conveyancer of proverbs." They were readily solved to the amusement of those present. Put them in simple English and you will find they are well known proverbs.

1. Desiccated herbace[illegible] to perturbation,
   The while the radiant orb of day affords illumination.

2. A futile superfluity of culinary aid,
   Destroys nutritious liquids from osseous tissues made.

3. Your immediate environment submit to circumspection,
   Ere you traverse some feet of space by muscular projection.

4. Inhabitants of domiciles of vitreous formation,
   With lapidary fragments should ne'er perpetrate jactation.

5. Who counts ere fractured are the shells his bipeds gallinaceous,
   Is apt to find his calculations utterly fallacious.

Guess

'Tis a gay sort of lion
All dressed in yellow,
I've pulled the head off
Of many a fellow
He stands in the grass
But he never prowls round,
When I blew off his hair
He makes never a sound.

Little Folks Corner

The Little Green Toad

By LUCRETIA M. K. MAMMEL

A LITTLE green toad lived under a mossy stone which lay on the banks of a pretty little singing brook. Its home was protected by tall grasses and overhanging branches of a weeping willow tree.

Hoppo, as the toad was called by his little play-fellows, was very happy and merry and made everyone around him happy by his gay little antics. For a long time Hoppo never thought of leaving his pretty safe home. He was contented to hop up and down the bank of the stream, though he often wondered what was on the other side of the high wall that ran back of the willow tree.

One day a strange brown toad appeared and told him of new and beautiful things on the other side of the wall. Hoppo listened eagerly and asked many questions, and when Mr. Brown Toad was ready to go, Hoppo wanted to go along. The brook gurgled protests, the weeping willow wept, and the friendly grasses tried to hold him back, but Hoppo paid no attention to them. Without even a farewell he hopped after his new-found friend.

It was a long, long way by the big gray wall before they came to an opening. But they found a hole, and in they went and began to climb a steep hill. Hoppo was all tuckered out for he was not used to hopping so far. He begged his guide to rest a moment, but Mr. Brown Toad was in a hurry to get home and urged him on. As they jumped through an opening in the hedge, Brown Toad said:

"Well, here we are at last. You can look out for yourself now. I don't want you with me any longer." With these words he disappeared into some tall grass.

Hoppo suddenly felt lonely, and a little bit afraid. He was right in the middle of a walk, and the sharp stones were not nearly so pleasant as the soft ground he was used to. The garden in which he was lay beyond the wall that arose above his own dear brook, but of course Hoppo did not know that. He was so bewildered that he couldn't even remember which way he had come.

(To be continued)



LUCY'S LAMB

Like the other lamb we hear so much about, this one follows Lucy Whitmore everywhere she goes, but that is probably because Lucy raised it on a bottle.



Ralph Kroger tells us one moonlight night he saw a deer come down to the creek to get a drink. He says it is a common sight to see them come to the orchard and eat apples. His dog's name is "Pal."

THIS IS THE SIZE OF THE NEW U. S. PAPER CURRENCY

According to latest reports all of the new bills will bear a portrait of a famous American on the front:

Washington	$ 1
Jefferson	$ 2
Lincoln	$ 5
Hamilton	$10
Jackson	$20
Grant	$50



The $1 bills and denominations over $100 will have ornamental backs. All the others will have engravings of buildings on the backs.

Franklin	$ 100
McKinley	$ 500
Cleveland	$ 1,000
Madison	$ 5,000
Chase	$10,000

IT WILL BE IN CIRCULATION AFTER JULY 1, 1929

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1.—President Hoover's "greatest thrill." Photo shows, left to right, Philip and Al Pflueger, taxidermists, with the six-foot 48-pound sailfish which President Hoover caught near Florida before his inauguration. The catch has been mounted and is now on the way to the White House to remind the President of his "greatest thrill" in Miami.

2.—First South American to receive U. S. Distinguished Flying Cross. The latest portrait of Captain Benjamin Mendez R., Colombian ace who flew from New York to Bogota, who will be awarded the Distinguished Flying Cross by the United breast are those presented by Cuba, Guatemala, Panama and Colombia.

3.—The Tomb of Napoleon in Les Invalides, Paris. Surrounding the tomb are six chapels, three of which are shown. Of these six chapels, one is unoccupied, and it has been hinted that the body of the great hero, Marshall Foch, will be placed in it.

4.—Katsuji Debuchi, Japanese Ambassador to the United States photographed with Mme. Debuchi and their children under the beautiful Japanese cherry trees in bloom around the Washington's monument

Left to right: Masaru Debuchi, son, Takako Debuchi, daughter, Mme. Debuchi and the Ambassador.

5.—His brother's keeper. Photo shows: Young Crown Prince Peter, Belgrade, Jugoslavia—just a "nice little boy"—keeping a watchful eye on his little brother in the garden surrounding the palace here. He prefers playing nurse to the tot to romping with other children of his own age.

6.—Where Philadelphia's municipal airport will be built. An airview of Hog Island, which has been selected by the city of Philadelphia as the municipal

TIGHT BINDING TEXT CUT OFF

Old Rhiney

By CHARLES ADAMS

Copyright, 1901, By Perry Mason Company. Originally Published in The Youth's Companion

"WE HAVE had no peace, day or night, since this trouble came on us," Mrs. Briggs remarked, pathetically, to one of her neighbors.

On the fourth night some mischievous wag attempted to let the animal loose. In the morning the door at the rear end of the cage was found unbarred and wide open; but as the rhinoceros was headed toward the front end of the cage, and was too large to turn around in it, he appeared not to have noticed the open door. The incident alarmed the selectmen, and they placed a strong, new padlock on the door.

In the course of five days the sheriff came back. He had traced the flying proprietor of the show as far as Springfield, Massachusetts, where he was reported to have gone to New York with his elephant and some of his other beasts. There seemed but a slight chance of overhauling him, and little likelihood of his coming back to claim his abandoned property.

Such being the outlook, Mr. Odway and Mr. Briggs came to Mr. Stone's view, and judged that the best way to escape further expense and possible liabilities was to destroy the beast, and so get him off their hands.

The question which came up next was, therefore, how to take its life. Its hide was so thick and looked so inordinately tough that they had doubts whether musket or rifle-balls would penetrate vital parts. If merely wounded, the animal might break loose and run rampant through the community.

All sorts of plans were discussed. Mr. Stone suggested blowing the beast up with a keg of powder.

But Briggs, who was, even in distress, a more merciful man, opposed this scheme. "We must do it massiful," said he. "I'm agin all needless cruelty to dumb creturs."

Old Rhiney here interrupted the argument with a hideous grunting bellow, and Mrs. Briggs remarked that it was anything but a "dumb cretur"!

"Wife, you know what I meant!" rejoined Mr. Briggs, reprovingly. "Bad as he looks and sounds, this animal is as the Lord made him, and there mustn't be any needless cruelty in taking him off."

Mr. Stone "pshawed" impatiently; but Mr. Odway stood by Mr. Briggs, whose sentiment was shared by the majority.

After a great deal of earnest consultation, it was at length decided that the easiest, safest and most "massiful" way would be to drown the beast in his cage by backing it off the steep bank of the mill-pond just above Copeland's sawmill, four miles from the Corners. There was here a "brow," or smooth bank, where logs were rolled down into the pond in the spring of the year; but it was now clear of lumber.

The selectmen did not wish to lose the cage, however. The rear wheels and other gear were estimated to be worth twenty-five or thirty dollars, and this was all there would be to reimburse them for the potatoes which the beast had devored, and for other expenses. But if the cage ran off the bank into twelve or fifteen feet of water, and the rhinoceros, which weighed at least a ton, drowned there, it would be no easy matter to get the cage out.

THEY hit on a plan, however, which appeared to promise well. Rufus was again summoned with the Flint oxen to draw the cage to the pond; and after it was paraded on the brow, ready to push off, Selectman Stone unlocked the padlock on the door at the rear end, and in place of it thrust a wooden pin through the staple. To the pin was tied a long rope, by means of which it could be jerked out of the staple after the beast was drowned. The end of another rope was then tucked in under the door and made fast to the rhinoceros's hind leg. The plan was, after the drowning had become an assured fact, first to jerk out the pin so that the door would open, and then to haul the defunct animal out of the cage, which could be buoyed and recovered.

"I think that's as massiful as any way that could be thought up," Mr. Briggs explained.

More than a thousand people gathered for the event. The fence along the opposite side of the highway from the mill-pond was lined with horses and wagons. Many of the people had never seen a rhinoceros, and had queer ideas as to what the animal was or on what he fed. Some believed him to be a man-eater.

At last Mr. Stone, who stood with an ax on one side of the cage, said to Mr. Briggs, who stood on the other, "We're all ready, ain't we?"

"All ready!" responded Briggs, tremulously.

"Knock out the trigs, then!" shouted Stone.

With simultaneous blows they knocked away the trigs. The cage shot down the bank and plunged into the water with a dismal splash. A great wave ran out across the pond, for the momentum carried the cage deep down under the water, until the wheels struck violently against a sunken log or a submerged rock thirty or forty feet from the shore.

Then a queer thing happened—which shows how the wisest plans of mice and selectmen may go all wrong!

What occurred when the two selectmen knocked away the "trigs" and launched the cage into the mill-pond was startling enough. The unsuspecting brute had gone down backward, and when the wheels struck the submerged log was thrown, or slid, with great force against the cage door. The wooden pin in the staple broke short off, and the ponderous creature shot clear of the cage.

We who stood on the bank did not, of course, see what happened under water. What we did see a moment later, however, was an ugly nose-horn and snout which broke the surface with a frightful snort.

An outcry rose. For this was contrary to the program.

After a few snorts, the beast began to swim to the other side of the mill-pond.

Selectman Stone then seized the end of the larger line and called for help. Briggs and half a dozen others took hold of it with him. They tugged with might and main, hoping yet to drown the animal.

The rhinoceros tugged, too, to get clear and swim off. He went completely under two or three times, but rose snorting hoarsely, then came round with a vast swirl in the water and started for the bank.

With that the shouts changed to shrieks of terror, and a stampede followed.

Men, boys and women actually tumbled over one another in the wild scramble to get away before the beast reached the shore. Some ran for their wagons and horses. Some climbed the fence across the road and scampered up the hillside. A few ran down the road to the old sawmill. Several climbed on board piles. Others climbed trees.

There were wild cries of "Whoa! whoa!" to horses that were suddenly unhitched. Wagons began to rattle away; and it is a fact that some ran their [illegible] miles, thinking from the [illegible] prior behind that the rhinoceros was after them.

Never did a great gathering disperse in such mad haste.

In one half-minute nobody was to be seen on that "brow" except one poor, lame old man, who had grown confused and knew not which way to turn.

Selectmen Briggs and Odway were among those who ran up the hillside; but Stone stood on the fence with his ax in his hand.

Leland and I, who had kept together, ran to a second-growth pine and swung ourselves up among the green boughs. Caspar Wilkins and another boy, named Lettus Frost, got up with us.

The distressed rhinoceros came to the bank, but the declivity there was so steep and the clay so slippery that he could not crawl out of the water. He splashed and paddled about, grunting and puffing for a few moments, then turned and swam across to the other side of the mill-pond, where the water was shallow. Here he easily splashed out and crossed a bold, wooded, long rope trailing after him. Tossing his head to and fro, he sent the rails flying with one horn of his snout, and disappeared in an orchard of young apple trees.

OBSERVING this, Leland and the rest of us slid down from the trees and started to run to the sawmill. Stone, the selectman, was the only one who had a horse and "brow."

"Goodness! Leland," we heard him exclaim angrily, "No knowing what damage he will do! And the town'll have it to pay for!"

Seeing us running to the mill to cross over on the dam, he shouted: "Watch him! Watch him, boys! See where he goes to!"

We thought that the rhinoceros was in the orchard, and after crossing over on the dam to that side of the mill-pond, we crept up to the fence.

But he had gone. The barking of a little dog gave us the first hint that the animal was crossing a tract of woodland at a distance beyond.

Caspar Wilkins now turned back, for he heard his mother calling to him excitedly from the other side of the pond. But Leland and I, who, as his discoverers, felt a sort of proprietary interest in the rhinoceros, ran on. Lettus Frost also went on with us.

Guided by the yelps of the little dog, we ran through the woods and came out into fields beyond them. Leland was a few steps ahead, and at once, on emerging from the bushes, cried, "There he is!"

Several acres of young corn were growing there, near a farm house, and we could see the dark back of the rhinoceros in the midst of it. He was grubbing up the corn by the hill, and champing like a hog. We dared not go very near him, but stole round toward the house.

Old Rhiney did not stay there long, however. After a few moments he tramped through a field of oats to a fence separating the grain from a pasture; and this obstruction he broke down without any apparent difficulty. Sheep were feeding here; they ran away and huddled together on the highest hillock in the pasture, all except a ram, which laboriously tried to butt the strange intruder.

We three boys followed on. In fact, we were obliged to run most of the time in order to keep up with the creature; for although his pace seemed a clumsy waddle, he got over the ground fast.

There was a stone wall on the farther side of the sheep pasture. The rhinoceros did not attempt to climb this, but coursed along it till he came to a set of bars leading to a highway. These bars he tossed aside as lightly as if they had been feathers, and jogged along the road for a mile or more, when another field of corn attracting his attention, he entered it through a rail fence. Here for some minutes he made havoc again among the corn.

He appeared to realize, however, that he was followed, and suddenly left the corn and crossed two pastures in succession, where there were cattle. The cattle, head and tail up, fled, bawling wildly.

Thus for the [illegible] he took nothing off in an easterly direction, but coming now to the foot of a high, steep hill he bore away to the north, passing close to a house and reaching the garden behind it.

There appeared to be no one at home; the people had no doubt gone to Copeland's sawmill to see the rhinoceros drowned. If they had been at home they would have seen their garden gate go ten feet into the air and the fence rails fly merrily when he went out on the other side.

"My grief, I hope he won't go to our house!" muttered Leland. "But he's heading our way, sure as fate!"

(To be continued)



The Cheerful Plowman

KIND TO ANYBODY AND EVERYBODY

NO matter who the party is who needs a kindly word, I hope from me that little word will any time be heard. Today I saw a colored child whose grief was sad to see; she wept until her eyes were like the Dutchman's Zuider Zee.

"What is it, child?" I said to her. "Why do you wail so loud? Have you three grandmas dead and gone? Your face is like a cloud. You've wept until your eyes are red, until your face is black! Tell me what you have gone and lost; perhaps we'll get it back."

It was some simple childish grief—she'd lost a top or doll, sufficient reason for child to wail and whoop, and bawl. I helped her find the article and then she dried her tears and went her way with happy heart, atune on all her gears.

Last week I saw an unkempt lad with lungs enough for five bawl out his eyes in tearful grief; his tears were sure alive. He was an urchin, nothing more, togged out in mottled rags; his coat was made of gunny sacks his pants were made of bags.

"What is the rip with you?" said I. "You'll lose a lung, I fear. You'll drown yourself if you let your mother's sugar tear. What have you lost, three Cousin Janes and two gold mines, or more? Perhaps I may be able now to help you less or more." Well, it was trifling, but to him his grief was live and real. I straightened out his case for him and stopped his mournful peel.

It cost me nothing, not a cent, to help that colored lass who wept until her face was black and eyes were green as grass. It cost me not a cent to soothe that roaring urchin lad who thought the world was out of chip and going to the bad. Some day those kids may be fine folks then I shall have a part in their success for I took time to give them both a start.

J. E. T.

Kentucky Bluegrass

Continued from page 24

cows are used in these computations; those producing 25, 35 and 50 pounds of milk per day. The cows producing more than 25 pounds of milk per day should be provided with sufficient concentrates other than grass to furnish a balanced ration. Thus a cow producing 30 pounds of milk will require for maintenance and production an average of 249 pounds of digestible crude protein and 18.31 pounds of total digestible nutrients. Eighty pounds of bluegrass will supply 2.96 pounds protein but only 12.72 pounds total nutrients. The difference should be supplied by supplementary feeding.

Kentucky bluegrass is a high protein feed with a nutritive ratio of 1:5.5 which should be modified by dry-lot feeding to a ratio of approximately 1:6. This concentrate may be supplied by eight pounds of corn meal per day. If a high yielding cow is fed on pasture without supplementary feed she will draw on her body for the nutrients required and lose in weight. A cow producing 50 pounds of milk per day on pasture should receive also forty pounds of silage and two pounds wheat bran or oil meal, two pounds wheat bran or oil meal, two pounds gluten feed or the equivalent in concentrates other feeds. A cow thus fed will not lose weight during the pasture period and will enter winter quarters better equipped to produce a higher milk production than if she were not fed in addition to pasture feeding.

Average Results

With these facts in mind the cost of feeding the three types of cows for 120 days (May 10-October 10) on pasture and dry-lot feed was computed on the basis of a well-balanced ration. The difference between the cost of dry lot feeding and the pasture feeding including the supplementary feed, was credited to the bluegrass pasture. Space will not permit the details of all the figures involved, and I do not wish to inflict a fourth article on the readers of this good farm paper, so will give here the average results secured.

It was found that on an average it cost $17.68 to feed a cow for 120 days on full time pasture compared to $57.51 in dry lot—a difference of $39.83 in favor of the pasture furnishing 800 pounds of grass per day for 150 days or 12,000 pounds of green grass. The carrying capacity per acre is then obtained by dividing 12,000 by the yields of green grass per acre produced on each plot. The acre value is obtained by dividing the acres required to supply 12,000 pounds of grass into $39.83.

These figures emphasize the value of highly productive pastures and show the increased value when a complete fertilizer was used. Had the nitrogen been applied annually instead of every other year, recent studies show that the acre value would have been increased. It requires 7.7 less acres to maintain a herd of 20 high-yielding cows where nitrogen is used compared to the superphosphate and potash treatment.

These figures should impress the stockman and the farmer with the importance of pasture feeding. Highly developed dairy cows or the heavier type of beef cattle are not raised on small areas and should secure their feed on limited areas. Every stockman should further realize that abundance of open air and sunshine are of vital importance to the welfare of his animal. Science has proved that direct sunlight greatly stimulates mineral metabolism. Dairy cows on pasture are more resistant to disease and their milk has a higher vitamin content than that of cows kept under shelter.

Remember this fact that it is economical to buy nitrogen in the spring and convert it into protein feed by means of a good pasture. Think it over. I regret that our report of bulletin 195 dealing with my pasture studies is exhausted. Bulletin 229, however, is still available for distribution. It may be secured upon request to the School of Agriculture, State College, Pa.

Acre Value and Carrying Capacity of Kentucky Bluegrass Pasture
Average of Three Soils

Soil Treatment	Acres Required per Cow	Annual Acre Value	Annual Acre Cost	Annual Acre Profit
Lime alone (L)	14.82	$12.84	$2.27	$10.57
L, superphosphate (P)	1.64	27.20	1.01	27.19
L P potash (K)	1.29	32.11	3.55	28.56
L P K nitrogen	0.91	44.25	10.90	33.01

Sale at Woodbine

By W. D. ZINN

I [illegible]

Lumpy Lime

Owing to the wet conditions last summer I was unable to get all the purchased lime on the land and also from the same cause said lime became damp although stored under shelter. Now the lime has become hardened and is unfit for use in present condition. Is there any way to pulverize it so it will be fit for use? J. C. H.

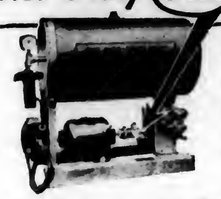
I HAVE had to spread lime a few times on the barn floor and pulverize it before using it. I have had to handle and phosphate in the same way. We used mallets sometimes and at other times we trampled it with our feet. If a lime pulverizer is available that would be the best way to treat it, that is by running it through the pulverizer. I have never seen ground limestone become so hard but that it was easily pulverized.

Kind of Fertilizer

I have a field of eight acres in which I had corn last year. This field was in clover in 1927 and I put about a ton two-horse spreader loads of manure on it last fall. I'm going to sow this field to oats this year and I don't want the oats to go down. Shall I use 200 pounds of 0-20 goods or 200 pounds of 0-12-6 goods? Gilbert E. May.

SINCE so much manure went on the land it is very evident that no nitrogen is needed for oats. I would be inclined to apply from 200 to 300 pounds of superphosphate and let it go at that.

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Model GD

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Think of it—for a few cents a day you can now have fresh water at all times—for every need. Simply install Auto-Prime then forget it. You'll be amazed at its sheer simplicity—its unmatched efficiency.

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TIGHT BINDING TEXT CUT OFF



MILK PRODUCTION *UP*.... MILK PRICES *DOWN*

WHEN cows go to pasture the flush season of milk production begins—and milk prices drop to their lowest levels. In spite of the fact that the cost of production and the market price of milk are then often out of alignment, scientific investigation and successful dairy farm practice have conclusively proved that it is false economy to take the concentrates away from the cows while they are on pasture.

Pasture is at its best for four or five weeks only. In any case it is impossible for cows to maintain a fair milk flow as well as their body weight when grass containing 70% to 80% of water, or when dried-up pasture is the only source of feed. For profitable dairying it is absolutely essential that cows be fed a grain ration during the pasture season as well as in winter.

The Ubiko Milling Company has taken care of this situation by providing 16% Sweet UNION GRAINS. It keeps the cows up in flesh and prevents a slump in the milk flow during the most trying time of the year. 16% Sweet UNION GRAINS is comparatively cheap and is an excellent grain ration to get cows in condition for fall freshening.

Do not confuse 16% Sweet UNION GRAINS with the ordinary 16% feeds whose only virtue is cheapness. UNION GRAINS does not contain screenings, oat-feed, or any other filler. It is true "Union Grains," with all that the name implies. Before you turn your cows out this year, order enough 16% Sweet UNION GRAINS to give it a thorough trial and let it prove that it is the finest and most economical grain ration you can buy to supplement pasture.

UNION GRAINS *Booklet FREE*

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THE FIRST DAIRY FEED MADE

24% Dry, 16%, 20%, 24%, 32% Sweet

Makers of* UBIKO *World Record Feeds

UBIKO All-Mash Rations
1. Starting and Growing Ration
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UNION GRAINS Dairy Rations





Why Not Buy the BEST SILO Possible to Put on Your Farm?

We will sell you a TORNADO SILO made of BEST GRADE OF OREGON FIR LUMBER, absolutely clear of KNOTS with all latest equipment:

Our big Hip Steel Roof and Steel Chute
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A SILO that will KEEP your SILAGE always in PERFECT CONDITION the year round. Why buy a SILO made of ordinary lumber full of knots, when you can have this one for the SAME MONEY? You will appreciate the BIG SAVING OF A SILO this YEAR. Write now for PRICES, etc.

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ABSOLUTE DISPERSAL OF FIFTY Heavy Milking HOLSTEIN COWS

MAY 1st, on Farm formerly known as Dr. John Iden, now Old Dominion Dairy Farm, Inc.,

One Mile of Manassas

This herd consists of fifty milking cows some fresh, some springers, and a number milking now and due in July and August. About one-half registered and the balance grades. This herd is accredited and blood-tested and is a very desirable lot of cows with good records. A rare opportunity to buy good cows at your own price.

OLD DOMINION DAIRY FARM, Inc., MANASSAS, VIRGINIA
ACCREDITED and BLOOD-TESTED ACCREDITED and BLOOD-TESTED

The City End of the Milk Business

(Continued from page 8)

that the flavor will make all the difference in the world in his sales.

Samples of milk to be used for bacteria tests are caught in sterile test tubes as the milk pours into the weigh tank. Perhaps some farmers think that selling milk on a bacteria count is a difficult problem, but some dealers classify and rate the operations of each department, each country receiving station, each city milk plant, by the average bacteria counts of the products handled. The manager's pay check will then depend on how well he understands what it means to keep things clean.

Samples for fat testing are taken of all milk received in can or in bulk. That is the only way check can be kept on the milk handled and the book keeping department can readily detect losses of milk or cream between country station and city plant. I remember during my work for the Food Administration in war times I visited at night a Philadelphia milk platform. The railroad watchmen were most hospitable and as a special act of courtesy took a big tin cup from a convenient post and dipped cream from some of the cans for me to drink. It was very good cream, but I wondered how often the dealer was short in his fat test. The few cans of milk received now in the city are invariably sealed with wire.

From the receiving platform the milk is forced through sanitary pipes to 12,000-quart glass-lined holding tanks at the top of the building, and then it flows by gravity through the various pasteurizers and bottling apparatus.

Weather Affects Quantity

One of the problems of the city milk distributor is to guess at the market needs for milk. Most dealers are under contract to buy all that their farmers produce, but weather conditions affect the quantity seriously, and at the same time affect the purchasing of milk in the city. Extremely hot weather increases the demand for milk—a sudden cold spell decreases it. Certain Jewish holidays cut down the sale of milk enormously. A blizzard in mid-winter may cut off the supply of milk but the city customers expect to have their bottles filled just the same.

One dealer regularly carries 1,000 cans more than his daily needs so as always to be supplied with the grade of milk he wishes for his trade. The surplus is sold or manufactured into by-products. Another dealer carries just enough for his actual sales, and if short buys any surplus he can secure from other dealers. Either way it is a gamble, but the well supplied dealer certainly has a chance of having a better quality milk for his customers.

From the holding tanks the milk goes to the pasteurizing department, passing through either a filtering, or clarifying apparatus on the way. Milk—especially the "A" and "AA" grades is supposed to be clean as it leaves the farm, but there must be no possibility of sediment in the bottle of milk and this extra precaution is a necessity. Some dealers filter after pasteurizing also.

"Dirty" Milk

The test of most Boards of Health is to let a bottle of milk stand quietly for several hours, then hold it carefully above the eyeline, move gently and examine the bottom. If the slightest dark particle is discovered the milk is classed as "dirty." Try it with your own milk. You may be surprised by what you see.

Pasteurization is a heating process required by most cities as a safeguard against carrying contagious diseases by means of milk. The usual rules are heating the milk for 145 degrees and holding it for 30 minutes, that being interpreted to mean every part of the holding tank including the foam and air bubbles on top.

There are all kinds of arguments both for and against pasteurization but it will be sufficient here to mention again that in most other countries it is customary to boil all milk before using it. Many baby specialists also now prescribe a formula of boiled milk for their patients, so heated milks seem to mean safe milks. It is generally accepted that properly pasteurized milk has not been changed in any way as far as food value is concerned. Objections because of taste or other reasons seem to be mostly a matter of habit on the part of the user of milk.

The milk dealer has a difficult position in regard to pasteurizing his milk. He dare not underheat, or his bacteria count will go up. He must not overheat or overhold his milk, or the cream line on his bottles will be affected and next morning his customers will be complaining because "there is no cream on the milk."

Prompt cooling follows pasteurization. Some dealers use a surface cooler similar to the farm coolers, but larger. Others use an internal tube system. It is becoming generally customary to use some regenerative method. Here is the raw cold milk enroute to the heaters is used to cool the hot pasteurized milk, thus absorbing some of the heat and saving many degrees of temperature and consequently considerable money.

In any case the pasteurized milk is carefully kept under cover and protected in going through the plant so that one scarcely sees milk at all until the bottling department is reached.

SAVE MILK

Earn a double profit!

Why raise your calves on milk when the market value of dairy products is so much more favorable? Adopt this better and more profitable way by raising your calves on



Ryde's Cream Calf Meal
(with milk Albumin and Dried Skim Milk)

It is an economical milk substitute on which your calves will thrive and grow. Calves eat it in preference to any other food you may place before them. It is prepared from choicest materials, expertly milled and steam-cooked for easy digestion. Its proteins, fat, vitamins and minerals in abundance for rapid normal growth.

Ryde's Cream Calf Meal assures two profits, one from the milk sold and the other from the value of the grown animal which costs less to raise. Think of the saving! 100 Pounds make 100 gallons of rich, nutritious milk substitute! We guarantee satisfaction. At dealers in 25, 50 and 100-lb. bags, or write us.

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Cutter Mill



Change in ½ hour from efficient ensilage cutter to hammer mill, that cuts roughage into 3/16 in. lengths before grinding, grinds and mixes roughage and grain (see picture). Operates on light tractor power, at 1500 r.p.m., using 16 in. pulley. Gives amazing capacity and is priced

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continues to be the standard one-purpose machine. Saves power, time and money. Light running. Gives ample power. Feeds not fast for any men can unload. No choking up by gang. Unlimited elevating radius. Outlet adjustable. Comes in

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Dept. 15



The Sure Stop without a fault

The Mitchell Patented Double Folding Sure Stop does everything that a sure stop device should do, and nothing that one should not do. The stanchion is the only place where the cow can enter. Cows cannot slide, pass through, or turn stanchions. A touch of the lever closes stanchion and gives cow freedom and comfort.

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Barn Equipment

In stalls equipped with Mitchell Patented Double Folding Sure Stops the stanchions are set close to curb, making it easy for animals to lie down. Stanchions are adjustable for all sizes, from large cows to small calves. Our lever controls entire row of stanchions, but any stanchion can be separately opened or closed. Partitions are in OI Anchors which prevent rusting and add greatly to life of stall.

Our Catalog Explains

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Help Control the Corn Borer

D. H. Worthley, Federal Corn Borer Control Head, W. P. Flint and J. C. Hackman, Illinois State Experiment Station, have proved by actual experience that when corn is cut close to the ground, chopped fine and EMPTIED, the corn borer passes out of the picture. The results of many experts, information and advice as to how you can successfully combat the corn borer with a Marietta Silo are all told in our free book, "How to Make Money Out of Your Marietta Silo," also details about Marietta Brooder and Farrowing Houses. Marietta silos and staves are guaranteed longest and most water-proof made. Mail the coupon—get your book.

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Makes Milking Easy

$100 Complete Ready to Milk

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ARMCO IRON ROOFING

No. 49 Middletown, Ohio

ARMCO IRON NOT STEEL

Dairy Cattle Exhibits at Fall Fairs

By E. B. FITTS

A SURVEY of premium lists of fairs held in different parts of Pennsylvania shows considerable variation in classification of both individual animal entries and groups. This often leads to misunderstanding and uncertainty especially on the part of exhibitors who show at more than one fair. Some fairs have continued the same classification for many years while others make a careful revision from time to time.

It would seem that a uniform classification would be very desirable. The following classification was made after a careful study and comparison of the classifications used last year at some of the leading dairy shows of the country.

The entry "Community Herds" is new and is designed to give communities, where united effort is being made to improve the quality of cattle, an opportunity to display their cattle and to compete with other communities.

Premium lists for fall fairs will soon be printed and a study of this classification may be helpful in preparing the list for this year's show.

1929 Shows—Rules

All applications for entry of cattle should be accompanied by the name of the breeder; name, age and date of birth, and registered name and number of the sire and dam of the animal to be exhibited. Proof of registration or eligibility must be produced if called for.

Pedigrees of cattle in all cases must be recorded in the American or Foreign Herd Books of the particular breed to which they belong.

The age base date of all dairy cattle shall be August 1 except in junior classes where February 1 is used as age base date.

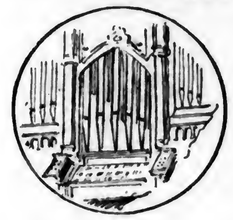
When on exhibition in the ring each animal must be under halter and in charge of owner or employe.

No bull over one year old will be allowed on the grounds without a ring in his nose.

Make entries in accordance with the following classifications offering five prizes in each case:

1. Bull, 3 years old or over.
2. Bull, 2 years and under 3.
3. Bull, senior yearling.
4. Bull, junior yearling.
5. Bull, senior calf.
6. Bull, junior calf (over 3 months).
7. Cow, 4 years old or over.

What Have Pipe Organs . . . . . Or Railroad Signals .



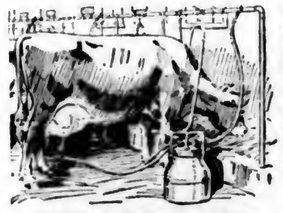


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A De Laval Magnetic will milk cows better, save you more time and give every dairyman greater profit and satisfaction than anything he can buy.



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Please send me, without obligation, full information on { Milker / Separator / check which }

Name.....
Town.....
State.....R.F.D.....No. Cows.....



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Dairy Farm Refrigeration

Hand-operated or automatic plants, with either electric or gas-engine drive; all types, using cold water tank or brine system, with or without tubular milk cooler, as desired; makes ice when required.

Write **Frick Company**

CORONA WOOL FAT COMPOUND

A Wonder Salve Nearly a million homes have learned that Corona Wool Compound, because of its soothing and healing qualities, is one of the best preparations ever placed on the market. It is different from ordinary salves. It is made from oil extracted from sheep's wool and while it is very penetrating and reaches right down to the seat of trouble, it quickly heals but will not smart the most sensitive wound.

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Keep a can of this wonder remedy on hand for any emergency. Your druggist can supply you. Two sizes 60c and $1. If you have never used Corona, we will gladly send you free sample on request.

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Sore Shoulders Collar Boils Barb Wire Cuts, Caked Udders, Sore Teats, *and* Sores or Wounds of all kinds on man or beast.

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SEE package at right—one horse only. Just 2 words—Caustic Balsam.

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Penetrating, soothing and healing—an unexcelled liniment, counter-irritant or blister, for veterinary and human ailments. Large bottle—$2.00. All druggists or direct

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(tuberculin tested)

to be held at the farm on Wm. Penn Highway between Harrisburg and Reading 1½ miles west of

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COWS THAT HAVE MADE
28 lbs. butter in 7 days at 4 years.
986.3 lbs. butter in 1 year.
22,706.1 lbs. milk in 1 year
19,542.1 lbs. milk in 1 year at 36 mos.

DAUGHTERS OF COWS THAT MADE
31.3 lbs. butter in 7 days at 3 years
1,008.8 lbs. butter in 1 year at 2½ yrs.
21,931.1 lbs. milk in 1 year at 2½ yrs.

How do you like this sample?
She milked this year OVER 100 LB. PER DAY.



Send for free descriptive circular and don't fail to attend.

Dr. M. Z. GEARHART, Owner.

Management and Publicity:

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STRUVEN'S FISH MEAL

Made from the WHOLE Menhaden Fish fresh from the Sea



Has all the properties necessary for the health and quick growth of young stock. Its unequalled combination of Proteins and Minerals in the most digestible form known to feeders makes the pigs, chicks and calves grow rapidly and vigorously and produce meat, eggs, and milk more profitably.

Write us for sample and our booklet—"Care and Feeding of Poultry, Swine and Cattle".

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FOR SALE—Jersey Bull Calf, dropped Dec. 11, 1928, by Reg. of Merit Sire Meridale Merry Prince, Grand Champion West Va. State Fair. Dam also show winner with R.M. record 7,500 lbs. milk, 5.67% fat. Imported in dam from Isle of Jersey and daughter of Imp. Golden Fern's Noble. This calf has large, long deep body and straight back, a show prospect and blood tested. First check for $100 takes him. Fed. Acc. Herd No. 47377. Highland Farms, Greensburg, Pa.

Jersey Bull Calf dropped Nov. 17, 1928, by R.M. Sire. Solid color, excellent type, straight back and good middle. Dam now on official test and Peona State Leader 50 lb. fat for January with 79.32 lbs. fat. Fed. Acc. Herd and calf blood tested. Price $300. Crated for shipment.
HIGHLAND FARMS, Greensburg, Pa.

TWO RICHLY BRED, thrifty, registered Jersey bull calves, 2 months old, Accredited herd. W. F. McFARRAN, Furniss, Pa.

Fritzlyn Guernseys

Superior young bulls, two to twelve months old. Rich in May Rose blood. Dams with records up to 700 lbs. fat. Also cows and heifers. Herd accredited and blood tested. Write for description and prices. Fritzlyn Farm, Pipersville, Pa.

DAIRY SHOW'S HOME

THE $1,500,000 plant which is to be the permanent home of the National Dairy Exposition in St. Louis, beginning with the 1929 show, October 12th to 19th, is rapidly becoming a reality. Construction of the three big buildings which are to be used this year is well under way. The Arena Building, size 476 by 276 feet, will have a show ring 100 by 260 feet and in addition 35,000 square feet of good exhibit space on the main floor behind the seats. The balcony, containing 16,000 square feet, will be used for the 4-H Club boys' camp and suitable quarters will be arranged for them.

The West Building, 300 feet long by 288 feet wide, will be used for cattle. Half of the East Building will also contain cattle, providing total quarters for 1,200 head. The other half of this building will be the exposition hall for commercial displays of everything for the dairy and general farm.

8. Cow, 3 years and under 4
9. Cow, 2 years and under 3.
10. Heifer, senior yearling.
11. Heifer, junior yearling
12. Heifer, senior calf.
13. Heifer, junior calf (over 3 months).

Champions

14. Senior champion male
15. Junior champion male
16. Senior champion female
17. Junior champion female

Grand Champions

18. Grand champion male
19. Grand champion female

Groups

Each animal in all group classes should also be entered and shown for prizes in the individual classes.

Exhibitor's Herd

20. Bull, 2 years old or over; one cow 3 years old or over; one cow 2 years old and under 3; one heifer 1 year old and under 2; one heifer under 1 year, all owned by one exhibitor. Prizes, 1st $—, 2nd $—, 3rd $—, 4th $—, 5th $—.

Breeder's Young Herd

21. Bull, under 2 years old; two heifers 1 year old and under 2; two heifers under 1 year; all except bull must be bred and entire herd owned by exhibitor. Prizes, 1st $—, 2nd $—, 3rd $—, 4th $—, 5th $—.

Calf Herd

22. Bull and four heifers all under one year of age and all bred and owned by exhibitor. Prizes, 1st $—, 2nd $—, 3rd $—, 4th $—, 5th $—.

Get of Sire

23. Four animals, either sex, any age, get of one sire. (Sire must be named.) Prizes, 1st $—, 2nd $—, 3rd $—, 4th $—, 5th $—.

Produce of Cow

24. Two animals, either sex, any age, produce of one cow. (Cow must be named.) Prizes, 1st $—, 2nd $—, 3rd $—, 4th $—, 5th $—.

Community Herd

(All animals in this herd must come from within the recognized limits of a community.)

25. One bull, 2 years old or over; one cow, 4 years old or over; one cow, 3 and under 4; one cow, 2 and under 3; one senior yearling heifer; one junior yearling heifer; one heifer calf. Not more than two females to be owned by one exhibitor. Prizes, 1st $—, 2nd $—, 3rd $—, 4th $—, 5th $—.

A System

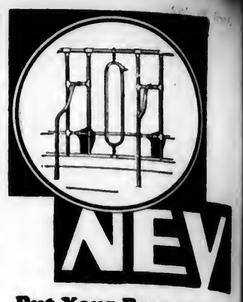
"A wire to Chicago," responded the telegraph clerk promptly to the traveling Scot. "will cost you five cents a word for ten words. There will be no charge for signature."

The Scot rubbed his forehead with a pencil.

"Well," he muttered finally, "s'pose you just send my signature."

"All right, I'll do that for you. "What's you name?"

"Well, I may not look it," he replied seriously. "But ye mann ken I'm an Indian, an' ma name is Big-Chief-Won't-Be-Home-Till-Friday."—The Accelerator.



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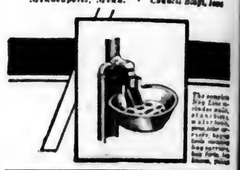
Ney equipment *modernizes* the dairy barn. Puts it on an efficient basis. Reduces drudgery, eliminates many burdensome chores. Insures sanitary conditions. Standardizes the barn. Paves the way to bigger profits.

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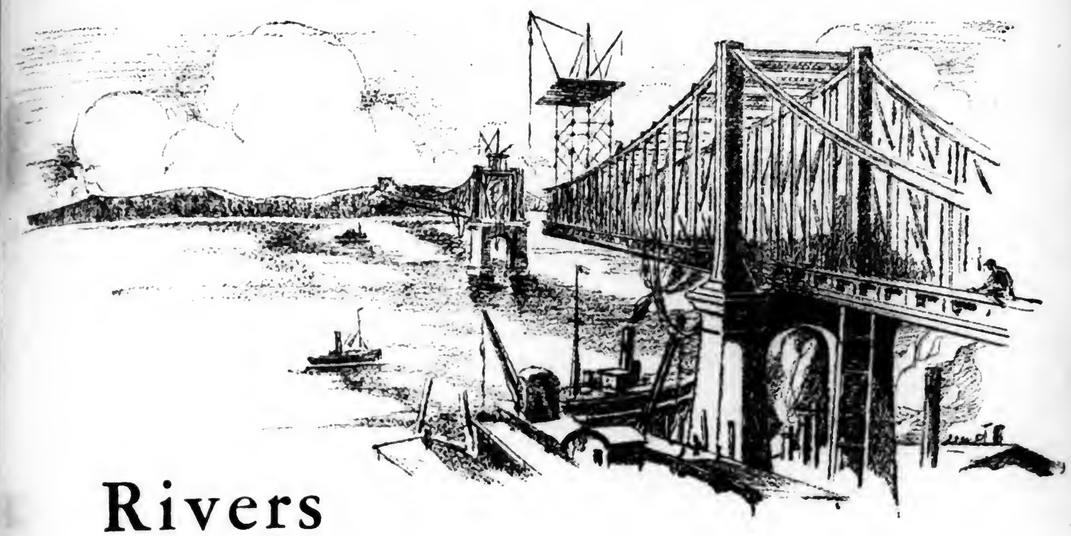
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Boston, Mass.—Buffalo, N. Y.

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TIGHT BINDING TEXT CUT OFF

Produce Market Review

THE unusual weather this past week caused prices of many of the nearby vegetables to fluctuate sharply. Large quantities of New Jersey, Pennsylvania and Maryland spinach forced prices down to a point where it was no longer profitable to ship. A sharp change in temperature later in the week cut receipts and again the market improved and the best offerings sold at 50@90c per bushel. High prices caused farmers to cut their fields more closely and at the close of the week prices again dropped with 20@50c a bushel the prevailing price.

Asparagus was about the most important commodity from the nearby sections. Harvesting in Pennsylvania has not started in a commercial way but in New Jersey on the lighter soils the crop advanced rapidly. Receipts of New Jersey asparagus in Philadelphia and New York were liberal and the quality was good. Maryland and Delaware shipped considerable stock by truck and the movement by express and freight from California and South Carolina doubled.

The warm sunny weather resulted in a larger proportion of green asparagus and this sold readily and I believe this was responsible for prices holding up despite the fairly liberal supply. The fact that prices declined later in the week, when cool rainy days prevailed, and the grass was whiter and shorter, bears out this belief. During the major part of the week New Jersey asparagus sold at $5.50@6.50 per dozen bunches for the large stock with extra fancy bringing $7@8. Medium-sized grass brought $4.50@5.25, and small $3@4. Later there was no 88 asparagus and most of the large stock sold at $5@6.

Mushrooms.—The hot weather resulted in heavier offerings and poorer quality along with lower prices. Cooler weather reduced receipts, increased the demand and raised the price. Most weeks the lowest prices are received on Saturday as receipts are larger on account of growers picking more closely. Last week both New York and Philadelphia reported highest prices at the close of the week. In Philadelphia prices ranged from 25c to $1.50 and in New York from 40c to $1.75.

Rhubarb and scallions strengthened toward the end of the week. Philadelphia reported rhubarb selling at 2@4c per bunch and scallions at 75c@$1.25 per 100 bunches. New York quoted rhubarb at 2@5c and scallions at $1@2. The sweet potato market was almost at a standstill with a very light demand. Right at this time there are so many new commodities on the market that consumers are selecting these and neglecting those which they have had all winter. The best yellows sold at 90c@$1.15 per ⅝ basket in Philadelphia while in New York they brought $1.50@2 per bushel with fancy packs bringing $2@2.85.

Old potatoes were dull during most of the week with prices unchanged. Both shipping points and consuming markets reported a slow demand. Some of the Pennsylvania stock offered in Philadelphia was very ordinary and sold as low as 50c per 120-pound sack. Late in the week supplies of old potatoes were rather light in Philadelphia and the market strengthened with the best Pennsylvania's bringing $1.15 @1.35 per 120-pound sack.

Shipments of new potatoes increased rapidly but prices in the city markets held fairly steady during most of the week. On Saturday, however, the larger supplies began to have an effect and prices dropped about 25c@50c per barrel in a number of eastern markets.

The butter markets in the East were unsettled with a general lack of confidence on the part of both buyers and receivers. On Monday the market was barely steady with receivers selling freely in order to prevent accumulations. On Tuesday prices dropped and the market was steadier for the balance of the week. The demand improved and on Saturday and Friday the market strengthened and a quarter cent advance occurred at Philadelphia and New York.

The Philadelphia egg market was steadier at the close of the week and the market advanced 1c. There was a better demand and some dealers attribute this to the approaching Jewish holidays. The demand for these holidays is only for the finest eggs. Receipts are holding up from the South and nearby sections but there are comparatively few western eggs offered on the open market. The southern eggs are very irregular both as to size and quality which makes the trade dependent upon the nearby eggs for quality. At the close of the week nearby white eggs were selling at 29@30c per dozen with mixed colors around 28@28½c. The southern eggs were quoted around 27½@28c.

The New York egg market was steady with nearby browns ranging from 27@31c per dozen, browns 26@31c and mixed colors 26@31c. There was a better demand for fancy brown eggs and all grades of stock fancy nearby stock.

The New York live poultry market was fairly steady. Receipts of fowls were light with a fairly good demand. Leghorns and colored fowl were quoted at 35c. Broilers 50@55c. Rocks at 45@47c and Leghorns at 42@45c. There were light supplies of nearby dressed poultry and most state supplies from the West. The demand was generally slow and prices showed Fowls sold at 30@40c per pound, broilers at 47@55c and chickens at 26@32c.

W. E. W.

PITTSBURGH MILK PRICES

THE Dairy Conservation Service Company announces the following prices for 3.5% milk to dealers, based on the basis of [illegible] milk delivered during the [illegible]: Pittsburgh zone, basic $2.025 (zone prices 5c higher); Canonsburg, $2.185 (zone prices 5c higher); Butler, $2.09; Beaver Falls, $2.09; Kittanning, $2.09; Ellwood City, $2.09; Greensburg, Monessen, Connellsville, Uniontown, Washington, New Castle, $2.09; Indiana, $2.09; Punxsutawney, $2.09; Johnstown, $2.09; Ebensburg, $2.09; Somerset, $2.09; Meyersdale, $2.09; Bedford, $2.09; Everett, $2.09; Huntingdon, $2.09; Altoona, $2.09; Tyrone, $2.09; Clearfield, $2.09; Du Bois, $2.09; Punxsutawney, $2.09; Kittanning, $2.09; Ellwood City, $2.09; Greensburg, Monessen, Connellsville, Uniontown, Washington, New Castle, $2.09; Indiana

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Richmond, Virginia

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says W. E. Tyler, of Dewittville, N. Y.

Like most other corn-growers, Mr. Tyler didn't believe that anything could stop the awful waste caused by the pesky crows, and other little pests such as moles, squirrels, etc. But he was willing to try almost anything. So he sent for some Stanley's Crow Repellent. He coated his seed-corn with it, and planted it at once, as it is not necessary to wait for it to dry, nor does it clog the planter. And from that day, Mr. Tyler's worries over crows were over for good and all time.

If you want to stop your worries, too, use Stanley's Crow Repellent as hundreds of corn-growers have been doing for over twenty years. Large can, enough for 2 bu. of seed-corn (8 to 10 acres), $1.50. Half size can $1.00. "Money Back" guarantee. If your hardware, drug or seed store doesn't have it in stock, then order direct. Address Cedar Hill Formulae Co., Box 500, R. New Britain, Conn.

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Farm Engineering

By R. U. BLASINGAME

Storage Batteries

ONE of our readers wrote us saying that he expected to leave his belt plant batteries for about six months. He inquired about how to treat these batteries. We referred him to a manufacturer of battery plants and here is their reply:

"Inasmuch as you are only going to let the batteries stand for six months, we would suggest that you give them a complete charge according to the hydrometer reading and then a four-hour gassing charge. The batteries can then set for three months and a slight boosting charge of two hours will retain them in condition for the next three months.

"I suggest that you do this rather than take the cells apart and have to put in new separators, etc. I believe this would be the cheapest way."

Cistern Dimensions

I am planning on building a cistern this summer and would like to know how large I would have to built it to hold water from a flooded barrels of water. Which would be the better and cheaper, brick or concrete? H. R.

A CONCRETE cistern 10x10x8 feet would hold about 6,000 gallons of water. This would be a little larger than what would be required to hold 100 barrels, each barrel containing 50 gallons. You could reduce the size of the cistern slightly, however. 10x10x8 feet is a size very often used.

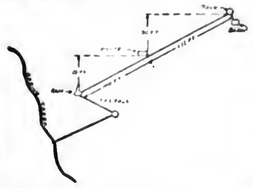
I believe that a cistern built of concrete would be better than one built of brick. Concrete, it properly made, is water tight. On the other hand, bricks are very often porous enough so that water will flow through them.

Water System

Will you kindly tell me if a farm water supply as described and sketched below would work? Would the water supply be satisfactory at house by taping supply pipe to tank at house and having both tank and tank pressure furnish water at house or would there have to be a return pipe back from tank to house? The house is 20 feet lower than tank and 12 feet above ram. Is one inch pipe large enough?

W. M. Simington.

THE plan which you outlined for your water system will not only work but will save considerable pipe. There is no use in running a pipe from the hydraulic ram to the tank, and then another pipe from the tank back to the house. I would suggest, however, that a check valve be placed at or near the ram so that if the ram should stop the water would not run from the tank back through the ram.



In your scheme, the supply pipe from the ram must enter the bottom of the tank rather than going over the edge of the tank. It will not require any more power to pump the water into the bottom of the tank than it will to carry it over the side. This arrangement will insure a supply of water to the barn and house even though the ram should not be in operation.

The scheme which you outlined is just the same as that used in city water supply. The house lines are tapped directly into the large pipes which run from the pump to the reservoir.

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Lice on Livestock

THE term "lousy livestock" has been used as an expression of derision for certain individuals or their four legged property. From reports it would appear that the application of this term would be an appropriate one, for many animals serve as hosts to the little pests known as lice. Because of the widespread infestation of livestock this winter and losses that have resulted it is deemed advisable to make a number of suggestions covering the control measures that may be applicable to these parasites.

As long hair favors the parasite, it follows that clipping is of great advantage in its control. Whenever stable conditions or weather conditions will permit the practice of clipping affected animals should be followed. All clippings should be burned. The body of the clipped animal should be well groomed and rubbed with such as brushes or curry combs to dislodge as many lice as possible.

After the clipping process is completed, a dipping or rubbing solution should be applied over the body of the animal. If weather turns cold again the body should be protected from chilling. Blankets should not be done immediately after the application of crude oil as there is danger of interfering with the animal's natural heat regulation.

Dipping all animals on a single set of premises should be accomplished when the weather conditions permit on a single week's schedule. The premises should be vacated for one week after the dipping operations are completed in order that the lice that are dislodged from the animals may be destroyed. Some solution may be sprayed on the affected animals, brushing it into the hair.

Look to the Stable

During cold weather a good louse powder dusted on and rubbed into the hair will reduce the number of lice. If properly applied, it will be an efficient control measure until warm weather when other measures such as clipping and dipping can be satisfactorily carried out.

Any plan of lice control that fails to take the stable into consideration is not an efficient plan. Lice may leave the body of the infected animal and find temporary quarters in the cracks and crevices of the walls, stalls or on litter. Spraying these structures with dip solution, white washing or spraying with hot lye will reduce the hazard.

When animals are affected on the same premises each year the thorough cleaning, spraying and disinfection of stables should be done in the fall and continued until the control measures have been effective. Animals may be dipped or other treatment applied before stabling and during the period of stabling.

Hog lice may be controlled by sprinkling them with crank case oil. This should be applied two or three times each season.

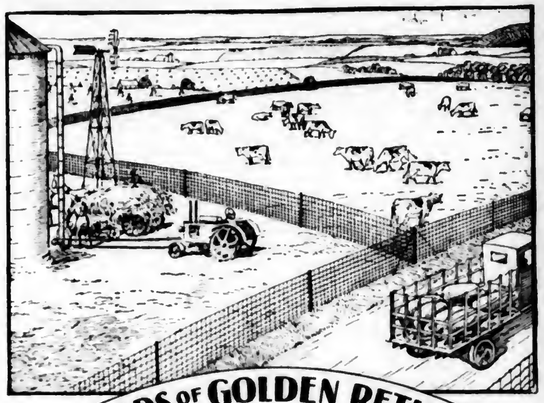
The livestock owner will find it of value to pay greater attention to lice control measures. J. E. Shigley.

Where They Go

YOUR editorial "Where Did They Go?" takes me back to the days at Cornell when I was in a seminar course in economics with Kemmerer, now famous. There we often wondered what would become of all the workers displaced by improved machines, same as now.

I would suggest that you drive 100 miles and count the gas stations, something that hardly existed fifteen years ago.

Basic city industries face the same problem as the farm. The development of American civilization, particularly since 1920, has been toward the expansion of luxury industries. The auto, the radio, the movies, to mention but three, have provided for an immense mass of the workers displaced by improved machines both on the farm and in the factory. Daniel Dean.



FIELDS OF GOLDEN RETURN

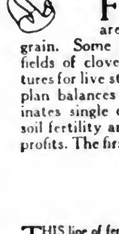
FIELDS that produce golden returns are not always fields of grain. Some years they must be fields of clover or alfalfa, or pastures for live stock. This up-to-date plan balances farming work, eliminates single crop risks, maintains soil fertility and insures consistent profits. The first essential to modern farm management and the rotation of fields with crops and live stock is a system of good, hog-tight fences. When building fence do not waste time and labor on inferior fences that require frequent repairs and early replacement. The best fences that experience, research and money can produce are—

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Registered Belgians— Young stallions and mares. Also a good four year old Percheron mare. Write fully your wants or better come and see. HYLLMEDE FARM. Beaver, Pa.

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$75.00-$75.00. Mares in foal. Also, Buggies, $25. New saddles, $8.50
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FOR QUICK SALE. Two Belgian Stallions, four years old. RAYTHARN FARM. Ronald Webster, Mgr., Huntingdon Valley, Pa.

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WHITE LEGHORN EGGS AND CHICKS.—Big discount if ordered now for spring shipment. Bired by 200 to 300 egg males. Egg bred 29 years. Winners at 50 egg contests. Shipped c.o.d. Catalog, special price bulletin free. Thousands of pullets, hens, cockerels at low prices. George B. Ferris, 980 Union, Grand Rapids, Michigan.

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CHERRY HILL S. C. White Leghorn Chicks from my personal supervised breeders on our farm. They are truly larger, more vigorous, more profitable producers of white-shelled eggs than you will find elsewhere at such reasonable prices. Circular free. Cherry Hill Poultry Farms, Wm. Nace, Prop., McAllisterville, Pa.

BUCHER SUPER-QUALITY CHICKS from inspected, free range, money-making stock. Reds, White Wyandottes, White, Barred Rocks, Giants, Black Minorcas, Anconas, White and Brown Leghorns. Booklet Free. Low Prices. Pure Breeds. Bucher Bros. Hatchery, Dept. B, Bucyrus, Ohio.

EARLY SPRING BROILER CHICKS.—Butcher market men pay extra prices for your purebred Rocks, Reds, Wyandottes, Orpingtons. Descriptive picture folder free, showing best varieties money-making market chickens. Farm Service, Route 81, Tyrone, Pa.

CHICKS —Pure Barron English White Leghorns. We import Large Trapnested Birds. Hi- and up Big, husky chicks hatched from our Egg-Bred Leghorns insure success. Get free Catalog, prices, before buying. Willacker Leghorn Farm, Box N, New Washington, Ohio.

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SUNNYFIELD EXTRA LARGE Single Comb Black Minorcas exclusively. Chicks, Eggs, Stock. Extraordinary layers. Lay exceptionally large white eggs, two matings, low prices. Catalogue. Sunnyfield Minorca Farms, Grampian, Pa.

CHICKS C. O. D.—100 Rocks or Reds, $14.00; Leghorns, $12.00; heavy mixed, $12.00. Light, $9.00. Delivery guaranteed. Feeding system, raising 95% to maturity free. C. M. Lauver, Box 45, McAllisterville, Pa.

PETERIME Electrically hatched pure-bred Barred Rocks, Reds, "Business Tancred" White Leghorns. Breeders rigidly culled and specially fed for highest vitality. Disease free. Get catalog, attractive prices stating number. Garber Hatchery, Harrisonburg, Va.

CHICKS.—Barred Rocks, April, $12.00 per 100; May and June, $10.00 per 100. Postpaid. 100% live delivery guaranteed. West Denton Hatchery, Denton, Maryland.

REGAL DORCAS WHITE WYANDOTTES Eggs-Chicks, Stock. 258-Egg Record Ledger. North American contest. Winter layers. Excellent type Fine matings. Free catalogue. Keiser's White Acres, Grampian, Pa.

QUALITY CHICKS.—White Leghorns, 8c. Barred Rocks, Reds, White Wyandottes, Black Minorcas, 10c; Buff Rocks, Orpingtons, 12c; Heavy mixed, 9c; Light mixed, 8c. Plum Creek Poultry Farm, Sunbury, Pa.

AMERICAN MOTTLED ANCONAS.—Record Layers. Lay large white eggs. Extra large type. Exceptional markings. Fine matings. Low prices Catalogue. American Ancona Farms, Grampian, Pa.

CHICKS.—From vigorous farm flocks. White Brown Leghorns, $12.00. Barred, White Rocks Reds, $13.00. Buff Orpingtons, White Wyandottes, $14.00. Black Giants, $20.00. Mixed, $10.00. E. S. Burger, Crestline, Ohio

PENNSYLVANIA STATE SUPERVISED Chicks. Barred Rocks, White Wyandottes, White Leghorns, all Leghorn Flocks headed by R. O. P. Cockerels (Tancred Strain). Write for prices. Lincoln Way Hatchery, Chambersburg, Pa

BABY CHICKS.—Leading strains of Barred Rocks and Reds. Knip's famous Brown and White Leghorns. Catalog free. W. W. Knip, R3A, Dutztown, Pa.

SINGLE COMB REDS, Barred Rocks, Eggs Chicks, Extraordinary matings. Fine type Erect for winter production. Catalogue, low prices Grampian Hills Poultry Farms, Grampian, Pa.

BEAVER'S QUALITY Large Size Tancred Barron English Single Comb White Leghorn Chicks from my own flock. $9.00 for May. E. L. Beaver, McAllisterville, Pa.

CHICKS from heavy-laying strain Barred Rocks, 10c. Mixed, 8c. 100% arrival guaranteed. Circular free. R. J. Ehrisman, Box 50, McAllisterville, Pa.

PENNSYLVANIA STATE SUPERVISED, officially blood tested. Tancred White Leghorn chicks. Mickey Poultry Farm, R 10, Alexandria, Pa

BEST WHITE LEGHORN CHICKS. Tancred strain. Satisfaction guaranteed Circular free. Pine Range Poultry Farm, Richfield, Pa

BABY CHICKS.—White Rocks, Barred Rocks, Reds, Contest winners in White Leghorns. Woodland Poultry Farm, Reedsville, Pa.

KEISER'S SINGLE COMB BROWN LEGHORNS and Golden Buff Orpingtons. Excellent matings Catalogue. P. Keiser, Grampian, Pa.

QUALITY CHICKS.—Satisfaction guaranteed Davis Bros. Electric Hatchery, Reynoldsville Pa

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12 MAMMOTH TOULOUSE GOOSE EGGS $6 (if postpaid, $25.50 per 50). From large old breeders. Valuable instructions with each order. Satisfaction guaranteed. Hatch early for size Highland Farm, Sellersville, Pa.

DUCKLINGS—Mammoth White Pekins 1,200 weekly, 26c each, 1c less in 100 lots, 2% Discount, full remittance with order. Bucher Bros Hatchery, Dept. B, Bucyrus, Ohio

WHITE PEKIN DUCKS.—Eggs and ducklings reasonable. Flocks headed by mammoth 8 to 10 pound drakes. Catalog free. H. A Souder, Sellersville, Pa.

MAMMOTH PEKIN DUCK EGGS for hatching, ten cents each delivered. J. G. Kennel, Atglen, Pa.

Veterinary

By Dr. J. F. SHIGLEY

PARALYSIS

I have a sheep seventy months old that has nearly lost the use of his legs. He commenced to waste around with his hind parts some time ago and I now can hardly stand alone. He eats well and is in good condition. Would it be right to use this sheep? J. S. H.

Recent investigations tend to show a mineral deficiency of the ration can have a direct bearing on paralysis of the hind quarters in lambs. Contagion from is the principal cause of why it should be supplied with something in which it is found. In all cases of paralysis in sheep, it is necessary to find out the cause, and remove it if possible. Sometimes a change of pasture will effect a cure. We have found that a small grain mixture composed of some green alfalfa is excellent. Do not overfeed corn or cracked corn should be shared with the feed in the proportion of one part to 99 parts of feed or corn in chaff to the quantity of the sheep to be fed with grain.

I cannot give you any more advice as to the improvement of this sheep. I have seen so many of these dogs which never did or else the improvement that it always is safe to assume that you will not have definite improvement except in a small percentage of cases. Along the most practical thing to do is to sell this dog to the butcher before he has lost weight thereby getting something out of him for pork. It is a safety well there is for to own who his meat is not fit for food.

Farm Conditions

Westmoreland Co., S. W. Pa.

April 5 Spring is opening early. A few plum trees are in bloom. March was warmer than usual by five degrees. Had one day nearly 80 degrees and birds arrived earlier than usual. Wheat, grass and clover have come through the winter in good condition. Stock is looking good and there is an abundance of hay in the barns. Plowing began the latter part of March.

F. J. Wagner

Butler Co., Western, Pa.

April 6 Fine spring weather. Manure hauled and clover seed sown. Most of the spring wheat sown. Oats and corn ground being plowed with large acreage to be sown. Baby chicks doing fair. Potato acreage to be increased slightly over previous years. Much new machinery being bought. Howard F. Fox

Wirt Co., Central W. Va.

April 4 Farmers busy sowing oats. More oats being sown than usual. Farm sales over everything bringing good prices. Calves $14, cream 50c, butter 50c eggs 24c, hens 25c, corn at 1.5 bu., oats, 50c, potatoes 75. Not as many pigs for sale as usual.

E N B

Clearfield Co., Central Pa.

April 3 The snow drifts are gone and deep mud roads prevail. Marketing difficult. Apples 75c to $1.50, potatoes 75c to $1, cabbage 4c, eggs 30c, butter 45cents, dressed poultry 25c. Winter grain in fair condition. D H Watts.

Highland Co., Southern Ohio

April 7 Weather warm and dry. Grass and wheat growing nicely. Garden making and plowing the order of the day.

M B Williams

Pendleton Co., N. E. W. Va.

April 2 Farmers busy with spring plowing. Grass is growing nicely. Wheat looking good in some sections and in others rather slim. Lumbering is still one of the leading factors of the county. Public sales in full swing and property commanding fairly good prices. Most cattle, sheep and horses have come through the winter in good condition, and quite a bit of rough feed can be carried over to next year unless the weather becomes inclement yet. This spring has been a fine time to save young lambs. Turkey hens laying well. A number of persons are now engaged in raising turkeys. Yesterday I saw a truck load of potatoes hauled 15 miles and sold at 40 cents per bu. John Dahmer.

Frederick Co., Northern Md.

April 8 Weather has been extra good for March. Farmers busy sowing oats, plowing corn ground and hauling manure. Grass is looking extra good for this early in the season. Wheat looking fine. Trees are out in blossom and are sure full of them. Farm sales nearly over. Prices were good, especially for good horses and cows. The work of testing cows for tuberculosis is expected to start in the near future.

Roy J. Wivell

CATTLE

REGISTERED HEREFORD CATTLE. Bulls, cows, heifers and young bulls for sale. A high lot of Woodford breeding.
JRED J. BROWN, DuBois, Pa.

HEREFORD BULLS.—Yearling bulls, one of the best. Ready for service and priced right. Write or come.
OTTO G. COCHRAN, Millersport, Ohio.

D. S. POLLED HEREFORDS.—A few choice Cows, Heifers, bulls. Come or write
CHAS. D. GILL, Millersport, Ohio.

BUCK & DOE RUN VALLEY FARMS. Herd of Cattle, Poland-China Hogs, Saddle Bred Horses.
COMPANY THE LAST Martinsville, Ohio.

Angus Cattle at Stud
W. S. BAYARD BROS., Waynesburg, Pa.

MILKING SHORTHORNS.—Cows, heifers, bulls. Best breeding, accredited herd.
C. M. Kennedy & Sons, Ulster, Bradford Co., Pa.

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they help you get the most out of life and save you time and trouble doing it.

BEES & HONEY

A TREMENDOUS CHANGE IN BEEKEEPING is coming about in the last half dozen years. It is an entirely new beekeeping due to the fact that honey production can be doubled in the average apiary in the United States by a system of management, without new equipment and with less cost. We want to write you this revolution in beekeeping, but you must act at once if and begin it this season. A. I. Root Co., 235 Liberty St. Medina Ohio.

WANTED

WANTED White Cattle pups, State price. Fred Schueler Galion, Ohio

EGGS

GOLDEN BUFF ROCKS, the best all-purpose fowl. Select hatching eggs from high record hens that are mated with males of to 11 lb. pedigree healthy baby chicks. Eggs, $3.0 15; $2.75 for 30, $5.00 for 60. Floyd Long A. H. Shaffer, R. 1, Box 16, Farmington, Ohio.

SINGLE COMB WHITE MINORCAS great for layers. Pure bred heavy laying strain. Circular free to flock. Eggs, $1.25 for 15, $3.00 for 50. Mrs. Golden, Penn Run, Pa.

MY BARRED PLYMOUTH ROCKS are vigorous, heavy, high producing birds. Eggs, $2.00 per 15, $5.00 per 45 and $8.00 per 90 postpaid. Circular. R. L. Evans, Somerset, Pa.

LARGE WHITE CHINESE GEESE eggs from free range stock, 30 cents each; $3.50 for Five Dollars, postage paid. Mrs. Sheffler, Hilltownville, Pa.

REDS BOTH COMBS.—Eggs, $1.50 per 15; $2.50 per 30; $4.50 per 60; $8.00 per 100. Circular free. Line Roberts, Palmyra, Pa.

SINGLE COMB BROWN AND WHITE Leghorns. 257-egg Eggs, 15-$1.00 up. Very best Rocks, Reds, Wyandottes, Buff Orpingtons, Buff Rocks, Runnebergs, 12c. Heavy mixed, 9c; Light mixed, 8c. Plum Creek Poultry Farm, Sunbury, Pa.

BARRED ROCK EGGS.—Hogset layers, show record 1, H. Tyreman, Ked Lion, Pa.

JERSEY GIANTS 15 eggs $1.25 postpaid. Mrs. Joseph E. Holland, Milford, Delaware.

GOLDEN BUFF ROCKS 15, $1.00; 30, $1.75. Mrs. Viola Wise R. 2, Renfrew, Pa.

POULTRY

BARRED ROCK COCKERELS.—Big boned. Certified stock laying eggs and baby chicks. Eugene A. Greene, Lime Rock, Md.

TURKEYS

12 MAMMOTH BRONZE TURKEY HENS producing fertility guaranteed, $60.00. Also strutters with each order. Brookcot, Highland Farm Sellersville, Pa.

TURKEYS.—From our famous Bronze, Bourbon Red, White Holland, and Gannett Special prices. Eastern Oak Farms, Bealls ville, Ohio.

MAPLEWOOD FARM MAMMOTH BRONZE toms 17 to 24 lbs. Narragansett, Bourbon Red eggs special prices Walter Jones, Fredericksburg, Virginia

PURE BRED MAMMOTH BRONZE TURKEYS. Trowbridge Poultry Farm, Bellbrook, Ohio.

PURE BRED BOURBON RED TURKEY toms $5.00 for 30. Geo. Lehman, Anamosa, Iowa.

TEN CHOICE BOURBON RED TURKEY toms $5.00. Ray Lehman, Hanover, Maryland.

BRONZE and NARRAGANSETT EGGS $2.50 per 11. Henshaw, Box 1024, Uniontown, Pa.

DOGS

FREE Dog Book.—Folk Miller's famous book on diseases of dogs. Instructions how to bring cure and breeding with original dog pictures. Illustrated. Write for free copy today. Miller Products Corp., 1925 W. Broad St., Richmond, Va.

ENGLISH SETTER PUPPIES from champion field trial sire of the week for the champion field trial sire of the week for regular prices. Duquesne Kennels, Penn Hills, Pa.

HIGHLY PEDIGREED POLICE PUPPIES 3 months, $8.00; males, $10.00, with papers. Rex Grimm, Bellevue, Pa.

PURE BRED COLLIE PUPS, beautiful, intelligent, natural herders, farmers' prices. Ross Petaskala, Ohio.

COLLIE and FOX TERRIER PUPS. Finely marked and intelligent. London Kennels, Glen Rock, Pa.

SITUATION

EXPERIENCED FARM MANAGER desires position on modern dairy farm. Best references. Address: Box 116, Pennsylvania Farmer, Pittsburgh, Pa.

MALE HELP

WANTED—Single man to work on private estate on modern dairy farm. Give reference and state wages expected. E. J. McCoy, Emlenton, Pa.

SEEDS AND NURSERIES

APPLE TREES.—Baldwin, Cortland, Delicious, Stayman Winesap, Rhode Island Red, Northern Spy, Wealthy, Rome Beauty, Jonathan, Grimes Golden, 3 to 4 feet, 25c each, $20.00 per hundred; 4 to 5 feet, 30c. Concord grape vines, 2 to 3 feet, 20c. Concord grape vines, 2 to 3 feet, 20c. Concord grape vines, 2 to 3 year, $5.00 per 100. Evergreens, shrubs, Hedge Plants, 25c each. Evergreens, shrubs, Hedge Plants, 25c each. A dollar saved is a dollar earned. Send for catalogue and let us tell you more about our products. Thomas Marks & Sons, Wilson, Niagara County, N. Y.

COLLEGE PLANTS, NOW READY.—My frost-proof Cabbage plants will head three weeks earlier than other plants. Varieties: Jersey Wakefield, Succession, Flat Dutch, Charleston Wakefield, Copenhagen Market, Early Summer, Late Flat Dutch. 500, $1.25; 1,000, $2.00; 5,000, $9.00. Express collect. Tomato plants same prices as Cabbage plants. Pepper plants, Bell or Bull Nose, 500, $2.25; 1,000, $4.00. Prepaid. Satisfaction Guaranteed. Pelham Plant Farm, Tifton, Ga.

FULTON FIELD-GROWN VEGETABLE Plants—Early and late beets, 500, 25c; 1000, 40c; 5000, $1.75. Cauliflower, Celery, Lettuce, 500, 40c; 1000, 75c; 5000, $3.00. Peppers, 100, 50c; 500, $2.00. Tomatoes, 100, 50c; 500, $2.00; 1000, $3.75. Sweet Potatoes, 100, 50c; 500, $2.00; 1000, $3.75. Egg Plant, 100, 50c; 500, $2.00; 1000, $3.75. Express collect. Prompt shipments. Fulton Plant Co., Fulton, Ky.

FROSTPROOF CABBAGE PLANTS.—Jersey, Copenhagen, Flatdutch, etc. Now ready for shipment. Tomato plants, Pepper plants, Sweet Potato plants. 500, $1.00; 1000, $1.50; 5000, $6.00. Express collect. Satisfaction guaranteed. Dixie Plant Farms, Tifton, Ga.

MILLIONS FROSTPROOF CABBAGE and BEET plants. Leading varieties. Prompt shipment. 500, $1.00; 1000, $1.50; 5000, $6.00. Tomato, pepper, eggplant, sweet potato plants, same prices. Satisfaction guaranteed. Quick delivery guaranteed. J. T. Counsell Sons, Franklin, Va.

MILLIONS CABBAGE PLANTS frostproof, that will stand northern climate. 200, $1.00; 500, $1.25; 1,000, $2.00 postpaid. Express, $1.25 per 1,000. Also Early Tomato plants, same price. Dixie and dealers, get our wholesale prices. Bird Plant Co., Franklin, Virginia.

JET GRIMM ALFALFA SEED NOW! Lemon's Jet Grimm is original Grimm stock. Hardiest of strains and highest in feeding value. Yields 5 tons without replanting. Seed scarified to insure germination. Also sweet clover and red clover. Order early! A. B. Lemon, Introducer, Lyons, Minn.

PURE CROP SEED CORN.—Field selected, carefully dried, shelled and graded. Germination very good. First prize Boone County White, Reid's Yellow Dent, Iowa 13 Yellow Dent. $2.00 bushel; parcel post paid. Ten ears mailed for 25 cents. Ten pound parcel post prepaid, $2.45 bushel. Boone County Seed Farm, Boone, Iowa. Chas. L. Gibson, Rockford, Pa

MY OUR FROSTPROOF CABBAGE and ONION Plants are mature crop 3 weeks earlier. 300, $1.00; 1,000, $2.50 Prepaid. 10,000 by express, $15.00. Tomato plants, 300, $2.50; 1,000, $3.50 prepaid. 10,000, $15.00 by express. Pepper plants, Sweet potato plants delivered or parcel post. P. Counsell Company, Franklin, Va.

FROSTPROOF CABBAGE PLANTS.—Charleston Jersey, Flatdutch, Succession grown from selected seed. Plants specially hardened for cheap, quick growth. Ready now. 500, $1.00; 1000, $1.50; 5000, $6.00. Express collect. Prompt shipments guaranteed. Satisfaction guaranteed. Tifton Plant Farm, Tifton, Ga.

SEED SWEET POTATOES.—Porto Rico, Nancy Hall and Yellow Jersey. Prices reasonable. Price list free. Write for it. Ralph Hall, Bridgeville, Del.

CERTIFIED SEED POTATOES.—Irish Cobblers and original strain Carman No. 3. Buy direct from grower. Write today for prices. M. A. Baker & Sons, Fairport, New York.

C. O. D. FROST PROOF CABBAGE PLANTS. Leading varieties now ready. 500, 65c; 1,000, $1.00; 5,000, $4.50 Farmers' Plant Co., Tifton, Ga.

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WRITE FOR FREE SAMPLES CLARAGE Seed Corn. Champ producer World's Highest Yields. Planlap & Son, Williamsport, Ohio.

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100 GENUINE, selected Mastodon Everbearing Strawberry plants, $1.35; 1,000 Dunlap, $2.25; Gibson, $2.75; Cooper, Premier, $5.00; Twelfty plants guaranteed to grow. Weathaner's Nurseries, Sawyer, Michigan

FREE PLANTS.—By C.O.D. mail or express and charges paid. 500, $1.00; 1,000, $1.75; 5,000, $7.50. Free onion plants with every order for Frostproof Cabbage Plants. Eureka Farms, Tifton, Ga.

WILSON SOY BEANS $2.40 bsh, sacks free. Leading tariff-tested corn, $4.00 bushel, fob, sacks extra. All clovers, lowest prices. J. T. Vandenberg & Son, Bridgeville, Del.

CHOICE ORANGES.—Sweet, juicy, box containing 100, $1.85 with order, express charges collect. Satisfaction guaranteed. Mrs. Mary A. Thomas, Box 59, Thonotosassa, Florida

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VERY CHOICE FIRST GRADE SEED Potatoes, grown on best potato soil. Russets and Cobblers. Bushels $1.50. Brookside Stock Farm, Hershey, Pa

Improved CABBAGE and Bermuda Onion plants. Prepaid mail, 500, $1.00; 1,000, $2.00. Express, 5,000, $3.75; 10,000, $7.50. Coleman Plant Farms, Tifton, Ga.

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STRAWBERRY PLANTS, $3.00. 1,000 UP, twelve leading varieties (Mastodons). Raspberries, blackberries, gooseberries, asparagus, rhubarb, horseradish, Wholesale prices (Succeeds Kurrent). Three Oaks, Michigan

DAHLIAS.—Fifteen excellent varieties, labeled, $2.00. Gladiolus, large flowered, mixed, blooming size, 60c per 100. Both collections, $2.75. Hundred gladiolus, $2.00. Bertha Lindell, New Cumberland, W. Va.

100 GENUINE, selected Mastodon Everbearing Strawberry plants, $1.35; 1,000 Dunlap, $2.25; Gibson, $2.75; Cooper, Premier, $5.00; Twelfty plants guaranteed to grow. Weathaner's Nurseries, Sawyer, Michigan

FREE PLANTS.—By C.O.D. mail or express and charges paid. 500, $1.00; 1,000, $1.75; 5,000, $7.50. Free onion plants with every order for Frostproof Cabbage Plants. Eureka Farms, Tifton, Ga.

WILSON SOY BEANS $2.40 bsh, sacks free. Leading tariff-tested corn, $4.00 bushel, fob, sacks extra. All clovers, lowest prices. J. T. Vandenberg & Son, Bridgeville, Del.

CHOICE ORANGES.—Sweet, juicy, box containing 100, $1.85 with order, express charges collect. Satisfaction guaranteed. Mrs. Mary A. Thomas, Box 59, Thonotosassa, Florida

CABBAGE PLANTS.—500, $1.25; 1,000, $2.00, postpaid. Tomato plants same price. Hot and June delivery. Satisfaction guaranteed. Union Plant Farm, Franklin, Va.

VERY CHOICE FIRST GRADE SEED Potatoes, grown on best potato soil. Russets and Cobblers. Bushels $1.50. Brookside Stock Farm, Hershey, Pa

Improved CABBAGE and Bermuda Onion plants. Prepaid mail, 500, $1.00; 1,000, $2.00. Express, 5,000, $3.75; 10,000, $7.50. Coleman Plant Farms, Tifton, Ga.

CERTIFIED SEED POTATOES.—Irish Cobblers and original strain Carman No. 3. Buy direct from grower. Write today for prices. M. A. Baker & Sons, Fairport, New York.

C. O. D. FROST PROOF CABBAGE PLANTS. Leading varieties now ready. 500, 65c; 1,000, $1.00; 5,000, $4.50 Farmers' Plant Co., Tifton, Ga.

SEND NO MONEY.—C. O. D. Frost Proof Cabbage and Onion plants. All varieties now ready. 500, 65c; 1,000, $1.00; 2,000, $1.50 Standard Plant Co., Tifton, Ga.

MILLIONS CABBAGE ONION and TOMATO Plants. $1.00. Pepper and Potato Plants, $1.75. 1,000. Ozark Plant Company, Thomasville, Ga.

HARDY ALFALFA SEED, $25 pure, $20.00 bushel sweet clover, $12 pure, $9.00. Return seed if not satisfied. Geo. Rowman, Concordia, Kansas

CERTIFIED SEED POTATOES.—Two years testing by Pennsylvania State College proved these among the very best. Paul R. Smith, Clyssers, Pa.

FROST PROOF CABBAGE PLANTS, $1.00 thousand; Porto Rican Potato Plants, $2.00 thousand. Shipped parcel post. Cash with order. Bullard Brothers Plant Farms, Bailey, Ga.

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WRITE FOR FREE SAMPLES CLARAGE Seed Corn. Champ producer World's Highest Yields. Planlap & Son, Williamsport, Ohio.

EARLY VARIETIES CABBAGE PLANTS, 500, $1.00; 1,000, $1.50 postpaid. Satisfaction guaranteed. Bissell Plant Co., Franklin, Virginia

FROSTPROOF CABBAGE and ONION PLANTS. 500, 75c; 1,000, $1.00 prepaid. R. Williams, Quitman, Ga

PEACH, $4.00 per 100. Apple, Pear, Cherry, Plum, Small Fruits, reasonable. Price list free. Farina Nursery, Farina, Ill.

SEED CORN.—Best selection Lancaster Sure Crop money can buy. Write Noah Hershey, Parkesburg, Pa

CHOICE DAHLIAS.—Circular describing varieties free. Penn's Floral Gardens, Bordentown, Pa.

SEED POTATOES.—Irish Cobbler, Bonnets Rural and Rural Russets. The Cross Farm, Hayesville, N. C.

SEED POTATOES.—Cambria County ragged Russets, eighty cents bushel. J. A. Firebaugh, Sales Manager, Bradley Junction, Pa.

GLADIOLUS 60, same color, $1.25; 10 Dahlias, $1.25; evergreen trees, roses. Catalogue. Gladiolus Farms, Chicopee Falls, Mass.

LANCASTER COUNTY SURE CROP Seed Corn, germination sure. $2.00 per bu. John H. Boettinger & Sons, Lemoyne Place, Penna.

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CERTIFIED SEED POTATOES for sale. Jas. Lynch, Coral, Montcalm County, Michigan

HYBRID SEED CORN, first cross Pennsylvania grown. William Brimm, Glenrose, Pa

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LOUISE PURE HONEY.—Direct from producer, 5 lb. pail clover or buckwheat, $1.15 postpaid. Wholesale prices on request. Satisfaction guaranteed. W. C. Long, Millville, Pa

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MISCELLANEOUS

DO NOT EXPERIMENT with Your Cows, Horses, etc. J. A. Call of Enon Valley says:—"Be sure that I treated with Dreedall's Restorer, to restore heat, cause 16 heat O.K." Successful dairymen can recommend our remedies. If they are not successful, they would not be users of our Tonics, Heaves, Bag Remedy, Remedies for Failure to Breed, Miscellaneous, etc. Information and Booklet Free. Breed-O Remedy Co., Box 2240, Bristol, Conn.

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150 ACRE FARM, Armstrong County, near Chicora. Good buildings. Barely loam, only $6,000. C. U. Cryptian, Harrisburg, Pa.

MISCELLANEOUS LANDS

IN THE SAN JOAQUIN VALLEY of California general farming is a paying business, feeding millions of people in towns and cities. Alfalfa combined with dairying, hogs and poultry, yields a good income. A small one-family farm, with a little hired labor, insures success. You can work with us on your own terms. Necessary welcome. The Santa Fe Railway has no land to sell, but offers a free service in helping you get right location. Write for illustrated San Joaquin Valley folder and get our farm paper—"The Earth" free for six months. C. L. Seagraves, General Colonization Agent, Santa Fe Railway, 819 Railway Exchange, Chicago

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Dependably Built to Thrive on Hard Work

JUST as the farmer of yesterday relied on Dodge Brothers cars for their dependability and stamina—the farm owner of today, with his modern wants and needs, now turns to the new Dodge Brothers Six. He knows from its name that it is a sound, sturdy and capable motor car. He finds, from an inspection of its many betterments and advancements, that it offers new dependability even for a Dodge Brothers car. He learns, from a trial ride, that it welcomes rough roads, thrives on hard work—sets the pace in performance for anything at or near its price. The new Dodge Brothers Six—with its new Mono-piece Body—its modern, good-looking lines—its spacious interiors, is as typical of the ability of Dodge Brothers as it is of the genius of Walter P. Chrysler who inspired it.

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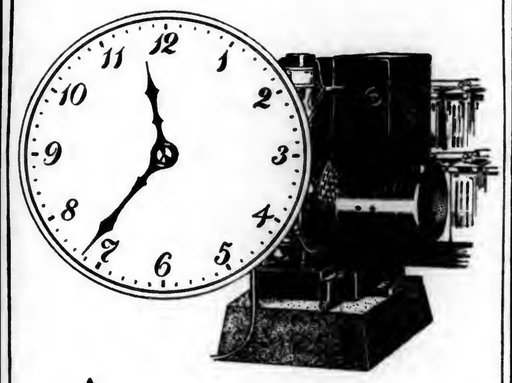
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Farm Facts and Fancies

By ALVA AGEE

A LEADING manufacturer of potato planters writes: "My recollections carry me back years ago when you used our planter on your Ohio farm. I am particularly anxious to call to your attention a practice in growing potatoes, especially in Pennsylvania, which I believe is the same as you recommended in those years ago—that of placing a shallow covering of earth over the seed planted deep in a trench. We recommended a practice which we discussed Doctor Nissley (of Penn State College) last year to plant his potatoes on his own farm, with instructions for covering potatoes in this manner, and the result was very satisfactory, and he is therefore recommending this method of covering very strongly for the coming season. I am naturally interested in tracing the origin of this method of covering and giving credit where credit is due."



Light Covering of Seed

I recall the use of that planter with a lot of pleasure. It seemed all wrong to pile a heavy ridge over the seed, because the soil naturally was too heavy for potatoes, and so we took the covering disks off and attached a section of a small log to the planter to trail in the furrow and press a little fine earth over the seed. When the planting was finished, the field looked as if it was merely furrowed ready for planting by hand. After the buds had started the furrows were filled by the cultivator that was used to loosen the ground close to the row. The result was stronger plants than could be started under a close covering of heavy soil.

As It Was Reasoned Out

We didn't have very good seed for planting in those days. The common trouble was that the plants were too spindling, and the lack of vigor was most apparent when heavy rains after planting had caused the ground to become compact around the seed pieces. The sprouts would thicken as they came into the soil that was made loose with a harrow or weeder, but I have never seen a good yield from a plant that was small where it left the seed piece, no matter how well it might appear when it had reached the surface.

Heavy rains played the mischief with a soil that was not naturally half loose enough for potatoes, but the land would pay better in potatoes than in any other crop, and so they were grown. Then, too, we knew that seed potatoes exposed to the sunlight for ten days before planting made stronger buds than those kept in the dark, but our planting must be done as soon as frost would permit, and we could not follow the practice of some who planted in May and June. The next best thing was to plant on time, and leave the seed free to the light and air.

The Other Side of It All

In those days I didn't know how heavy a first class potato soil could be, and how far our land was from the natural condition of land in the best potato sections. I jumped at the conclusion that what I found good for myself must be good for others, and some people who believed what I was talking and writing, and who were growing only potatoes for market, tried the plan and often told me that they did not like the method.

Deep covering isn't best when early maturity is the consideration, and anyway a really heavy covering of loose ground keeps out the light and air like half the bottle of sugar soil. The difference in soil conditions and time of marketing that made me come to think that I might be doing as much harm as good I became half-sorry I had ever advocated the method.

Where Probability Lies

There is nothing like light to secure a strong bud. Regardless of soil conditions, it would pay many a grower who plants late to expose the seed to sunshine for a time before planting. Doubtless the vigorous seed that our best growers now use would not benefit as much from very light covering in the row as was the case when poor seed was used as a matter of course and of ignorance. Main crop potatoes do best when the planting is moderately deep, and light covering seems the natural thing for the seed. I reckon that so much depends on soil and season that no one can afford to be very positive in the matter.

That Old Planter

There was no device at that time for covering lightly with the disks of a planter. Removing the disks did very well because the seed pieces slipped down under a little of the fresh soil before it fell back into the bottom of the furrow, and the log helped to cover some pieces that otherwise would have been left exposed.

Our friend asks about the "credit" for the idea. I doubt whether any of us have any original ideas. Things come to us from many sources, and we forget that they are not our own. On reading this letter I thought, "Well, here is one thing I worked out," but later I recalled that I had been interested in the extraordinary yields Mr. E. S. Carman, originator of the Carman and some other varieties of potatoes, had obtained, and he planted in very deep trenches. That, and the advantages of budding seed in the sunlight, and the distress after wet spring in finding plants spindling, led to the experiment with the planter.

While the method may have had questionable value for some grown in naturally loose soils, it was all I claimed for it in my own case. But all we were trying to do was to get strong plants, when putting the seed only three or four inches under the leveled surface of the ground, and the true trench method is another story.



MUTTON PRODUCTION IN LANCASTER COUNTY
Sheep raising is one of the many lines of farm work conducted successfully by Master Farmer C. B. Snyder, Lancaster county, Pa.

News Notes

¶ Agents of the United States Department of Agriculture constantly are searching remote corners of the world for plants which can be imported and grown profitably by American farmers. Some of the successful importations thus made are: Durum wheat from Russia; sorghums and Sudan grass from Africa; soy beans from Japan; new varieties of cotton from Egypt.

• • •

¶ The best of milk is nearly ninety per cent water. Nevertheless it is not "weak" for it contains a long list of "solids" some of which have just been discovered by Cornell University scientists by means of the spectroscope. It is now known that the following metallic elements are present in milk:

potassium	rubidium
calcium	sodium
silicon	strontium
iron	titanium
boron	vanadium
magnesium	zinc
manganese	

Of course, milk also contains many other non-metallic substances.

• • •

¶ Most of the Mexican tomatoes which are usually shipped to northern markets in large quantities at this time of year are grown in the state of Sinaloa. Many railroad bridges in Sinaloa have been destroyed during the present revolution, thereby many of the tomato shipments.

• • •

¶ As soon as an egg is laid it starts to lose its carbon dioxide and becomes more alkaline, which hastens its decay. This tendency can be largely overcome by introducing carbon dioxide into the air of cold-storage rooms, shipping containers or refrigerator cars. The use of carbon dioxide for this purpose is very simple, since an amount sufficient to keep the eggs will not endanger workmen who must enter the storage rooms.

• • •

¶ Oklahoma shipped 120 tons of dressed poultry to the Philadelphia market during March. Other states which shipped more than 50 tons were: Illinois, Indiana, Iowa, Kansas, Kentucky, Texas. Pennsylvania shipped slightly more than one ton by rail.

• • •

¶ The last spike on the new railroad connecting the Canadian railroad system with the shores of Hudson Bay will be driven this summer. Ballasting will be completed and the road will be ready to carry wheat in 1930. The Hudson Bay route will shorten by nearly a thousand miles the route from Canadian wheatfields to the markets of Europe.

• • •

¶ Station WPSC of the Pennsylvania State College has changed its noon broadcasting period to 12 sharp. Programs are on the air every day at that time except Saturday and Sunday. Sunday chapel service is broadcast at 11 A. M.

• • •

¶ Orchardists who get the most benefit from the use of bees as pollinizing agents place a colony of the bees on each acre of orchard, says bee specialist Aigo of the Ohio extension service. But should the orchard be made of self-sterile varieties, it is necessary to bring in large bouquets of blossoms from some variety which will cross-pollinate the variety in the orchard. These bouquets are placed in tubs of water near the bee hives.

• • •

¶ The airports at Bellefonte, Pa., Hadley Field, N. J., and Cleveland, Ohio, now receive twice-a-day weather reports by teletype printers. These machines automatically typewrite the weather reports and upper-air data which come in over the wire from weather and aerological stations all over the United States and Canada.

• • •

¶ Virginia shipped 10,956 cases of eggs to Philadelphia by motor truck in March. Truck shipments from some other states were: Pennsylvania 28,815 cases; Delaware 6,432; Maryland 7,916. More than 7,000 cases came by boat, from as far as North Carolina and a few from Georgia, but mostly from Maryland and Virginia.

• • •

¶ Canada's total potato crop in 1928 is estimated at 90,975,000 bushels from 399,775 acres. This year's production is a 11 per cent increase over 1927.

• • •

¶ Nearly a million bushels of grano onions were imported into the United States from Spain during the last half of 1928.

An organization of sixty years' experience gives you its word that there is

no finer oil made *than* ATLANTIC

THE very first oil specially made for automobile engines was made by the Atlantic refineries. And these same refineries have given the world a constant succession of motor oil improvements ever since.

No organization in the land has devoted more study to this very important factor in the operation and upkeep of automobiles. None has behind it such a vast store of knowledge, research and experimentation.

You are most careful to buy a car of proved merit and experienced manufacture. Why not apply the same caution when buying the thing upon which its very life depends? . . . MOTOR OIL.



ATLANTIC possesses qualities for heat and evaporation resistance unsurpassed in any other paraffine base, or any other type, motor oil.

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It will carry you farther before oil-changing becomes necessary, giving you more miles per dollar than any other oil you have ever used.

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TIGHT BINDING TEXT CUT OFF

WHEN DO *We* EAT?

Your Corn Crop Wants to Know

IF growing corn had the power of speech you'd hear something like this from every stalk on your farm—"When do *we* eat? When do *we* eat?"

Growing corn needs food just as growing boys do—but not so constantly, luckily. Feed your crops one or two good helpings of Chilean Nitrate of Soda and you will harvest bigger ears and many more ears per acre.

Your Other Crops, Too

Chilean Nitrate will help every crop you grow make more money. As top dressing on wheat, it adds 10 to 15 bu. per acre. On truck and fruit it pays for itself many times over. Chilean Nitrate is the world's only natural nitrate fertilizer. Not synthetic. Nature's own plant food, containing all that nature gave it—including iodine.

Free Fertilizer Book

Our new 44-page illustrated book, "How to Use Chilean Nitrate of Soda," tells how to fertilize all your crops. Free. Ask for Book No. 1, or tear out this ad and mail it with your name and address.

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EDUCATIONAL BUREAU

530 CITIZENS' BANK BLDG., COLUMBUS, OHIO
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Profitable Crops

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"The crows went over and pulled up my neighbor's corn"



writes J. E. Meyers of West Salem, Ohio. And from that day on Mr. Meyers' crow troubles were over, for he said further, "I tested your Crow Repellent and found it to be just as you recommended."

With a successful record of over 20 years behind it, Stanley's Crow Repellent is the one sure cure for crow troubles. Not only crows, but moles, squirrels and all pests leave your cornfield severely alone, if you treat your seed-corn with it just before planting. It is not poisonous.

Large can, enough for 2 bu. of seed-corn (8 to 10 acres) $1.50. Half size can $1.00. If your hardware, drug, or seed store doesn't have it in stock, then order direct. "Money Back" guarantee. Address Cedar Hill Formulae Co., Box 500-R New Britain, Conn.

Be sure you get

STANLEY'S CROW REPELLENT



Seed coated with Stanleys Crow Repellent



The Baker Gas Tractor

Two Sizes—22-40 and 25-50

The tractor with the answer. Strong substantial frame. Heavy duty Foote Transmission. Heavy solid axle revolving on roller bearings. Four plate heavy duty clutch. Especially designed drive pulley shaft with three bearings. The harder the tractor pulls the closer it hugs the ground due to special draw bar hitch. Moderately priced. Terms fair. Complete tractor and thresher catalogs free.

THE A. D. BAKER COMPANY
Swanton, Ohio

NESHAMINY GARDENS

By R. P. KESTER

SEVEN days of cold, wet, cloudy weather, with peach, cherry and pear blossoms in full bloom! What may we expect from this? I knew an extensive apple grower in Centre county, a man who was a natural born scientist as well as practical farmer, who said he had usually noticed that three such days when apples were in bloom were very destructive and lessened the crop. We have had no frost the last week, although the thermometer registered 38 degrees on two mornings.

• • •

After staying pretty well up all winter, the price of eggs at last took a tumble. This is no doubt due to the fact that hens which have been loafing more or less during the past winter came into production. Poultry keepers generally report high production just now. Storage eggs are being rushed onto the market so as to clean out the supply before the time limit expires, and this also helps to bear the market.

• • •

Our asparagus has been pushing out at an unheard of rate during the warm weather last week. Last year we had our first cutting about the first of May. This year we found stalks a foot high on the fifth of April! We had not cleaned the field, nor done any ridging. We will use the big tractor and the orchard disk to work the ground and ridge up the rows. We found last year that this did a very satisfactory job. One thing we are silently praying for this spring is an absence of asparagus beetles. Last year these pesky little insects injured a great deal of our product.

• • •

The warm weather the first part of April pushed most of the strawberry plants through the mulching material before we removed any of it. But this makes it all the better since the mulch is sure to be well spread around and under the plants, and this will keep the berries from being splashed with dirt when it rains. We have found that this is the chief use of strawberry mulch in this section. But it is a big and important factor in producing marketable berries. People who find sand on their berries when they come to eat them tell you about it the next time you go to sell.

• • •

I have just a word to an unknown reader who sent me word to stick to practical farm stuff when writing and not use space to tell about my grandchildren. The word is this. Those two little boys and that little girl are more interesting to me than all the strawberries, asparagus, peaches, onions and grapes we raise, and since I started this column to have a place to write about things that interest me, I propose to mention them whenever I feel like it.

• • •

I am always a little suspicious of people who do not like, or are not interested in, children and dogs. Of course, there are many people who think that their own children, grandchildren and dogs are exceptional and superior, but they don't like children in general. Such people should be watched. They exhibit a high degree of selfishness. As a matter of fact, the whole child population is the most important thing this nation possesses. All our farms and mines and factories are insignificant in value when compared to the value of the rising generation.

• • •

The extremes of weather and the rush of heavy work during recent weeks conspired to give me a touch of lumbago, and for that reason I feel justified in curtailing the arduous work of running a typewriter this week. I [illegible] this unimportant, personal bit of [illegible] in explanation of the brevity of [illegible] column.

Friendly Talks

By Edgar L. Vincent

CHARACTER in large part [illegible] pends on the way we meet [illegible] days. I have forgotten who [illegible]

Sad days must be dark and dreary. Into each life some rain must fall.

Nobody can dispute the truth of [illegible] adage, and I do not suppose any [illegible] us would deny that rainy days are a good thing in a great many ways. Our farming business would soon come to grief if we should not have rain for a year or two. To a greater or [illegible] all we realize we are dependent on the showers and the rains that visit [illegible] at regular course.

And yet, what a lot of kicking we do about the weather! [illegible] these nice days come and go! "Never did such weather as this. Just get [illegible] to sow the new acre lot and then [illegible] comes a big rain that sets things back a week or two." And if we ever feel [illegible] and down in the mouth when it [illegible] rot on these same rainy days! [illegible] what a test they are of character!

I know men who say, when the [illegible] shines, "I never find fault with the weather," and yet when it has [illegible] for three or four days, these same [illegible] begin to fidget around and [illegible] smile from their faces and say [illegible] to the hired man and it may be [illegible] the folks of their own families [illegible] which they are really sorry when [illegible] clouds clear away and things [illegible] again. I guess we all know how [illegible] us. We are pretty near of a "[illegible]" crab; some are more so [illegible] others. But how we do hate to [illegible] up to it!

Now, what about these rainy days when the bobolets of life [illegible] hard and the skies look dull and [illegible] bidding? How shall we turn [illegible] drab days into the making of [illegible] lives? Is there any better way [illegible] just to think, "There is a [illegible] Hand than ours on the helm. He [illegible] guids the ship right. If we only [illegible] Him things will come out right in the long run." And then live up to it. [illegible] takes all the manhood there is in [illegible] but how it does sweeten and [illegible] each our lives!

Lime and Lawns

ON page 8 of your issue of Apr[illegible] J. W. White says lime will [illegible] duce the growth of weeds, while on page 9 L. I. Rummell says that [illegible] tends to increase weed growth.

Now what does a person learn [illegible] reading such articles?

J. H. Rittenhouse.

Editors' Note—To lime or not to lime lawns is one of the subjects on which the authorities disagree. We asked for his opinion J. R. Watson, professor of landscape gardening at the Pennsylvania State College, who discussions on this subject by well-known green-keepers who recently met in body at Penn State. These professional lawn care-takers appeared to agree on a middle course—apply a little lime (ground limestone), but don't overdo it every year; the best time is when the lawn is started.

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Broom Sedge

By R. B. DUSTMAN

SCATTERED across the hills and valleys of West Virginia and other eastern and southern states is a familiar grass plant known to farmers as "broom sedge." It is common nearly everywhere—in fact much too common, both in distribution and in pasture value. Its scientific name is Andropogon virginicus, and this is as it should be. The botanist frequently names his plants with some descriptive character in mind and in the case of broom sedge he has succeeded admirably. Certainly it is a cuss in the Virginias and no doubt elsewhere as well.

Interesting tales of its local appearance and dissemination are to be found. One vet-shot states that it came with the marching armies during the Civil War and was widely spread by them. Another story accounts for its prevalence as the direct result of attempts to burn it out, it being claimed that the more it is burned the greater is its spread. Possibly both of these factors have contributed somewhat to its frequent occurrence, but perhaps loss of soil humus and gradual reduction of fertility following the removal of timber and farm crops has been a much greater factor in bringing broom sedge into our hillside meadows and pastures. Along with certain other plants it is generally regarded as indicative of infertile soils.

A search of the agricultural experiment station literature reveals the fact that a very few of our early investigators inquired into the chemical composition of broom sedge and the possibilities of utilizing it for feeding purposes. About thirty-six years ago Director Patterson of the Maryland Station cut a field of mature broom sedge, raked it up immediately, ran it through a silage cutter and placed it in alternate layers with corn silage in the silo. The outcome of this early experiment is interesting. The following winter he found that the broom sedge silage came out in good condition and was eaten with relish by the stock, none being rejected.

When Young and Tender

A few years ago the writer became interested in the composition of broom sedge at various growth stages. Samples were gathered at regular intervals throughout the summer season and analyzed for various constituents, some of which are shown in the accompanying tables. For purposes of comparison corresponding data for a few other grasses are included.

A study of these figures indicates that in its early growth stages broom sedge is relatively high in protein and ash and low in fiber. Up to about the first of August it compares favorably in composition with timothy and redtop, as these are ordinarily cut for hay. However, as the season advances the fiber increases and the protein and ash steadily decrease. The old dead growth allowed to stand over winter takes on a character and composition about comparable to corn husks.

Unfortunately little is known concerning the digestibility of broom sedge, but it is probable that in the early growth stages it is approximately the same as other grasses in this respect. Cattle, sheep and horses all eat it readily in the immature state when the blades are young, green and tender. Later on when the leaves and stalks become brown and woody they are avoided by all forms of livestock.

To Maintain Growing Stage

It is coming to be more generally recognized that early pasture growth, aside from its water content, contains, partakes of the general nature of a protein concentrate and is highly nutritious. It appears also that by proper grazing, grass plants can be maintained in the growing stage characterized by high protein composition, over a considerable portion of the season, and the time of mid-summer decline in nutritive value thus delayed.

Reasonably close and continuous grazing of broom sedge during its early growth will utilize the plant at their time of greatest palatibility and nutritive value and prolong their useful period. However, once it is ordinarily permitted to reach the impalatable stage without attention, broom sedge does not contribute as much to the pasture supply as it otherwise might. Most farmers allow the tall, harsh broom growth of the previous season's growth to stand indefinitely. These objectionable tufts of old dead growth effectively cover up and protect the new tender growth of spring and early summer against the access of grazing animals. By the time the new growth extends sufficiently beyond the old growth to be accessible it also is tough, woody and less palatable and nutritious.

Old Tufts Must Be Cut

The samples of new growth for these analyses were picked by hand from among the protecting sheaths and stalks of the previous season's growth. This was necessary throughout May, June and July. It is quite apparent, therefore, that if grazing animals are to utilize the pasturage afforded by this plant, the old dead tufts must be cut close to the crowns some time during the fall, winter or early spring in order to expose the new growth when it comes on. Where this is done observations show that broom sedge is eaten by grazing animals in considerable greater degree than where the matured bunches are allowed to stand.

These statements and data are not intended to encourage the growth of more broom sedge, but rather to suggest ways for a greater utilization of those plants already present in our grazing lands. A considerable factor in the spirit of modern progress is the utilization of waste products and in this respect industry seems to have out-distanced agriculture.

We hear considerable now about the utilization of waste farm products in industry, and research in this direction is bearing fruit. There may also be a field for more research regarding unknown values in farm products from the food standpoint.

Composition of Broom Sedge at Various Growth Stages in 1928. Moisture-free Basis

Date Collected	Stage	Crude Protein	Crude Fiber	Ash
May 7	Blades 2 to 4 in. long	11.7	27.9	5.8
June 6	" 4 to 10 " "	13.4	28.6	8.0
July 6	" 6 to 18 " "	8.6	33.7	6.4
Aug. 15	" 15 to 24 " "	6.7	33.6	4.9
Sept. 15	In head	4.8	34.4	3.7
Oct. 17	Mature	4.6	32.9	3.6
May 7	Old growth which stood over winter	3.6	40.8	3.4

Composition of Broom Sedge at Various Growth Stages in 1928. Moisture-free Basis

Date Collected	Stage	Crude Protein	Crude Fiber	Ash
May 7	Blades 2 to 4 in. long	8.7	23.6	5.7
June 7	" 4 to 10 " "	12.6	28.0	7.2
July 7	" 6 to 20 " "	9.6	31.8	4.3
Aug. 7	" 12 to 30 " "	7.4	31.9	3.4
Sept. 7	In head	6.2	32.5	3.0
Oct. 8	Mature	4.4	37.0	3.2
May 7	Old growth which stood over winter	3.0	35.7	2.2

Average Composition of Other Grasses. Moisture-free Basis

	Stage	Crude Protein	Crude Fiber	Ash
Kentucky Blue grass				
	Before heading	22.2	21.8	11.3
	In head	15.0	30.0	10.2
	After bloom	7.8	30.2	9.1
	Ripe	7.9	33.3	8.5
Timothy				
	Before bloom	10.5	30.3	7.1
	Early bloom	7.2	29.8	5.3
	Late bloom	6.5	33.3	5.3
	Nearly ripe	5.9	35.1	4.9
Redtop				
	In bloom	7.8	32.5	5.8

A Western Suggestion

FROM Iowa comes the proposal that the tax on land in legumes be fixed at a standard rate of one dollar per acre. The shortage and high price of clover seed, necessity of applying lime, needed increase in legume acreage to build declining soil fertility, are some of the reasons occasioning the introduction of this bill in the Iowa state legislature. A tentative limit of thirty acres for this tax exemption is proposed, but an acreage percentage will prove more equitable. Estimates show that this proposal would increase taxes on non-leguminous acreage approximately three cents per acre.

The fact is now accepted that clover alone is not enough. New methods of treatment applied on clover, alfalfa and wheat as conducted by individuals and experiment stations lead us to the conclusion that we stand at the threshold of an era of scientific agriculture that will bring forth results equally as astonishing as science has brought to other industries. This is an age of transition; it may be of perpetual transition. Prophets are unwilling, both to limit and to place prophecies concerning the future. No longer do we say it can't be done. For the impossible has been and is being done. Weekly, daily, hourly are new records created and new discoveries announced.

We must examine the future carefully. We will have need of all the assistance that science can render. The position of the farmer as the feeder of his fellow humanity is not being challenged. It is simply going through a re-adjustment that cannot be estimated by previous experience. S. H. Green.

Vitamin "G" Announced

ANOTHER member of the famous and popular vitamin family has been named, according to an announcement by Prof. H. Adams Dutcher, head of the department of agricultural and biological chemistry at the Pennsylvania State College. Vitamin D now takes its place with A, B, C, D and E.

Vitamin B, formerly thought to be a single factor, was found to be twins instead when biological chemists worked further with it. Yeast, germs of cereals, leafy plants, fruits and vegetables contain the complex factor.

In December, 1927, Dr. E. V. McCollum, of Johns Hopkins University, president of the American Society of Biological Chemists, appointed a committee on vitamin B nomenclature. This group consisted of Professor Dutcher as chairman; Dr. H. C. Sherman, Columbia University; Dr. Atherton Seidell, Hygienic Laboratory, Washington, D. C.; Dr. P. A. Levene, Rockefeller Institute for Medical Research; Dr. Harry Steenbock, University of Wisconsin, and Doctor McCollum, ex-officio.

This committee has decided now that the term "B" shall be restricted to designate the anti-neuritic factor which is destroyed by heat and that the term "G" shall be used to denote the more heat-stable, water-soluble, dietary factor, called the pellagra-preventive by Dr. Joseph Goldberger and his associates, and which also promotes maintenance and growth.

TIGHT BINDING TEXT CUT OFF

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EGG WEEK

THE hen may be an uncertain critter in many respects but she is certain to shell out in the spring. National Egg Week has been wisely dated May 1-7, when eggs are plentiful and cheap. That is the best time to interest consumers in anything, when it is easily secured, the quality is good and the price is low. Nobody knows just how much good this week of egg boosting does, but certainly it is of benefit to the poultry industry and to consumers as well.

THE PRICE OF NEGLECT

IN 1927 Prof. D. S. Bell of the Ohio Experiment Station bought a bunch of skip or cull lambs, treated them for internal parasites, fattened them and made a profit of over $7 per head on them. Last fall he bought another bunch of skips, treated half of them, fed them all and made a profit of over $4 per head on them in spite of losses by parasites and accidents. The man who raised these skip lambs, by whose neglect they became culls, lost the $4 and the $7 per lamb he might have had. Prof. Bell, in citing his profits of $243.65 on 60 skips this year, says: "Neglect lost some sheep producer at least this much money. Cull lambs and profitable sheep production simply do not go hand in hand."

AT THE BOTTOM?

VARIOUS reports indicate some improvement here and there in the market for farms, but plenty of them are still available at low prices. We are among those who hope and believe that the bottom has been touched, that the future will reveal more confidence in land and better prices for it. The marginal buyers, those who were ready to pick up a bargain whenever it was offered, have been scared out of the market. When they again realize that cheap land is a safe and possibly a profitable investment they will help to maintain the price. Those who don't need to sell land now should take it off the market. All land owners should quit talking land down and begin to talk the other way. For the price of land, like the price of everything else, is affected by public opinion as well as by its current financial returns. Cheap talk is helping to make cheap land to a greater extent than we realize,

SHORTAGE OF FEEDERS

ON two days of last week we took a look at the Chicago market for stocker and feeder cattle. On both days very few cattle of either kind were in the pens. A few fleshy feeders were sold at $13.25@13.65 and a few stockers at $11.50@13, all looking very dear as compared to good fat steers. The cattle market must advance if the thin cattle bought on this spring's market make money for those who graze or feed them. There is a great deal of grass this year which needs cattle and some of it must go unstocked because they cannot be had except at prices which look dangerously high. We face a positive shortage of feeder cattle, accentuated by a shortage of light killing cattle, and there is no source of supply.

Present and recent experience suggests that it is time to consider the resumption of cattle raising on farms. Feeder cattle are costing three or four times as much as they did when farmers left cattle raising to the range producer, who is now unable to supply enough of them and is not likely to produce enough in the future.

FOR STATE COLLEGE

WITHOUT a dissenting vote the Pennsylvania legislature appropriated $6,311,000 to Pennsylvania State College. The items are: Maintenance, $2,350,000; agricultural research, $300,000; agricultural extension, $650,000; oil research, $50,000; buildings, $2,250,000; deficit, $711,000. This is the largest appropriation ever granted to State College, and as all but two minor items were included in the Governor's budget he is expected to approve it. At that the appropriation for buildings is not sufficient because for years the legislature failed to provide for them and the needs have accumulated. But it is a liberal appropriation in view of everything and all hands are to be congratulated. After many years the service of this institution to the public is being recognized, largely because it has been real service, which always compels recognition.

THE RELIEF MEASURE

LAST week we published the statement of purposes of the farm relief measure evolved by the Committee of the House of Representatives. Since then the bill has been introduced and widely published, likewise the Senate's bill, which is similar to the House bill but provides for the use of the export debenture plan in case of emergency. Let us now review the principal provisions of the proposed legislation in an effort to discern its probable or possible effects. For the purpose of analysis it may be divided into two parts, one of which may be called educational and the other fiscal. Both bills provide for a federal farm board and for a revolving fund of $500,000,000 to carry out the work that board is authorized and expected to undertake.

The features which may be classed as educational are embodied in the following paragraph, Section 4 of the House bill:

> The board is authorized and directed (1) to promote education in the principles and practices of cooperative marketing of agricultural commodities and food products thereof; (2) to encourage the organization, improvement in methods and development of effective cooperative associations; (3) to keep advised from any available sources and make reports as to crop prices, experiences, prospects, supply and demand, at home and abroad; (4) to investigate conditions of over-production; and (5) to make investigations and reports upon the following: Land utilization for agricultural purposes; reduction of the acreage of unprofitable marginal lands in cultivation; the economic need for reclamation and irrigation projects; methods of expanding markets at home and abroad for agricultural commodities and food products thereof; methods of developing by-products of and new uses for agricultural commodities; and transportation conditions and their effect upon the marketing of agricultural commodities.

Promoting understanding of marketing, getting information of various kinds, developing new uses for products and new markets for them—all these are worthy objects. But is there anything in the list that cannot be done by existing and easily expanded agencies of the government? We doubt it. The Committee evidently foresaw this comment or it would not have provided in the bill that bureaus of present government departments may be transferred by executive order to the federal farm board.

The fiscal part of this legislation is rather complicated. A brief analysis of it is difficult if not impossible. The whole program is based on the assumption that cooperative organizations should, can or can be made to carry out the declared policy of Congress, with the financial or other aid and the direction and supervision of the federal farm board. So the revolving fund is to be available as loans to cooperative organizations or otherwise available for the following purposes: (1) Merchandising; (2) the construction, purchase or lease of storages or other physical facilities; (3) the formation of clearing-house associations for better distribution of products; (4) extending the membership of cooperative associations; (5) insurance against loss by price declines; (6) financing stabilization corporations which may buy, hold and sell commodities of which there may be a surplus.

All of which indicates that the federal farm board has tremendous discretionary power but does not fully reveal it. For example the board may undertake almost any kind of investigation with a bearing on agriculture at home or abroad. No limit is set on the number of its employes or their salaries. No limit is fixed on the rate of interest the board may exact for the use of the $500,000,000 revolving fund. It may legally lend it at one per cent or less if it chooses, and apparently it may discriminate between borrowers as to rates. It may virtually control the cooperative organizations by its authority to prescribe their by-laws and supervise their operations. Moreover it may authorize an agency, or create one, which shall indulge in unlimited speculation—the so-called stabilization corporation with its power to buy, hold and sell in any quantity at any time. Stabilization in this case is clearly and openly sought by speculation, despite the declaration that one of the purposes of this legislation is to minimize speculation. For what may we call buying, holding and selling commodities if not speculation?

No such vast power over men, money and organizations has ever been or should be conferred on any board. It is not possible for Congress, or its agency the board, to establish a new marketing system by revolution. Commercial history shows that all such systems are the result of evolution. Nor is it necessary to promote cooperative marketing by such extraordinary subsidy as this legislation provides. Cooperative marketing is developing rapidly, as fast as it is found to be profitable, and probably it should go no faster than that. There is some doubt whether many cooperative organizations will join this movement, for they are likely to cherish their business independence and to dislike official dictation. Cheap federal money may attract some of them, however, and the use of such money may create some.

Beyond question this legislation is less objectionable than that which has been twice vetoed. But we can see in it no benefits sufficient to offset the uncertainty and confusion it may create, or sufficient to pay for such interference with production and business may cost. The best thing Congress could do with it is defeat it and provide otherwise for the investigations it authorizes, but in view of all things this is not probable. So we are likely to witness an experiment that will prove profitable to a few, interesting to many and in the end embarrassing to those who brought it about.

Pennsylvania Farm Comment

By MILES HORST

OUR Pennsylvania Forestry Department is waging a vigorous campaign against the careless use of fire in and about forest areas. Men convicted of such carelessness are given the limit in fines. For example, a man burning brush in Columbia county on March 12 neglected his fire, and it spread to a nearby wooded area. The fire was extinguished by officials at a cost of $30.25 to the state. This man causing the fire was fined $50, was required to pay the cost of putting out the fire and of prosecution. More of such action will save thousands of dollars worth of timber land in this state for the use of those who come after us.

• • •

AS their part in the observance of National Egg Week the poultrymen of Wayne county are sponsoring a window display contest among the egg retailers in their county. Most of the retailers have agreed to take part in this contest and will make suitable displays during the week. These displays will later be judged by a competent committee which will score them on the basis of size, attractiveness, educational features and neatness.

• • •

A FARMER never gets too old to learn. Apparently this fact was not proved scientifically until a few months ago when the U. S. Department of Agriculture spent some money to investigate 1,000 farm men and women in order to find out whether extension people can afford to spend as much time with older farmers as they do with younger farmers. They found just what all of us would expect, that farmers between forty and sixty years of age take hold of new ideas in agriculture just as readily as do those of fewer years.

• • •

THE Cream Rose Dairy Farm at Livermore, Indiana county, dispersed its Holstein herd at public auction, Wednesday, April 10. Fifty-one head were sold for $8,544.50. The offering included 15 bull and heifer calves, eight unbred heifers and four grade cows. The highest cow sold for $460. The herd was blood tested for abortion and was under the accredited herd plan for tuberculosis.

• • •

THE southern peach crop seems to be coming along in good shape. Its condition on April 1st was reported as indicating 83 per cent of a full crop. The potato crop in those same states is not faring quite as well. Cold weather has had its effects and lowered the condition of the crop to 76 per cent of a full crop. This is four points below the condition of last year's crop on the same date.

• • •

DISTANCE is not the important factor in marketing fruits and vegetables that it was but a few years ago. For example, the city of Philadelphia last year received 11,644 carloads of fruits and vegetables from the state of California. She received 6,821 carloads from Florida. New York, a nearby state for example, supplied but 4,435 carloads and Virginia 3,555. Pennsylvania, within whose borders this city is located, shipped in 2,094 carloads of fruit and vegetables and New Jersey 487. For these two latter states, however, it must be said that the truck has been the big factor in shipping these perishable products from nearby areas. Competition in a market like Philadelphia is very keen. Timeliness, quality and appearance seem to be far more important than length of freight hauls.

• • •

EVERY corn grower throughout the corn borer infested territory will do himself and his neighbors a service this spring by voluntarily following the advice of the Department of Agriculture in cleaning up all corn stalks and corn remnants in fields and around the barn by either plowing them down entirely or by burning them prior to May 1. No more proof of the advisability of doing this is needed than the results obtained in Erie, Crawford and Mercer counties last year where this clean-up was followed out to the letter and the corn borer infestation was decreased by 92 per cent.

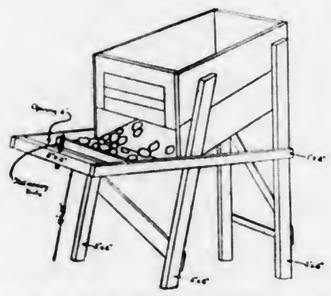
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PROBABLY some of our readers could use to advantage a bulletin recently issued by the Pennsylvania Department of Agriculture giving the names and addresses of the poultry flocks in the state having 500 or more laying hens each. There are 2,417 of these commercial flocks. The bulletin can be had by writing to the Department in Harrisburg.

• • •

THERE is much merit to the criticism coming from a northwestern Pennsylvania potato grower. He says, "During the past ten years the potato growers working with our potato specialists have made much progress in producing large and economical yields of potatoes in this state, but during this same time have lagged behind in developing just as important a program in producing quality in our potatoes. After all, is it not as important that we should know what factors make for yields? We know that some of our potatoes have poor culinary properties. We know that we have a lot of odd-shaped potatoes. We know that occasionally we get a lot of hollow-heart. What are the factors that make these undesirable features? We need to know if we are going to keep in step with other competing areas in this country.

• • •



The above type of seed potato cutting box is now extensively used by potato growers throughout Pennsylvania. The box will hold about five to six bushels and the potatoes can be dumped into it easily from a wagon. Through the opening at one end the potatoes continually roll upon the table where the cutter can easily get them and pull them across the stationary knife, cutting as many pieces as he sees fit. With this arrangement a man with average skill should cut from four to six bushels of seed potatoes per hour.

• • •

NOT many years ago a lot of sick and dying chicks or chickens around the farm brought the farmer considerable sympathy from his neighbors and friends. The sympathy that one gets today when he gets a mess like this on his hands is no longer as warm as it used to be and the reason is that today a poultryman must largely blame himself when his chicken flock gets down with disease. There is so much information available about how to proceed in order to keep brooder houses, chicken runs and laying houses sanitary that the man who neglects carrying out a thorough program of sanitation finds his old sympathizers grown cold.

• • •

HERE is an unfortunate case of a farmer who did his thinking after he signed a contract when he should have done it beforehand.

A "smooth" official of an electrical utility came to his place one evening, told him that the company wanted the right-of-way to run a high tension line through that territory, a line that would cross his farm. He offered the farmer a nominal sum telling him that the line would do little damage, etc. The farmer signed the contract and the official went on. This farmer learned a few days later that his neighbors were getting from three to ten times as much for equal rights-of-way as he was. He asks me whether there is anything he can do. I am afraid not. This man should not have been in a hurry to sign a contract of this kind. He should have weighed carefully the effect that such a line will have on the future sale of his property and the damage that it will cause him in the cultivating of his fields.

• • •

ON the west bank of the Susquehanna river, just north of the Harrisburg city line, is located an institution which receives little publicity but whose work is of great importance to the livestock industry of this state. There is located the laboratory of our Bureau of Animal Industry and to it are sent specimens of all kinds of domestic animals to determine the presence and nature of infection. Last year alone 140,240 such specimens were received and analyzed. These included the tests for abortion in cattle, for bacillary white diarrhea in chickens, glanders in horses, rabies in dogs and other animals, etc. The exactness required in this work is evident when we consider that one mistake may condemn a healthy animal of considerable value and save a diseased animal for further contamination.

EVERY one who passes through the dairy barns at State College always finds a great deal of interest in seeing and hearing about Jessie, the cow whose stomach has been made an open book to the scientists at this institution. Two years ago, in order to know at first hand what goes on in a cow's stomach, these scientists made an opening in the side of her body and into the stomach. In this opening they placed a shutter which can be removed at will and through which contents can be taken from Jessie's stomach whenever desired. For some years previous to this it was known that cattle will grow to maturity, will bear normal off-spring and produce milk of normal dietary composition on a ration that carries little or no vitamin B content. This is not true of most other species of animals. A study of this cow's stomach has shown that cattle produce vitamin B in their stomachs and do not need a supply of it in their feed.

• • •

BREEZES during the first week of April dealt a severe blow to the fruit prospects of California. A preliminary survey of the loss indicates that apricots will make less than half a crop, peaches not more than a half crop and almonds probably one-third of a crop. Pears and prunes have been damaged although the loss of these two crops is still uncertain. Cherries and plums have been severely damaged and a 25 per cent loss of the seedless grape crop is reported.

• • •

WE have by this time a fair estimate of what the 1929 potato acreage will be for the United States. The Federal Department of Agriculture issues the statement that the acreage this year will very likely be about the same as it was in 1927, and about ten per cent under that of last year. The largest decrease for any section in the country is shown in the early potato producing states from Virginia on south and west to Texas. The reported cut in this area is about 75,000 acres, or a reduction of 30 per cent. The second early states or that group including New Jersey, Maryland, Kentucky on west to Oklahoma, show a decrease in acreage somewhat smaller than the early states, the decrease being from 117,000 to 96,000 acres.

A 20 per cent decrease is the estimate given for the far western states including those on the Pacific Coast and in the Rocky Mountain region. The important group of late producing states, running from Montana on east to Michigan, are estimated to decrease their area from 1,974,000 to 1,775,000 acres. The acreage reduction in Maine, New York and Pennsylvania is given at three per cent, probably the smallest reduction of acreage of any section in the country this year as compared to last year. The small reduction in these eastern states, including our own, is no doubt due to a feeling among the growers that their nearness to the large consuming population of the country justifies them in continuing to supply these states with the bulk of their potato needs.

• • •

ON Saturday, May 11, the boys taking Dairy Husbandry at the Pennsylvania State College will stage their Seventh Annual Dairy Show. Various contests such as cattle judging, the judging of dairy products, fitting and showing will be staged. In the evening a dairy banquet will be served at which time prizes will be awarded to the winners and special honors presented upon the members of the College dairy teams taking part in sectional and national contests last fall.

• • •

PENNSYLVANIA is playing a real part in the development of agriculture in China. The beginning of our influence in Chinese agriculture was in 1909 when G. W. Groff, a Pennsylvanian and a graduate of our own State College, went to Lignan University at Canton, China, as a teacher of agriculture. He was supported in his work by funds raised by the student body and the faculty of our own College. The importance of his work was recognized at once and students flocked to the school so that within a short period of years a real School of Agriculture was developed in this large Chinese center. The Penn State student body and faculty have continued to contribute larger and larger sums of money to be turned over to Mr. Groff and his associates for teaching Chinese boys the science of agriculture and for carrying on experimental work.

The announcement is made that Lester M. Zook, a farm boy of Franklin county and a member of this year's senior class at State College, is planning after graduation to go to China and become a member of Mr. Groff's staff of teachers. Mr. Zook is an outstanding student and no doubt his work in China will bring more credit to our state, as well as prove to be a blessing to the millions of farmers in that country.

TIGHT BINDING TEXT CUT OFF



Iris Grows Easily and Has Few Enemies



Iris Borders Are Sources of Satisfaction

A Month of Rainbows

Iris Afford All Colors in Bloom During Long Season

By L. L. Rummell

ALL COLORS of the rainbow are blended in the glorious iris, the fleur-de-lis, national flower of France. Greatly has it been magnified and improved in splendor till today it hardly recognizes its poor relations, the common "flag" of our grandmothers' day or the wild sort that grows in swampy tracts. A full month of exquisite color is possible at the in-between season when spring flowers, like jonquils and tulips, have passed, and the grandeur of roses and perennial borders is still around the corner.

There are varieties without number, 150 different types, most of them standard and others rare. The bearded iris is the most common in this country and is the most satisfactory. Our discussion of it will therefore dominate this article.

As usually grown about farm homes iris are poor, neglected common masses. Somebody gave us a clumb of the rhizomes, and we put them in a neglected corner there to fight grass and eventually multiply to a point where they crowded each other. Nobody knew the name of the variety, or cared either, and they were not distinctive. It was just a mass of "flags," mongrels or outlaws blacklisted in the iris world. If you have that sort of iris about the yard, may I suggest that you dig it up, destroy it or put it out in the rear yard where it is inconspicuous? Then get a catalog from an iris specialist or well-known nursery and buy named varieties with wide range in color and season. You never knew before what possibilities lie before you in grandeur par excellence in your spring garden, what soft tones and pastel shades, what blending of colors is possible in a flower.

This superior named iris requires no more room, no more fertility, no more care—and, oh, what magnificence in bloom and what admiration from friends! It has the same superiority an American Beauty claims over the wild rose.

No flower succeeds so well with little care, tolerates adversity and poor dry soil as does the iris. Originated in Asia Minor, Hungary and Italy, it has been accustomed to dry soils, and it has shown adaptation in countries throughout the world. While it is called German iris, it really came from Asia. A sunny, dry, limestone soil seems to be its best habitat.

In planting iris, it is best to wait till the dormant season. However, right now is the season to make selections for later plantings. Iris will be in bloom at this season. Visit friends' gardens and those at nurseries; attend iris shows, fill your lungs with the atmosphere that radiates iris glory now; and then prepare your garden for iris plantings soon after the iris blooming season has passed. July is the best month for this region.

By proper selection a season of at least a month of bloom is possible; and by including the dwarf type, first flowers are possible in April, intermediate types in early May; then the great galaxy of color in the middle of May and early June; and with some Japanese types more gorgeous bloom in July. Some years I have had dwarf iris in bloom the first week in April. It is a prolific bloomer, with deep purple color, fits in nicely alongside the stones of a rock garden or as a border plant although stems are short and it lasts only a short time. Bravely it faces frosts, even snows at times with its cherry bloom. By all means put in a few of the iris pumilia for first bloom, and a few of the hybrid iris too, a cross between the dwarf and the bearded. After two weeks of the dwarf sort in bloom, the hybrid starts. These should be used in limited quantity though, because they are small and little breeding has been done to improve them from the common purple sort.

Then about the middle of May the great show is on—great stately German iris in never-ending color masses. For three to four weeks we may have flowers in profusion, with some variation in blooming date among varieties. The Florentine sorts are first in my garden, both purple (purpurea) and white (alba). If you want the first tall bearded iris in your neighborhood, put the purple Florentine alongside the south wall of your home.

Now as to choice of varieties. If I were a beginner and wanted to spend only a limited amount of money but restricted to good named varieties, I would get (in addition to just a few of those named above) the following 20 varieties: Iris King, Isolene, Prosper Laugier, Alcazar, Pallida Dalmatica, Arnols, Lorr, Madame Chobaut and Sheilonii. There are numerous other varieties as well. The American Iris Society conducted a beauty contest among iris varieties, and after growers everywhere scored varieties a combined rating was given each.

In planting iris buy in sufficient quantity to make a showing that fills the eye, not just a few of many varieties and then mix them. Group or mass planting gives a more pleasing effect than a conglomerate mixture. By strong divisions; plant just so the [illegible] (fleshy root) is barely covered and even protrudes a little; make sure [illegible] well drained and not in a shaded position; use no manure as it causes rot, fertilize with bone meal or high grade complete fertilizer; limed soil seems to be preferable. Just as flower buds open give a little nitrate of soda or sulphate of ammonia about each plant for superior size. Iris need little watering, unless it be dry just after transplanting. Divide every three or four years.

Few indeed are the pests on iris. The borer sometimes attacks them, but can be controlled by hand picking and by burning all old tops in winter or early spring. Rot develops at times but usually in wet seasons only or else where the ground is too low and not drained. It is usually associated with borer injury too. If it does develop, lift all plants, cut out every diseased portion, soak a few minutes in corrosive sublimate (chloride of mercury) solution; and replant in new soil, well drained and in full sunlight.

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When Plants Are in Bloom Make Selections for the Future

The Blister Beetle

THE most voracious eater in the whole bug kingdom that invades my garden is the old-fashioned black blister beetle. What he can do to a beautiful aster over night beggars description. He works like a power mowing machine or a silage cutter. Then when he advances in an army on the clematis vine, grab the spray gun quick or little more than a skeleton will result in a few days.

I could forgive him for some misdeeds if he did not have such fastidious taste. For instances, when he lights on my asters all he cares to eat is the flowers. Then he seems to like the gladiolus flower as well as a grasshopper does.

If there are only a few of the blister beetles I wear leather gloves and smash them one by one between my thumb and finger. You must be quick though, for they drop to the ground at the slightest disturbance. Spraying with arsenate of lead will do the trick too, but it discolors flowers. Use one ounce to a gallon of water. It really is too slow in action to kill the beetles immediately.

One year we had a drove drop down on a clematis vine. They had just devoured a neighbor's the previous week. I sprayed the vines with arsenate of lead thoroughly. Then each morning I put a blanket on the ground, shook the clematis, and collected the beetles falling upon the blanket.

Entomologists also recommend pyrethrum extract preparations to kill blister beetles that eat asters, zinnias and dahlia flowers. These are sold under various trade names. Arsenate of lead is too slow in action. By the time a blister beetle gets his stomach filled with enough arsenate of lead, he has cleaned up on several flowers. One of these pyrethrum dusts kills him immediately by contact. Sodium fluo-silicate is another dust often used on these beetles.

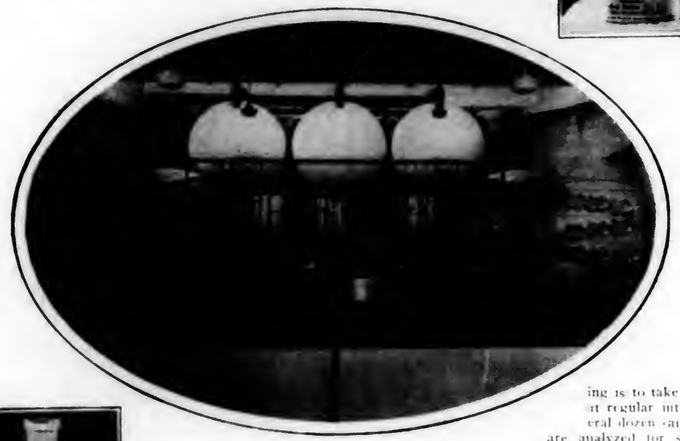
L. L. R.

The City End of the Milk Business

By Ellen S. Brinton



The new paper milk bottles. The company buys paper by the roll and a special machine forms the bottles. Another machine coats the bottle with paraffin and then it is immediately filled with milk and the top pinched in and held with a metal strip. This picture shows how the cream line shows on top of the milk.



Pasteurizing plant of Supplee, Wills, Jones at 26th and Jefferson Streets, Philadelphia. There are two complete units here. Circles in the background are supply tanks of raw milk. At either end of the room is apparatus for pasteurization—a continuous flow system being used. That is, the milk passes through pipes inside the box-looking tank, taking 30 minutes in the process; the temperature is accurately controlled. The cold raw milk on the way to the pasteurizer helps to cool the pasteurized milk to 40 degrees. Bottling is done on the floor below.



Weight of two quarts of milk in paper bottles compared with a quart of milk in a glass bottle. The paper bottles are packed in cases in this manner, making a very compact load as well as a light one. Motor cycles with side bodies are being used for delivery.

SOME thirty years ago glass bottles came into use for serving milk. "Dipped" milk is considered so unsanitary that Pennsylvania has a law that all milk (unless marked "skim") be delivered in sealed containers. In practice milk for cooking and restaurants is delivered in cans with the lids wired tight, and retail milk for home and table service is placed in glass bottles. If you are drinking milk any place in this state the bottle should be brought to the table and milk poured into the glass in your presence.

Glass bottles cost on the average five cents apiece. The loss and breakage is enormous; mischievous children and careless housewives contributing greatly to the total. The large dealers do all possible to reduce the bottle cost by offering bonuses to the drivers who bring back a certain percentage. Most companies carry large stocks of bottles on hand to take care of sudden catastrophies and snowstorms in winter when empty bottles are buried out of sight. It is not unusual for a company to buy on the average of two and three carloads of bottles a week, costing often $150,000 a year.

Washing these bottles is a serious matter. For years the usual machine was a long tunnel arrangement through which the cases of bottles were conveyed upside down. Jets of soda water and hot and cold rinses did the washing but not very efficiently. After prohibition when washing beer bottles was no longer profitable a new type of washer appeared in the milk plants, because the manufacturers of washing machines finally had time to study the milk business and design the necessary equipment. Actually, liquor bottles had been scrubbed, and sterilized for years with more care and thought than milk bottles and the milk-drinking public should thank the 18th amendment for the change.

Now with the advent of paper milk bottles comes another step in the milk industry. Some kind of bottle that could be used once and thrown away has been the dream of milk dealers for many years. There have been other paper bottles, but always there was a flaw—some were too perishable, too dark, too expensive. But the kind illustrated has been given a severe trial and seems to be proving successful in New York. The paper is first made into a bottle, then heavily coated with paraffin and then immediately filled with milk and sealed. Even the cream line shows.

After the bottle is filled the careful milk dealer is still not satisfied. He wants to know that every bottle of each grade of milk and cream went out to his customers with uniform quality. This means more work for his laboratory. One method of checking is to take filled bottles from the machines at regular intervals during the day until several dozen samples have been collected. These are analyzed for solids, butterfat, bacteria, color, creamline, flavor and the cream for viscosity or body. Nothing can be left to chance. The dealer must know his milk is in perfect condition every day. He does not take any one's word that the thousands of feet of piping and the 100,000 bottles have been properly sterilized every day. A laboratory girl has taken a bacteria sample from various places over the plant and tested out the empty bottles as they came from the washer. If there is a high count any place an immediate investigation is made. Even the water for washing equipment, in the city and country plants, is tested regularly for fear some unexpected contamination appear and be seeded into the milk.

Every one knows that if milk is allowed to stand even a few minutes the cream rises to the top. Just think of the problem of dividing a tank of 12,000 quarts into quart, pint and perhaps half-pint bottles and every one with its proper proportion of cream! The milk must be kept in constant agitation. To stop would mean that in drawing off the tank some bottles would have milk and others more than their share of cream. To check on the constant flow of milk fat tests are made at intervals in the plant. Finally the laboratory checks to see if the work was absolutely correct.

Besides taking care of the milk itself, a conscientious milk company knows that there must be a high standard of cleanliness all through the organization. It is generally customary for all employes handling the dairy products to wear white suits. These are usually changed daily and washed in the company laundry. First-class dairies require that employes be under strict medical supervision, claiming that giving the milk sanitary care would be a waste of effort unless every one handling the product be free from contagion. Many plants are painted white and repainted several times a year—every corner being cleaner and freer from dust than most kitchens.

It is a common thing for city customers to exclaim—after visiting a big city milk plant and hearing the story of a bottle of milk—"We really should be paying $1 a quart for it."

I wonder how many farms they could visit and have the same reaction in regard to the cleanliness of the milk and the sanitary care given it.



A modern bottle washing machine. Bottles are taken out of the cases and passed through on an endless conveyor, soaked in soda water, scrubbed with brushes inside and out, rinsed, sterilized, drained, cooled and delivered right side up ready for filling. It takes 18 minutes for a bottle to pass through. The machine holds about 1800 bottles

Editor's Note—Further articles on the city end of the milk business will appear in future issues.

TIGHT BINDING TEXT CUT OFF



The Farm Home



The Why of a Budget

By HEPSY NEFF

MORE and more the big jobs of the world are being done by big groups of men, big organizations. The same machinery needed to make a hundred plows is ready to make a thousand just as easily and after the thousand have been made the work must go on or the machinery must be junked. This sort of thing tends to make small undertakings difficult if not impossible. Perhaps the forty acres which made a good living and life work for one man may yet be lost in ten thousand acres and a demand for a thousand men—or would it merely offer a thousand jobs?

We may never know why but ownership and individual direction of work produces a different personality than any job has ever yet produced. But the first lesson that a man or a woman who wants to own a business must learn is how to save money. Most of us have seen a considerable amount of money go into the hands of a person who had never learned the lesson of saving money and lost in half the time spent in accumulating it. Nations and governments, organizations and individuals accept the making of a budget as the first step toward success or even a safe existence. For those of us who want the joy of ownership and initiative and who do not want to work under a boss the making and keeping of a budget is the only sure way.

Because women are the buyers of the family firm they must take the lead in budget making and family bookkeeping. Perhaps no human undertaking faces as many uncertainties as farming. Only a record of household expenses can offer a complete guide for an estimate of expenses on which a budget could be based. It may look like a hopeless undertaking at first, but since it has been done and is more and more being done every year any of us can do it if we will.

The First Item

The first item to be met is a blank book in which lists of needs and expenditures can be kept. A large part of the foods of a farm family really belong in the list of income rather than outgo, but this does not lessen the need for a list of necessary foods as well as food costs. Any successful business makes its budget list on the basis of actual necessities, leaving everything beyond to any surplus which may be found month by month or at the end of the year.

Following the list of foods a list of the actual and necessary clothes for each individual of the family should be set down. Not that nothing beyond actual needs can be expected but having the necessities provided for makes a safer program. Such a list keeps before the buyer various needs which may be met by something she has in stock. With children of different ages the outgrown clothing of one child may meet the need of another. The crowding demands of housekeeping have taught us that not until we fix our attention upon a special problem do we find the best way to meet it.

There may also be certain lists of repairs to buildings or improvements which may safeguard property. Leaking roofs, protecting paint, safer doors and gates should be listed and studied so that all resources of time and material may be used to the best advantage. An old carpenter voiced his disgust with modern and too often wasteful methods by saying: "Too many of them always cut into a big piece in order to get a little one when little ones are plentiful."

All this is merely a hint of what has been thought important enough to be written carefully in a Farm Bulletin listed as Miscellaneous Circular No. 68, five cents per copy. Write to the Superintendent of Documents, Government Printing Office, Washington, D. C.

Play for Health

By GERTRUDE S. STEWART

SO MANY of our readers wanted us to continue the interesting hints that we are doing that very thing this week and next and next. Then let us have something brand new but equally exciting. In our issue of May 17 we will publish the best suggestion that comes in on the subject "LOOKING TOWARD THE BARN."

Since this year May Day is not only Health Day, but Play Day also let's look up and doing that in our own back yards. We can really LIVE the ideals that are put before us by welfare organizations.

As we look toward the barn, do we see a splendid sand box under a shade tree for the tiny tots? Do we see a basket ball BASKET on the garage wing? Have we a croquet set or tennis court? Do we ever revel in the excitement of pitching horse-shoes or playing "Andy Over"?

Well, what do we do? When the shadows gather round, can the youngsters have "just one more swing"? Or another turn on the fine slide that daddy built?

Let the back yard be the family shrine for healthy, wholesome play. Eat graham crackers instead of lemon pie for dessert today and start some apparatus of pure play for yourselves and your children. Then May Day will be every day.

Whatever you do, share the experience with others. Write us all about it and send it at once to Household Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa. There are no rules, except speed. Each week brings a new contest. The prize for the best ideas will be a fine new steel shears. Letters mailed after May 1 will be too late.



The May Queen's Feast

"You must wake and call me early, call me early, Mother dear
Tomorrow'll be the happiest time of all the glad New Year;
Of all the glad New Year, mother, the maddest, merriest day;
For I'm to be Queen o' the May, mother, I'm to be Queen of the May."

CAN'T you see her in her little, frilly frock, a garland of flowers on her dainty head and her clear eyes shining with delight? She'll hold court over all the little boys, and preside with great dignity from her improvised throne.

But if anyone says: "Tag, you're it!" Her Temporary Majesty is very apt to forget her queenly dignity and scamper rapidly across the lawn in pursuit of her tagger. And when she comes in breathless, her cheeks rosy and blooming, from a succession of gay games, Her Majesty will certainly be in need of sustaining food. Here, then, is a menu to meet the occasion which will appeal to the Queen of the May and all her court:

Whole Fresh Strawberries Around
Powdered Sugar Cone
Cream of Tomato and Liver Soup
Whole Wheat Crackers
Creamed Chicken and Peas on Tiny
Baking Powder Biscuits
Currant Jelly
Asparagus Salad with Cheese. Carrots
Water-Cress Sandwiches
Junket Ice Cream with Red Raspberries
Sugar Cookies Milk
Hard Candies

Recipes to Serve Eight

Cream of Tomato and Liver Soup: Make a white sauce of four tablespoons butter, four tablespoons flour and one quart of milk. Simmer the contents of a number 2 can of tomatoes with a slice of onion for fifteen minutes, then press through a sieve. Add very slowly to the hot white sauce. Add one cup of fine chopped cooked liver, season with salt and pepper and keep hot in a double boiler, but do not boil after combining.

Creamed chicken and peas: Make a white sauce of four tablespoons butter, four tablespoons flour, two cups of rich milk and the liquor from a can of peas. Add a teaspoon of salt and one-eighth teaspoon pepper. Then add the contents of a twelve-ounce can of boneless chicken, cut in small pieces, the peas and one teaspoon of lemon juice, heat in a double boiler and serve on tiny split baking powder biscuits.

Asparagus salad with cheese carrots: Drain and chill one sixteen ounce can of asparagus tips, and arrange in nests of shredded lettuce. Pour over them French dressing made with lemon juice instead of vinegar and to which some fine minced pimento has been added. Shape pimento cheese (one jar of the soft kind) into tiny carrots, dust with paprika and insert a sprig of parsley for the carrot top. Use one or two as a garnish on each serving of salad.

Then the Sweets

And now that the children have been still for a few minutes while they are eating, and have cooled off to some extent, you can give them their ice cream and cookies and hard candies as the final treat.

Junket ice cream with red raspberries: Scald together one quart of fresh milk, one cup of evaporated milk and three-fourths cup sugar and then cool to luke warm. Add one tablespoon vanilla. Crush one and one-half junket tablets and dissolve in two tablespoons of cold water. Add to the luke-warm mixture in the ice cream can and let stand until firm. Then freeze like any other ice cream. Scatter a few spoonfuls from a can of red raspberries over each portion and top with marshmallow cream.

Child Health Day

SIX years ago the first day of May took on a new significance for May Day became Child Health Day. Then and there communities all over the country that first year held health exhibits or through plays and pageants in school and church called attention to the health needs of the children of their communities. The next year even more communities observed Child Health Day, and last year Congress passed a resolution setting aside May Day as Child Health Day, to be announced each year to the people of the United States by proclamation of their President.

Each year most states and cities have chosen May Day to focus interest on some one outstanding health need. Delaware, for instance, took the occasion to emphasize the periodic health examination for children last May Day. Maryland placed emphasis on the need for year round health care for its younger citizens. New Jersey in its state-wide preparation for May Day laid special emphasis on the prevention of disease.

The first aim of the May Day celebrations in Pennsylvania has been to speed up already existing child hygiene work and acquaint parents and teachers with the health facilities of our state, county and city. In West Virginia May Day has been celebrated with three objects in mind: to review the accomplishments of the past year in behalf of child health; to set the mark for achievement along this line for the coming year a little further ahead; and to focus people's attention on the health needs of children. Mollie Ames Pull... [illegible] Health Association

"You Weep Alone"

ONE of the chief requisites for happiness and contentment on the farm is good cheer. This applies to both men and women.

On the other hand one of the saddest things to be found anywhere but especially on the farm is the pessimist, who always sees the dark side of life. Life is what you make it and for the one who takes the "what's the use" attitude life on the farm is indeed pitiable. Many days we are all alone with our thoughts, and our own mind is either our best friend or our worst enemy.

Often there are so many tasks to do, we feel that we just cannot do them if we allow our minds to dwell on the thought which usually is uppermost when we are too tired and worn out, then the job is ten times harder. Rather let the main thought be "Carry On". We must carry on for the good of ourselves and our families. Then let's make it as easy as we can and the first thing to do is to get in proper mood.

When you feel that you have gone on and on beyond endurance—(and what farm woman has not)—then just quit and rest. Go out in the yard or garden and breathe the good fresh air, find a cheerful thought, which certainly is easy when you are out among the flowers, butterflies and birds. In winter, usually a few whiffs of the cold pungent air will invigorate you anew, and what is more beautiful than the snow on the trees and fence rails? No matter what your thoughts are when you go out to do the outside work, if everything is covered with snow think of those beautiful lines from Lowell's—First Snow Fall—

"Every pine and fir and hemlock
Wore ermine too dear for an earl."

Then when you resume your tasks they are done before you know it.

Farm women need a sense of humor. If not born with one then cultivate it. Read all the funny little stories and jokes that you can find. Tell them to the children and have them tell any that they hear. Of course we want good clean jokes. Never tolerate a story that savors of anything else.

Also, laugh with your friends, not at them. Learn to keep the corners of your mouth up, not down.

"Laugh and the world laughs with you
Weep and you weep alone."

Kathryn J. Newcomer.

Candied Peel

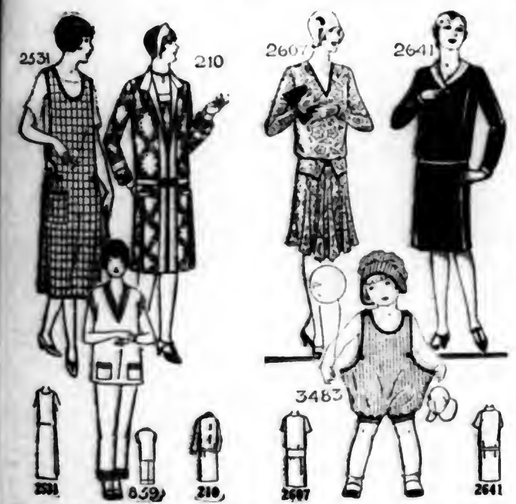
Can you give me a recipe for candied orange and lemon peel like we buy for fruit cakes? A Farmer's Wife.

TO make candied orange peel, cut out all the fibre from the inner lining, then cut the peel into strips using either sharp knife or scissors.

Cover with cold water and let boil twenty minutes. Drain, and repeat the above process twice. After the third draining, to each cup of the peel, add one cup granulated sugar. Cook very slowly till it grains, and the strips can be separated. Then roll in powdered sugar and spread out to dry.

Many folks do the same with rind of grape-fruit and lemon. This product keeps indefinitely (if no one knows where you hid it) and is not only a dainty sweet for occasional nibbles, but is useful to add flavor to fruit cakes, a tang to puddings, and so on. I use a glass jar that seals tight to keep it from drying out too much. G. S. S.

Fashions for Spring



No. 2531—Healthful Sun Suit. Designed in sizes 1, 2, 3, 4 and 5 years. Size 4 requires 1¾ yards of 40-inch material with 5 yards of binding.

No. 2607—6's Greatest! Designed in sizes 32, 34 years, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 3¾ yards of 40-inch material with 2⅞ yards of binding.

No. 2641—Fashionable Sleekness. Designed in sizes 16, 18 years, 36, 38, 40, 42 and 44 inches bust measure. Size 36 requires 3 yards of 40-inch material with ⅞ yard of 40-inch contrasting.

No. 2301—Attractive Apron. Designed in sizes small, medium and large. The medium size requires 2 yards of 36-inch material with 7 yards of binding.

No. 210—Youthful Style. Designed in sizes 16, 18, 20 years, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 36 requires 3⅝ yards of 40-inch material with 1⅛ yard of 40-inch contrasting.

No. 858.—Practical and Dainty. Designed in sizes 2, 4, 8, 10, 12 and 14 years. Size 8 requires 2¼ yards of 40-inch material with ⅝ yard of 27-inch contrasting.

How to Order

Write your name and address clearly. State number and size of each pattern. Price 15c each, two for 25c. Address Pattern Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

6 Beautify Your Home at Small Cost
6 EVERGREENS FOR $1.10 Postpaid

These soon grow into handsome trees worth many dollars.

Three to five-year trees are 36 to 15 inches high. 2 Norway Spruce, 2 American Spruce, 2 Chinese Arborvitae.

Place order early for Spring delivery.



SWEET WILLIAM — All colors, hardy, free bloomers; 6 plants ... $1.10

HARDY HYDRANGEAS — P. G. Blue, Pink, 2 plants for ... $1.10

ASTERS — Double, all colors; 60 plants for $1.10. (Extra fine.) Exhibition type.

WEIGELA ROSEA — Deep pink blossoms which are borne in wonderful profusion and make a great show. 3 shrubs ... $1.10

"Field-grown Stock From Our 150-Acre Farm"

Dahlia Flowered Zinnias — Show Flowers of enormous size. 20 Plants $1.10 — Brilliant colors.

FREE — 6 EVERGREENS, 3- to 5-year trees, above selection. FREE with each order of $5.50 and over. *This Week Only.*

COLORADO BLUE SPRUCE—Each $1.10 — selected, 5-6 years. Extra bushy, 1 to 1½ ft. high.

Hardy Yellow Daisy (Coreopsis Lanceolata) — This is the yellow variety and grows about 2 feet tall. 6 plants ... $1.10

Chinese-Arborvitae — Fine, feathery, deep green foliage. 2 years old, 8 to 12 inches high. 6 trees for ... $1.10

Japanese Barberry — Beautiful every month in the year. 2-year-old plants ... 6 for $1.10

GOLDEN BELL (Forsythia) — Its yellow flowers appear before the leaves, the earliest note of Spring; very striking. Two plants ... $1.10

HARDY CHRYSANTHEMUMS — Bronze, pink, lavender, white, red and yellow; flowers measure 6 to 8 inches in diameter. 6 plants ... $1.10

MAGNOLIA TREES — Bloom early in Spring; the earliest note of Spring; very striking. Two plants ... $1.10

CHINESE PYRAMIDAL ARBORVITAE. 2-2½ feet high. 1 foot wide at base; each ... $1.10

HARDY CARNATIONS—Large flowering; fragrant; all colors; field grown; 6 plants for ... $1.10

HARDY BUTTERFLY BUSH or Summer Lilac—a pretty shrub; 2 plants for ... $1.10

SNAPDRAGON NOVELTY SNAPDRAGON (Antirrhinum). 22 different colors; 40 plants (beauties) for ... $1.10

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DIGITALIS (Foxglove) — White spotted rose, purple 1 of each; 6 plants ... $1.10

ORIENTAL POPPY — Brilliant colors; scarlet, orange, pink; flowers measure 6 inches in diameter; 6 plants ... $1.10

PAINTED DAISY — The mixed and choice varieties and colors range from white to deep red; 6 plants for ... $1.10

$1 10

Hardy Azaleas (Rhodotrea). A handsome, free-flowering, pink species. A beautiful variety. Very hardy. Ready to bloom. Each ... $1.10

COLUMBINE — They are much used in any hardy border or rockery; blue, pink, yellow and other colors; 6 plants for ... $1.10

DELPHINIUM (Perennial Larkspur) — BELLADONNA—Light Turquoise Blue. BELLAMOSUM—a dark blue type of the Belladonna. Very decorative and lasts for years; 6 plants for ... $1.10

Gaillardia (Perennial Gaillardia). This one perennial, when once established, will last for years. Blooms with orange, crimson and red. It blossoms from June to November and grows 2 feet tall; 6 plants for ... $1.10

Shasta Daisy — Large, pure white flowers, which appear in early Summer, are excellent for cutting. 2 to 2½ feet; flowers measure 4 inches in diameter; 6 plants for ... $1.10

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Orchard Windfalls

By S. W. FLETCHER

NINETY degree temperature on April 6, 7 and 8 pushed the trees of Alder Run Orchard beyond the point where it would be safe to apply the delayed dormant oil spray. There was only a week in the delayed dormant period this year, instead of the normal three or four weeks.



Four of those seven days were so windy that no spray could be applied effectively. The net result was three days of spraying, and only about one-half of the orchard was covered. Probably this is fairly typical of most of the larger orchards of the state. How we will keep the red mite in subjection this summer is beyond me, but we have an added reason for using summer sprays of lime-sulphur this year instead of dust.

Perhaps entomologists will tell us it will be safe to use a summer strength oil spray, as is done in Washington, but this appears to be more dangerous to the trees in Pennsylvania than in Washington. Now comes the pre-pink stage, with scab spores shooting, and everything needing to be covered at once. Here is where the duster may come in handy, but we will spray all we can.

The only consolation we get out of the situation is that lower temperature came just before the peach blossoms opened, and has continued to this date (April 15), so that there is still a chance of getting a crop. Fortunate is the fruit grower who can take the situation this spring with some degree of philosophy, for it is certain that he cannot change the weather. Orchard heating may help some, perhaps, one year out of six, but usually it is impracticable on most of the sites of Pennsylvania, although some of our growers have felt repaid for the use of home-made smudges.

Fall Planting of Cherries

We always have had difficulty at the College with spring planting of sweet cherries. Four years out of five it is impossible to get the land ready before the trees have pushed their buds, and such trees are not likely to give a high percentage of success. A planting of sweet cherries was made last fall. Practically every tree is starting. This confirms previous experience in this state. Another insurance for success with sweet cherries is to get some Mazzard seedlings,—either those purchased from nurserymen or seedlings of our wild sweet cherry, which is Mazzard—plant these, and whip graft them to improved varieties when two or three years old, or cleft graft them a little later. This gives a hardy trunk, and prevents winter splitting of the bark, which is the most common cause of loss in this state.

Banana Tariff

There is a great hullabaloo at Washington about the tariff as related to fruit growing, especially the proposed tariff on bananas. I have listened attentively to all the arguments, but still view the proposal without enthusiasm. The proponents seem to intimate that, if a duty on bananas is placed high enough to make this fruit a luxury in the United States instead of a cheap food, immediately and necessarily the market for apples and peaches and other American fruits will improve. That is opinion, not proof, and opinions differ on this point. Mine is that it would make very little difference.

There is also to be considered the possibilities that lie in retaliatory tariffs; and an apple grower ought to be broad-minded enough to consider the interests of the public, as well as of his own industry. Personally, I favor meeting the competition of the banana trade, not by driving it out of the country, but by beating it at its own game.

When apple growers, as an organized group, show the same degree of efficiency, initiative and marketing skill as these our competitors, we will not need to erect a tariff wall around our markets. To place a high tariff on bananas is the negative way of meeting the situation, the positive way is to meet this competition openly, and win out by superior skill. The first is a quack medicine which may or may not cure the patient, the second is the fundamental corrective.

Hail Insurance

For the next three months fruit growers will be worrying about hail. On the whole, there is less interest in hail insurance now than there was some years ago. The companies were badly burnt in some sections, and have either withdrawn from these districts or have raised their rates so high that it is always a question with the grower whether the insurance is justified.

Hail insurance has been carried on Alder Run Orchard for three years, with no losses except to the pocket book of the owners. I doubt if we will insure this year. When the records show that severe damage from hail does not occur more than once in ten or more years, as is the case here, it is doubtful if the insurance is justified. In districts that suffer more frequently, many other factors must be considered besides the rate, especially the financial situation of the orchardist. The more precarious his finances, the less he can afford to take the risk. This is another case of "To him that hath shall be given."

In 1928, the Ohio Horticultural Mutual Hail Insurance Company was organized. This company restricts its policies to members of the Ohio State Horticultural Society. There is a similar organization in at least one other state. The operations of this company will be watched with interest by Pennsylvania. It will take ten years, at least, to determine whether a mutual company in this highly hazardous field can be permanently successful.

Perhaps Winter Injury

I am sending you a part of a limb of an apple tree and would like to know what is wrong with it. I have three young nursery trees with the disease. This started to come on this late last fall. The wood just decays from under the bark. I could not find a worm or bug about the trees.

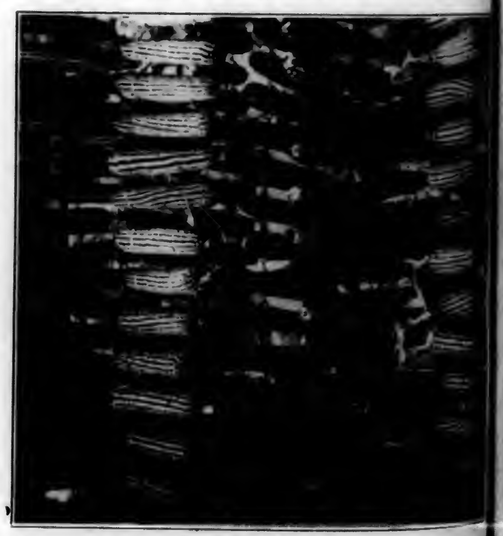
P. H. McKee.

SEVERAL places on the branch the bark is split down to the wood. There are a number of possible explanations of this damage. I do not know the correct one in this particular case. I have seen similar damage to apple limbs in southeastern Pennsylvania, the bark being split away from the wood in numerous places along the branch. Our pathologists at the college tell me that the injury to the limbs was caused, probably, by some in the spray. On the other hand, I have seen similar injuries on sprayed apple trees.

It seems more probable that the injury to your apple limbs is due to cold. I have seen a number of similar cases of this in nurseries and young orchards, when low temperatures occur in the fall, before the trees are fully dormant. The bark peels away from the stem usually at or near the crown, and usually on the southwest side. I saw the same effect from an unusually October freeze on young apple trees in the Yakima Valley in Washington some years ago.

If this diagnosis is correct, there is nothing that you can do to remedy the situation, except, possibly, to keep the trees unusually well covered with soil during the growing season, so that any wounds will be disinfected and protected from rotting until they have been completely healed with the healing callus. S. W. F.

Seed That's Famous for Its Quality



All farmers are now thinking about their seed corn for this year. But C. Snyder, one of Lancaster county's Master Farmers, began to think about several years ago. Each year's seed is the result of many season's of careful selection. The ears shown here were selected in the field before the crop was ripe last fall. Stored this way, in the open air, but under shelter, it comes through the winter in perfect condition—but even then, only the best formed ears will be used for seed, and these only after a germination test and careful examination for any signs of disease infection. Those who know say that Mr. Snyder has done more than any other one man to improve the type and disease-resistant qualities of Lancaster County Sure Crop corn.

Garden and Truck Crops

By GILBERT S. WATTS

TOO much emphasis cannot be placed on the importance of saving as many roots as possible when transplanting. When much of the old root system is conserved the check of transplanting is lessened. The newly set plants are more certain to grow, start into growth more promptly, make an earlier and heavier crop. Field-grown cabbage plants ordinarily are considered fit subjects for the roughest of handling. Yet in a Mobile county, Alabama, experiment cabbage plants that were lifted with a coke fork withstood the attack of maggots and survived being set in a rather dry soil where plants pulled in the usual manner almost entirely failed.

• • •

SUCCESSFUL market gardening is to a considerable degree a matter of being a good teacher. One must not only know the many intricacies of the business but he must be able to teach his helpers to do things in the proper manner and in the minimum of time. Simple, clear instructions and explanations, patience and tact, together with firm insistence on good workmanship are essential. Sometimes earnest workers who are slow to learn develop real efficiency under wise guidance.

• • •

WHERE a number of workers is employed it is a great advantage to establish a sense of individual responsibility. As a rule in field work each planter or picker should be kept strictly to his or her own row. In picking berries, peas, beans or tomatoes it is a simple matter to have initials or pay numbers placed on each basket. Then the work of the occasional conscienceless picker may be traced to the source and almost invariably the general average of the pack is improved.

• • •

NUMEROUS requests are received for the addresses of the vegetable growers' trade papers. There are two of these, The Market Growers' Journal, Louisville, Kentucky, and The American Produce Grower, 53 West Jackson Blvd., Chicago, Ill. Both are devoted exclusively to the problems of vegetable growing. A gardener who specializes in vegetable production cannot afford to be without at least one of these papers.

• • •

"I WOULD like to know what is the best solution to spray on potatoes to prevent blight?"—L. R. H.

Without doubt the best way to control potato blight is to spray regularly with Bordeaux mixture. Apply at high pressure, at least 250 pounds, beginning before the plants are more than six inches high. Use three nozzles to the row, one on either side and one above. Apply every week to two weeks, ten-day intervals being a good average except in hot or damp weather when more frequent applications should be made.

To prepare a quantity of Bordeaux mixture first make up stock solutions. Dissolve copper sulphate in a barrel of water at the rate of a pound to the gallon by suspending in the water near the top of the barrel a sack containing the correct weight of the chemical. In another barrel place as many pounds of good lump lime as the barrel will contain gallons when filled. Add just enough water to start slaking and keep on adding water carefully, neither so much as to drown the lime nor so little as to allow it to burn.

Stir enough to secure even slaking. Now fill the spray tank about a third full of water and strain in the lime solution at the rate of eight gallons for a hundred gallon tank. Stir. Run in water to make the tank two-thirds full and add eight gallons of the copper solution. Fill with water and you are ready to spray.

This same mixture but at the rate of ten gallons of each of the stock solutions to a hundred gallons of water is the best spray for celery blights.

G. S. W.

The MARKET PLACE

By W. R. WHITACRE

IT is over 500 miles from the berry fields of North Carolina to the wholesale markets of Philadelphia, but motor trucks are covering this distance and are bringing hundreds of crates of red berries to this market. This morning 700 crates of North Carolina strawberries arrived in Philadelphia via motor truck and this is equivalent to about three carloads.

There is very little difference in the cost of truck and express shipment from this section and the time on the road is about the same. Since express has the advantage of refrigeration, the swing toward truck transportation may seem unwarranted.

The advantages of the truck according to the shippers are greater flexibility of load, less handling and the fact that the truck goes direct to the wholesalers store while the express shipment goes to the railroad yard and the berries must be hauled from there to the store.

Given cool weather, and a good run the trucked berries often arrive in better condition than those hauled by rail. They also arrive on the market earlier in the morning and thus gain a sales advantage over later arrivals. In general the early buyers are the best as the later shippers are more like bargain hunters.

It has been raining for about five days and whether you like it depends on your point of view. To many growers it means that spring work has been held back, that crops have been retarded and to many others it is just unpleasant weather. Surely the potato dealer and shipper has benefitted, for within two days the price of Florida potatoes has jumped $1 per barrel and the most optimistic look for another dollar gain by the end of the week. The reason for this boom was the fact that heavy rains held up harvesting and the shipments which had been running around 100 cars a day dropped to three. The following day only twenty-nine cars were shipped from Florida and prospects are that shipments will continue light for a few more days. Supplies in the city markets are cleaning up and dealers are cashing in on the scarcity.

The weather and the boom in new potatoes has helped the old potato market and prices are advancing. Pennsylvania potatoes are selling at 10c to 25c more per two-bushel sack than a week ago. Some dealers believe that these price advances will hold since the available supply of old potatoes has been greatly reduced. Right now is a good time to market Pennsylvania potatoes and to take advantage of the price advance but what conditions will be even a few days from now, or when this appears in the Pennsylvania Farmer is a highly speculative proposition.

The cool weather this last week is causing alarm among the fruit growers. Temperatures in the vicinity of Philadelphia have dropped to around 36 degrees and with heavy rains during the apple blooming season there is likely to be imperfect pollination and a considerable drop. It is a little early to determine just what the effect has been.

Frosts early in April caused serious damage in California. A survey indicates that apricots will make less than half a crop, peaches not more than half a crop and almonds probably one-third of a crop.

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When we say RELIABLE—we mean RELIABLE in every way. Breeding stock of highest quality of 13 years of careful development. Special attention paid to health of chicks and records kept. CATALOG FREE—CHICKS SENT C. O. D. IF YOU WISH. Write for details—get our illustrated catalog which tells all the story. Our prices reasonable. A book on Raising Chicks worth many dollars given free with each order of $10.00 or more. Big discount for early orders.

HUBER'S RELIABLE HATCHERY, N. Main St., FOSTORIA, OHIO

NATIONAL "SUPER-BRED" CHICKS

Insure Your Future Poultry Profits by Ordering NATIONAL "SUPERBRED" CHICKS NOW

	50	100	500	1,000
S. C. White, Brown & Buff Leghorns	$6.75	$13.00	$62.00	$120.00
Tancred & Hollywood White Leghorns	7.25	14.00	67.00	130.00
Barred & White Rocks, R. I. Reds	7.75	15.00	72.00	140.00
White Wyandottes, Buff Orpingtons	9.00	17.00	82.00	160.00
Light Mixed, $9.00 per 100. Heavy Mixed, $10.00 per 100. Also Black Minorcas, White Minorcas, Anconas, Blue Andalusians and Jersey Black Giants. Send for our free catalog and prices on our Special Mated Chicks. We guarantee 100% live delivery. Member International Baby Chick Association.				

NATIONAL CHICK FARMS, Box 606, MIFFLINTOWN, PENNA.

BUY EARLE CHICKS

and you have made the first step in 'making poultry pay'. These pure-bred quality chicks come to you from the best of parent stock, bred to lay and guaranteed to please. We offer the following popular breeds and best strains at the Lowest Prices considering our quality supreme:

	100	500	1,000
Leghorns and Anconas	$13.00	$62.00	$120.00
Barred and White Rocks	14.00	68.00	130.00
R. Reds (Owens and Tompkins)	14.00	68.00	130.00
Jersey Black Giants	20.00	98.00	190.00

References: Richland Nat'l Bank. Book today on chicks that pay. You may order direct from this Ad. or will mail literature. We ship C.O.D. or upon receipt of 10% will send F. Post prepaid with 100% live delivery guarantee. EARLE F. LAYSER, Prop., Richland Poultry Farm & Hatchery, P. O. Box 1, Richland, Pa.



A Purple Martin House Has Been Erected on a Pole near the Brooder House. The Purple Martins Keep the Range Free from Hawks and Crows.

Labor Savers in Poultry Plant

H. L. EDMUNDS & SON, Dorchester county, Md., have worked out some original labor-saving ideas on their new poultry plant. Ten new Maryland-type brooder houses have been built to furnish housing for 3,000 White Leghorn baby chicks. The Edmunds started out by buying the best stock available. All chicks are from blood-tested stock.

They realized that caring for these chicks would require a great deal of labor, if the best sanitary methods were carried out. They have followed sanitary measures and as a result have had a very low mortality in the flocks. Before you are allowed in the fenced-off range where the ten brooder houses are located you must first disinfect your shoes at the gate. Running water has been piped to each of these houses. Instead of emptying the drinking fountains on the ground each time they are cleaned and refilled, they are emptied into a sunken nail keg under the faucet at each brooder house. In this way all lurking disease germs seep into the subsoil instead of being spread on the surface of the ground where the chicks may pick them up.

The greatest labor-saver found on this farm is original with the younger member of the firm and saves a great deal of time and work in carrying feed and coal. On the ends of each brooder house have been built hoppers which hold several days' supplies of feed and fuel. The feed hopper has two compartments, one for mash and the other for scratch feed. These hoppers open directly into the brooder house and at feeding time it is necessary only to open a slide on the inside of the house to obtain the feed. Fuel for the coal-burning brooder stoves is handled the same way. These hoppers make it possible to load feed and coal onto a wagon, drive to each of the brooders and leave a three or four day supply. If it were not for these the Edmunds would have to make the rounds with supplies each morning.

Another unique feature of their poultry plant is made possible by a natural spring. Along this has been planted water-cress which in time the Edmunds believe will furnish green feed for the flock the year around. G. W. H.

Depluming Mites

I have been troubled with the depluming mite for two years. I used your remedy, cured one flock and later helped two more. They got worse and late last fall I treated them but they did not improve and are now worse. The cause I think was due to the sulphur having lost its strength. What I want to know is, how soon would I dare to treat them? Shall I make ointment stronger than 1 to 8?

Mrs. Otto Wilkinson

GENERAL experience seems to prove that the depluming mite can be very easily controlled by the application of one part of sulphur and nine parts of lard. By all means treat your birds at the present time if they are affected with this mite. Egg production is very likely to decline with the presence of these mites. We do not believe that the laying ability of your birds would be greatly impaired by the use of the sulphur ointment.

Do you not consider it wise to feed mash the year around? This is most important, we feel, from the standpoint of high egg yields. A very satisfactory mash can be made by using the following ingredients: 100 pounds corn meal, 100 pounds wheat bran, 100 pounds wheat middlings, 50 pounds ground oats, 50 pounds alfalfa leaf meal and 100 pounds high-grade meat scrap.

The scratch grain may consist of two parts of corn and one of wheat. This should be fed morning and evening. Watch up the mash which your fowls consume and then you can govern the scratch grain feeding. Be sure to have mash before the birds every month in the year.

Feeding Problems

I see in the Farmer that barley has almost the same feed value as corn, about 100 per cent to be exact. Why, if this is true, could it not be used in the place of corn in the grain ration? Does yellow corn make yellow yolks?

Will you please state the difference between a moist winter mash for non-feeding and a moist fattening mash? When should one feed the latter, and what would a fattening mash consist of?

Mrs. E. B. I.

BARLEY is considered a relatively good feed for poultry. It is not, however, generally because of the fact that yellow corn is supposed to be superior as a poultry feed. Yellow corn contains more vitamin A than is to be found in barley. We know that vitamin A is most essential in the growth, development and maintenance of life. Barley can be used to some extent as a substitute for wheat. The substitution would depend largely on price.

In a hundred-pound mixture of scratch grain, it would be quite feasible to use 70 pounds of yellow corn, 20 pounds wheat and 20 pounds barley.

The idea of a moist mash is probably two-fold. First, to stimulate production, and second to maintain body weight. A very satisfactory moist mash for noon feeding can be made by using five pounds yellow corn meal, five pounds oat flakes and two pounds dried milk. This is a rather expensive ration and may be modified by using cornmeal in place of the oat flakes, ground oats and substituting meat scrap for one-half of the buttermilk. If liquid milk is available, use meat scrap in place of all of the dried buttermilk and then mix the ingredients with liquid milk.

The use of corn meal in the ration is desirable, but you will find that the fowl's body weight will be increased by the addition of a moist mash.



Feed and hoppers have been added to the ends of the Maryland-type brooder houses on the farm of H. L. Edmunds & Son. The board shelter at the windward side of the house provides shelter for the chicks on windy days.

Danger of Infection Among Baby Chicks

Success in raising baby chicks is dependent upon proper care and management. Readers are warned to exercise every sanitary precaution and beware of contaminated drinking water. Baby chicks must have a generous supply of pure water. Drinking vessels harbour germs and ordinary drinking water often becomes contaminated and may spread disease through your entire flock and cause the loss of half or two-thirds your hatch before you are aware. Don't wait until you lose half your chicks. Take the "stitch in time that saves nine." Remember, that in every hatch there is the danger of some infected chicks—danger of diarrhea in some form and other loose bowel and intestinal troubles. Don't let a few chicks infect your entire flock. Use Walko Tablets in all drinking water for the first two weeks and save more than one chick where you lost dozens before. These letters prove it.

Mrs. Bradshaw's Remarkable Success in Raising Baby Chicks

"Dear Sir: I see reports of so many losing their little chicks, so thought I would tell my experience. I used to lose a great many of the little downy fellows from bowel troubles, tried many remedies and was about discouraged. As a last resort I sent to the Walker Remedy Co., Dept. 507, Waterloo, Iowa, for their Walko Tablets for use in the drinking water of baby chicks. I used two 50c packages, raised four White Wyandottes and never lost one or had one sick after using the Tablets and my chickens are larger and healthier than ever before. I have found them a safe, sure thoroughly reliable and always get the remedy by return mail."—Mrs. C. M. Bradshaw, Beacon-on-the-Hudson.

Never Lost a Single Chick

Mrs. L. L. Tam, Burnettsville, Ind., writes: "I have lost no chicks or little chicks from the usual baby chick troubles. Finally I sent for two 50c packages of Walko Tablets, used it in all drinking water, raised over 500 chicks and I never lost a single chick. Walko Tablets not only tend to prevent baby chick troubles, but they also tend to give chicks increased strength and vigor. They develop quicker and feather earlier."

Never Lost One After First Dose

Mrs. Ethel Rhoades, Sheldon, Iowa, writes: "My first six baby chicks when but a few days old began to die by the dozens. I tried different remedies and was about discouraged with the chicken business. Finally I sent to the Walker Remedy Co., Waterloo, Iowa, for a box of your Walko Tablets to be used in the drinking water for baby chicks. It was the only thing to keep the chicks from dying of disease. We raised 700 strong healthy chicks and never lost a single chick after the first dose."

You Run No Risk

We will send Walko Tablets entirely at our risk—postage prepaid—so you can see for yourself what a wonder-working remedy it is when used in the drinking water for baby chicks. So we can prove—as thousands have proven—that it will reduce your losses and double, treble, even quadruple your profits. Send 50c for a package of Walko Tablets (or $1.00 for extra large box)—give it in all drinking water and watch results. You'll find you won't lose one chick where you lost dozens before. It's a positive fact. You run no risk. We guarantee to refund your money promptly if you don't find it the greatest little chick saver you ever used. The Pioneer National Bank, the oldest and strongest bank in Waterloo, Iowa, stands back of our guarantee.

WALKER REMEDY CO., Dept. 507, Waterloo, Iowa.

Send me the 1 | 50c regular size or 1 | $1 economical large size package of Walko Tablets guarantee to promptly refund my money if not satisfied in every way. I am enclosing 50c or $1.00. (P. O. money order, check or currency acceptable.)

Name .....

Town .....

State .....

Mark (X) in square indicating size package wanted. Larger package contains about two and one-third times as much as small.

R. F. D. .....



Nest Box Notes

IN producing pedigreed chicks, the eggs from each hen must be put in a wire "pedigree basket" or in a muslin nesting sack holding about six eggs, just before they are ready to hatch so that the chicks will not be mixed up. When the hatch is taken off, a small metal band bearing the hen's number and other information is put on the chick's leg, and this is transferred to the wing when the chick is about three weeks old.

Mosquito netting bags are not very satisfactory, as the chicks sometimes work through them, and the regular pedigree baskets cost 50c or more each, so I bought a lot of corn poppers for less than a quarter and used the wire baskets from them for pedigreeing with perfect satisfaction.

• • •

THE moment behind using the poppers was more of a diplomatic separation than on the hope that the chicks would pop out better in them, but to tell the truth, when you put the eggs in the little wire basket and mail sex chicks even a few days later you can make good chick or popping corn.

• • •

THIS sort of work certainly brings to the individual peculiar traits of character. A neighbor has had 24 hens on separate tables while on the same tables I have never had less than a great deal more than the number of eggs which the average hen lays and also on the breakfast table.

• • •

I HAVE been appointed that the best hen in my breeding pen of three can produce a single egg. Last season she had over 250 eggs, this season she had over 200 eggs, and this season she has gone on the record and her average there is only a couple more coming.

• • •

EXPERIMENTS have shown that rations including cod liver oil, corn meal or alfalfa leaf meal and milk increase the hatchability of eggs. Corn meal and the oil extract the most severe condemnation. Very often the matter is blamed when the real trouble breeders is at fault.

• • •

EXPERIMENTS at long time periods are necessary in order to get a true picture of the value of the various foods. It can be surprising to open the eggs with weak chicks on the 18th day when the chicks are all set up and by keeping the door on the incubator cellar we are doing the last week. R. I. S.

EGG WEEK

MAY 17 is the date of National Egg Week this year. This event is now held in the spring, not only to allow the attention of the consumer to the value of eggs as food. When we consider that the average Canadian eats 27 dozen eggs a year while the average per capita consumption in the United States is about 15 dozen it is apparent that the consumption of this food product might be visibly increased without hurting anybody, especially the poultryman.

Henry B. Lewis, president of the National Poultry Council, in drawing attention to Egg Week, recommends an extensive and long range program for the poultry industry. It includes research concerning food values of eggs, a system of egg quality as judged on markets, improved grading and standardizing the further development of Egg Week, poultry consumption propaganda and newspaper and periodical advertising to convince the public that it should cling to this standard equipment of the breakfast table.

REDUCE CHICK LOSSES!

YOU don't need to resign yourself to all the chick losses which pare away your profits. By using AMCO STARTING AND GROWING MASH, you eliminate those troubles which are due to improper feeding. Your chicks will develop strong, healthy bodies which resist colds, coccidiosis and other causes of loss.



Part of the flock of broilers belonging to Mr. N. W. Ebersole, Chambersburg, Pa. fed AMCO STARTING and GROWING MASH.

Mr. N. W. Ebersole, of Chambersburg, Pa., rearing chicks in the most difficult season, brought 95% of his flock of 2007 baby chicks to broiler age. He says, "These chicks weighed 1½ lbs. at eight weeks of age and made broilers of excellent quality. I do not hesitate to endorse AMCO STARTING and GROWING MASH as well as other Amco Open Formula Feeds".

Your nearest Authorized Amco Agent has AMCO STARTING and GROWING MASH all through the rearing season.

DIVISION OFFICE:
MUNCY, PA.

AMCO
FEED MIXING SERVICE
AMERICAN MILLING COMPANY
EXECUTIVE OFFICES: PEORIA, ILL.
Plants at: Peoria, Ill.; Omaha, Neb.; Owensboro, Ky.
Alfalfa Plants at: Powell, Garland, and Worland, Wyo.

Chick Bargain FREE Course in Poultry Raising
IMMEDIATE DELIVERY 7½¢ 21¢

Send no money. Just mail your order. We ship C. O. D. and guarantee live delivery of chicks. From pure-bred, inspected and culled flocks.

Prices on	25	50	100
S. C. Wh. and Br. Leghorns	$3.00	$5.50	$10.00
Bd. Rocks and R. I. Reds	3.50	6.50	12.00
Wh. Rocks and Wh. Wyandottes	4.00	7.50	14.00
Broiler Chicks	2.00	4.50	8.00

Box 908
Bellefonte Poultry Farm, Bellefonte, Pa.

BABY CHICKS C.O.D!

Send no money, just mail your order. We ship C. O. D. and guarantee live delivery of chicks. From pure-bred, inspected and culled flocks.

Prices on	25	50	100
S. C. Wh. and Br. Leghorns	$3.00	$5.50	$10.00
Bd. Rocks and R. I. Reds	3.50	6.50	12.00
Wh. Rocks and Wh. Wyandottes	4.00	7.50	14.00
Broiler Chicks	2.00	4.50	8.00

100% alive, prepaid. Poultry course, 10 lessons, filled with secrets of poultry raising, FREE to customers. Write now for FREE CATALOG & BARGAIN PRICES.
SMITH BROS. HATCHERIES, Box 908, MEXICO, MO.

TIGHT BINDING TEXT CUT OFF

SIEB'S GUARANTEED CHICKS
from CERTIFIED HOGAN TESTED HEAVY LAYING FLOCKS



STILL LOWER PRICES

WHY PAY MORE?

SIEB'S "OVERSIZE" CHICKS are from PURE-BRED Flocks of THE WORLD'S FINEST BLOOD LINES. They are a new Sieb Development—an advanced step in scientific breeding to produce chicks that grow larger, stronger, mature quicker and lay more and larger eggs. All one quality only THE BEST.

WHY SIEB CHICKS PAY BETTER

Fortunes have been spent to produce a superior quality chick. It costs just as much to raise a chick that weighs 6 lbs. at 6 months old as it does a Sieb Chick that will weigh 8 lbs. or more at 6months old. The best proof of this wonderful achievement is the testimonials from our customers. Think of young cockerals weighing 9 lbs. and pullets 8½ lbs. with remarkable egg laying records. If you want larger, stronger stock, more eggs, more meat, and more profits, buy Sieb's "OVERSIZE CHICKS". Our great capacity of over five million per year insures quick delivery, cuts down cost of production and enables us to give you THE BEST GRADE ONLY at prices even less than many hatcheries charge for second and third grade chicks. SEND FOR CATALOG or order from this ad. 100% live delivery guaranteed.



PRICES PREPAID	25	50	100	500	1000
Wh. Sc. & R. Leghorns -	$3.00	$5.75	$11	$52.50	$100.
Red. Wh. & Buff Rocks -	3.50	6.75	13	62.50	120.
Wh. Min. B. C. R. I. Reds	3.00	5.75	12	57.50	110.
B. C. R. I. Reds, Wh. Wyan.	3.75	7.25	14	67.50	130.
Wh. & Buff Orps. Sil. L. Wyan.	3.75	7.25	14	67.50	130.
Black Minorcas -	3.25	6.25	12	57.50	110.
Anconas & Heavy Assorted -	3.00	5.75	11	52.50	100.
Heavy & Light Assorted	2.75	5.25	10	47.50	90.
Light Assorted -	2.50	4.75	9	42.50	80.

SIEB'S HATCHERY,
BOX 150 LINCOLN, ILL.
Members Int'l. Mid-West, Ill. & America B. C. P. Association

20th CENTURY "MARVEL" CHICKS
from Special Mating Imported Barron White Leghorns

This Superb Mating consists of 350 Yearling hens, imported from TOM BARRON of England. The hens weigh not less than 4½ pounds and up to 6 pounds, and produce better than 250 eggs per year per hen.

Big Healthy Chicks from the World's Best Strains

14 varieties. Matings sired by pure-bred Males from the World's Finest Trapnested Egg Strains. Dams of high production, 250 to 302 egg lines. Harry Burrouahs, Pedel, Sheppard, Dustin, Page and others of similar famous breeding. I Guarantee Satisfaction and give you personal service. Prices reasonable. 100% Live Delivery Guaranteed. Ref.: Commercial Bank. Dun or Bradstreet.

	50	100	500	1000
S. C. White, Brown, Buff Leghorns; Anconas	$7.00	$13.00	$60.00	$115.00
Barred and White Rocks; S. and R. C. Reds; Black Minorcas	8.00	15.00	70.00	135.00
White Wyandottes; Buff Orpingtons; Buff Minorcas	8.50	16.00	75.00	145.00
Imported Barron Leghorns; White Minorcas; Park's Rocks	9.50	18.00	85.00	160.00

Heavy Mixed, $12.50 per 100; Light Mixed, $9.00 per 100

Ship C. O. D. if desired (pay postman on delivery). FREE Illustrated Catalog tells all about our big size Winter Laying Chicks and profits you can make with them. Send for your copy.

20th CENTURY HATCHERY Box Y **NEW WASHINGTON, OHIO**

WOLF SELECTED CHICKS

CHICKS C. O. D.—Send only $1.00 and pay Postman the balance.
Special pen mated and extra high bred chicks at slightly higher prices. Shipment made any time you wish.

	25	50	100	1000
S. C. W., Br. & Buff Leghorns, S. C. M. Anconas	$3.25	$6.50	$12.00	$97.50 $110
Bd. and Wh. Rocks, S. C. and R. C. R. I. Reds, Bl. Minorcas	3.75	7.25	14.00	67.50 120
White Wyandottes, Buff Orpingtons	4.25	8.00	15.00	72.50 140
Jersey Black Giants	5.00	9.50	18.00	87.50 170
Assorted odds and Ends, Mixed Chicks	2.50	4.75	9.00	45.00 90
Assorted Heavy Mixed Chicks	3.50	6.00	11.00	55.00 110

WOLF HATCHING & BREEDING CO., Box 43. Immediate Delivery. GIRSONBURG, OHIO

HERE: NEARLY EVERYONE RAISES Full Blooded "AMERICAN" Quality Chicks.

Write now for our new low prices. Your opportunity to get our special flock mating chicks at utility prices. Chicks shipped C. O. D. Catalogue and prices on request. 100% live arrival guaranteed. 15 breeds. Write now.

AMERICAN CHICKERIES, Box 318, GRAMPIAN, PA.

YOU NEED THIS CATALOG!



Big Poultry Manual Given Free to All Buyers of Chicks

Write for details. Every chick buyer should know about Hoyt-ville chicks. Our beautiful illustrated catalog tells all about them. Your copy sent on request.

OHIO ACCREDITED CHICKS — ALSO BABY DUCKS

Every bird in our breeding flock is banded and a record kept. Your chicks are inspected by experts trained and authorized by Ohio Poultry Improvement Association. Find out about our guarantee plan. 16 breeds. We have a limited number of Ducks from Ohio R. O. P. pedigreed sires. Write today.

HOYTVILLE ACCREDITED HATCHERY, 117 MAIN ST., HOYTVILLE, OHIO

BUY EASTERN QUALITY-PLUS BABY CHICKS

BIG HATCHES MAY 28, JUNE 4-11-18-25. WE SHIP C. O. D.

(Hens weigh up to 7 pounds each) at	Per 50	100	500	1000
Large Barron English S. C. White Leghorns	7.50	14.00	67.50	130.00
Fishel Strain White Hocks	7.50	14.00	67.50	130.00
Jones-Parks Strain Barred Rocks	7.50	14.00	67.50	130.00

Sent parcel post prepaid. 100% live delivery guaranteed. 10% book order. Free circular.

SHERIDAN POULTRY FARMS, Box F, SHERIDAN, PA.

PENNSYLVANIA COOPERATIVE LEGHORN FARM

Breeding COCKERELS with RECORDS to 303 EGGS. PURE TANCRED-HOLLYWOOD-BARRON STRAINS White Leghorns—Brown and Buff Leghorns—QUALITY EXTRAORDINARY—PRICES WAY DOWN. Ship C. O. D. Get our prices quick.

Pennsylvania Cooperative Leghorn Farms
Box 318, Grampian, Pa.

BABY CHICKS

13 Leading Varieties—White Leghorns, Black Minorcas, Rocks, Reds, Wyandottes, Mammoths, Speckled Sussex, Buff Orpingtons.

$9.00 per hundred and up.

Free Catalog and Price List

Lantz Hatchery, Tiffin, Ohio

Schwegler's "THOR-O-BRED" BABY CHICKS



OUR Breeders are bred for high egg production. White, Brown and Buff Leghorns, Barred and White Rocks, R. I. Reds, Anconas, Black Minorcas, Buff Orpingtons, White Wyandottes 15c and up. 100% live delivery guaranteed. Write today for FREE CHICK BOOK.

SCHWEGLER'S HATCHERY
29, NORTHAMPTON, BUFFALO, N. Y.

Chicks from Blood-Tested Stock

Pennsylvania Supervised Flocks.
Shipped C. O. D. Free Circular.
Bunnybrook Poultry Farm, New Berlin, Pa.

Baby Chicks from High Egg Laying Flocks



11 years reliability. Satisfied Customers our specialty. Prices Reasonable. Write for catalog and price list.

BUCYRUS HATCHERY CO., Box 415, Bucyrus, Ohio

Chick Prices for May deliveries. S. C. Leghs. $11.00-100; Red. Rocks and Reds, $11.00-100; Heavy mixed, $10.00-100; Light mixed, $7.00-100. 100% live arrival guar. Circ. free. Penn's Creek Hatchery, Selinsgrove, Pa.

Poultry Problems

Turkey and Duck Eggs

Can you tell me if it will prove all right to hatch turkey eggs and duck eggs in an incubator? W. F. E.

It is not a good business to place turkey and duck eggs in the same compartment of an incubator. Some duck eggs hatch in 28 days, while others require 33 to 35 days. As a general rule duck eggs hatch in 28 days. It is not a good plan to mix chicken and duck eggs in the same tray, due to the difference in the incubation period.

Further more, chicken eggs require one treatment and duck eggs another and turkey eggs still another. It pays to hatch these eggs separately.

H. C. K.

To Kill Lice

Some time ago I saw in the Pennsylvania Farmer something about using sulphate killing chicken lice by just painting the roosts in late afternoon. Will you be good enough to let us know how to use it?

Mrs. L. V. Grinage

THE material is applied to the roosts, painting it on the top with a small brush, commencing at one end and can late in the afternoon, and when the birds are on the roost at night the heat of their bodies vaporizes it and the fumes penetrate the feathers, killing all body lice. This is not fully effective against mites which harbor in the cracks around the roosts and dropping boards, and which can be destroyed by painting these parts with spent motor oil from the garage. R. L. S.

Value of Chicken Manure

I would like to ask you what you consider roost manure worth. I have probably two tons of good hen manure and have had some chances to sell it but did not know anything about what it was worth. This manure has no straw or other substances in it and has been housed all winter. Daniel Aiken.

POULTRY manure, according to Hoskins and Walker, averages in analysis as follows: 1.44 per cent nitrogen, .39 per cent potash and .99 per cent phosphoric acid.

If the poultry manure has been well preserved and most of the nitrogen retained, it is of considerable value. The use of gypsum or superphosphate on the dropping boards is to be recommended, since either of these materials helps to reinforce the poultry manure with fertilizing value and also prevents the escape of ammonia.

Under present prices, poultry manure, as it is removed from the dropping boards, is worth in the neighborhood of $7 to $8 per ton. H. C. K.

Chickens Won't Eat

I have about 200 broilers, three months old and they did fine until about ten days ago. They look droopy, combs and wattles very pale, won't half eat and are very thin. Seem very thirsty and finally die. H. H.

JUDGING from the description of the trouble in your broiler flocks, the ailment is coccidiosis, which generally attacks young chickens after they are several weeks old.

In treating this disease, give a dose of Epsom salts at the rate of one-half pound per 100 birds dissolved in the drinking water. Clean the litter out, replace with dry fresh material and put the birds on a ration consisting of 40 lbs. corn meal, 40 lbs. dried milk and 20 lbs. bran, feeding lightly on grain, until the outbreak is over. Birds should be confined during this treatment, as they will become reinfested if allowed out on contaminated ground, and when the disease is under control the buildings should be moved to a new location or the birds transferred. The litter should be cleaned out as soon as it becomes damp. R. L. S.

5 Lb. LEGHORNS

The old reliable heavyweight stock. Produced high up on Pennsylvania's healthy mountain top. Get your chicks from certified record stock. Tancred, Barron Matings. Hens weekly pure white eggs up to 36 ounces per dozen. Beautiful Color Plate Leghorn Catalogue Free.

FARM SERVICE
Route S-10 TYRONE, PA.

Lineaville Gold Medal Chicks still on top, after winning State Gold Medal this year. Winning again for others. You can win with Our Sturdy Chicks.

The Old Reliable LINESVILLE HATCHERY Linesville, Pa.

Write today for free booklet and prices also free book on brooding.

STRICKLER'S SUPER-QUALITY CHICKS

High Egg Production Bred, Healthy, Tancred Barron English S. C. White Leghorns. 274-316 egg line matings. No buzzard chicks are extra hardy and rapid growing. These quality grow chicks at special reasonable prices. 100% live delivery guaranteed, or cash in May of $12 per 100, $55 per 500, $109 per 1000. Circular free. Order today, before chicks are gone.

LEONARD F. STRICKLER, Box F, Shrewsbury, Pa.

STOP! LOOK! and take notice to the several big values in these baby chicks for May delivery.

	25	50	100
Tancred Strain White Leghorns	$3	$5	$9
Pure Strain Brown Leghorns	3	5	9
Barred Rocks and S. C. Reds	3	5	9
Light Mixed	2	3	5
Heavy Mixed	2	3	6

Special prices on 500 and 1000 lots. Per cent guaranteed, prepaid. Circular free.

COCOLAMUS POULTRY FARM, Cocolamus, Pa.

BABY CHICKS

Order direct from this ad and save money

Fine Range Bred

	25	50	100
White and Brown Leghorns	$3.25	$6.25	$12
Anconas & Black Leghorns	3.25	6.25	12
White and Barred Rocks	3.75	7.25	14
Rhode Island Reds	3.75	7.25	14
Heavy mixed broilers	3.75	6.25	12
Light mixed Broilers	2.75	4.50	8

Full count and quality guaranteed. Catalog free. For Greater Profit Utah Poultry Farm & Hatchery chicks Box 14, Port Trevorton, Pa.

BABY CHICKS

Tancred Str. W. Leghorns $1.00 per 25
S. C. Brown Leghorns ... 1.00 " 25
S. C. Barred Rocks ... 1.00 " 25
S. C. White Leghorns ... 1.00 " 25

Also Pullets. Assorted chicks, $7.00 per 100. Prepaid. Live delivery guaranteed. Catalog free. Postpaid. For 300 and 500 lots we have a special price.

Chester Valley Hatchery, R. 2, Coatesville, Pa.

Look! DUCKLINGS

Instead... Live arrival guaranteed. White Pekins, Indian Runners and Buff Orpington ducklings. Ducklings make the most profitable poultry known. $30 a 100. Circular free. Stamps appreciated.

Nabob Poultry Farms, Dept. 32, Gambier, O.

ULSH'S Superior CHICKS

White Wyandottes ... $12.00 per 100
Wh. & Brd. Rocks ... 11.00 per 100
Heavy Mixed ... 8.00 per 100

100% live delivery guaranteed. Postage paid.

JAS. E. ULSH, Beaver Springs, Pa.

BABY CHICKS

Tancred Str. Wh. Leghs. $10 per 100
White Leghorns ... 9 " 100
Barred Rocks ... 12 " 100
S. C. Reds ... 12 " 100
Heavy Mixed ... 8 " 100
Light Mixed ... 7 " 100

500 lots 3c less—1000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for circular.

C. F. LISTER, McAlisterville, Pa.

ZELLER'S EXTRA QUALITY CHICKS

from Large Type S. C. White Leghorns. Tancred production bred strain. 200-egg, 11½-oz. $15-100. Barred Rocks and Reds 12½ per 100. Circular free.

EDGAR A. ZELLER, 2014 Maneda St., Harrisburg, Pa.

CHICKS

from heavy laying flocks

S. C. White Leghorns ... $8 per 100
Barred Rocks and R. C. Reds ... 9 " 100
Heavy mixed ... 7 " 100

Mifflinville Reliable Poultry Farm, Millmont, Pa.

BABY CHICKS

100% Arrival

	25	50	100
White Leghorns and Heavy Mixed	$2.75	$5.25	$10.00
Barred Rocks and Reds	3.25	6.25	12.00
Heavy Mixed	2.75	4.75	9.00

JOHN SHADEL HATCHERY, R. 2, Boalsburg, Pa.

Chicks, Barron Eng. Wh. Leghorns

White Leghorns Sc; Barred Rocks 10c; Reds 10c; Light Sc. Hedgerd on large orders. Send for "New Circular Free". May 20th and later 100% live delivery.

TWIN HATCHERY, Bellefonte, Pa.



WHITE WYANDOTTES

Baby Chicks, Hatching Eggs, Breeding Stock. Ohio State Fair, Chicago Show Winners. Ohio State Fair, Columbus, 1928. Big, type, heavy layers of fine quality. A. P. A. Certified. Large catalogue free.

Sherman Bowden, Box 1910, Norwalk, O.

CHICKS

Pure bred. Blood tested for range breeders. Leghorns, Anconas, 9c; Barred Rocks, Reds, 12c; Wyandottes, Orpingtons, 13c; Black Giants, 30c. 100% live delivery. Valuable Chick Manual Free.

Minorcas, 13c; Black Giants, 30c. 100% live delivery. Valuable Chick Manual Free. Worthington, O.

BEIDELTON FARMS.



"Ohio Accredited Chicks" at these Low Prices for April

	25	50	100
Barred, White & Buff Rocks, S. C. & R. C. Reds, White Wyandottes, Silver Wyandottes, White & Buff Orpingtons	$3.00	$5.50	$10.50
White & Brown Leghorns	2.75	5.00	9.50
Heavy Assorted	2.50	4.50	8.50

Sunbeam Chicks are BIG Chicks. Weigh 11 to 12 lbs. per hen at 10 weeks. Live Delivery Guaranteed. Big Discounts for Quantity orders. F.O.B. Illustrated Catalog. We ship C. O. D.

SUNBEAM HATCHERY
Box 2702, Findlay, Ohio

MONTCALM GAME FARM

Your breeding flock of turkeys needs new blood

Get it from the Montcalm Game Farm

Our Mammoth Bronze toms and hens sired by our super, early maturing, large chick, type of flock and mated matchless. It will improve the vigor of your flocks, will increase the vitality of your poults and help get your poults off to the early market and high prices. We guarantee all our stock. If not satisfactory, it may be returned and money refunded.

Write for catalog and prices.

MONTCALM GAME FARM
R.F.D. 3, Box 6K, Hunterdon, Pa.



Just Paint it on the Roosts!

—Before the chicken's perch. Only a small paint brush and a can of "Black Leaf 40" are needed. When chickens roost, fumes are slowly released and pass up through the feathers, killing lice. Kills every louse and mite by actual touching of birds. Ask your dealer or write us.

Black Leaf 40
Kills Poultry Lice

Save Baby Chicks



by giving them daily a few drops of Bourbon Poultry Remedy in drink or feed. For treatment and prevention of Diarrhoea and as tonic and conditioner to keep chicks strong and vigorous it has no equal. Money back if it fails to cure any disease of chickens, or to keep them healthy. Hundreds say they can't raise chicks as without it. Also cures and prevents blackhead, gapes and other ills of turkeys. Half-pint $1, pint $1.75. At druggists, or send by mail postpaid.

BOURBON REMEDY CO., Box 9, Lexington, Ky.

RAISE YOUR CHICKS



One dose Wonder's Chick Tablets in the water, from the start, keeps White Diarrhoea, Coccidiosis and other chick diseases. Starve your chicks previous to using.

STOP THAT ROUP

Wonder Roup Tablets positively stop roup for Roup-ie Birds in seven days.

Either tablets one, $1.00—3 for $2.00—any size which C.O.D. plus postage. FREE Booklet on Poultry Raising.

Wonder Remedy Co., BOX 137 66 CAMDEN, N. J.

BROILER—RAISERS

SHIPPING CRATES LOANED FREE

SHIP YOUR LIVE BROILERS and other poultry to Sol Tork's Oldest Live Poultry House. Est. 1881. We are limited commission merchants. Birds fed, watered daily. Highest prices. Our outlets unlimited. Reasure about us. Write for quotations, crates, tags, shipping instructions and Holiday Calendar. Refer P.R. KRAKAUR POULTRY CO., Inc. 308 Washington Market, New York City.

PENN'A CHICKS FOR MAY



Have vim and vigor—hatched by men with 25 years experience. Pure-bred and 100 per cent live delivery guaranteed. S. C. White and Brown Leghorns, 8c each; Rocks, 10c; Reds and Minorcas, 12c. Heavy mixed, 8c; Light breeds, 8c; $70.00 per 1,000. Circular free.

PENN'A HATCHERY, Liverpool, Pa.

CHICKS

Pullets, Cockerels, Pullorum tested flocks. Reds, Wyandottes, Leghorns, Minorcas. Circular and price list. Delivery guaranteed.

LONG'S RELIABLE HATCHERY
Box 18, Millerstown, Pa.

Additional Baby Chick Advertising on Page 21.

White Diarrhea

I have lost about 40 per cent of my young chicks with white diarrhea.

Lee Rosemeriance.

BACILLARY white diarrhea is transmitted from the infected adult through the egg to the chick, and the best way to avoid it is to buy chicks from blood tested stock, as the infected breeders are detected and removed from the flock by the test. Infected chicks are also a source of infection to other chicks, and once the disease starts in a chick flock it may be pretty serious, as it is usually fatal and incurable.

It is a good idea to dip the beak of each chick in sour milk before it is first fed, as the lactic acid in the milk has a beneficial effect on intestinal conditions. Sick chicks should be killed and burned and the house kept very clean. As a rule B. W. D. takes its toll during the first week or so.

R. L. S.

Cement Floor

Would like to know whether raising chicks under brooder which is placed on cement floor is satisfactory.

Simon Britton.

I BELIEVE that a cement floored brooder house would be perfectly satisfactory, as long as it was not damp.

R. L. S.

Leg Weakness

Could you tell me the cause of leg weakness? The chicks just sit down.

H. A. S.

LEG weakness is caused by a lack of vitamin D in the ration which can be remedied by adding one pint of cod-liver oil to each 100 pounds of mash, mixing the oil with the mash thoroughly.

R. L. S.

Perhaps White Diarrhea

My chickens seem to have something like paste and a thin white secretion comes from them. I am feeding a chick starter and developing feed. I give them sour milk, tincture of iron once a day in two quarts of water. I keep a disinfectant in their water at all times. I have also given them Venetian red in their water.

Mrs. Oscar J. Wagoner.

IT is a good plan, when using a commercial feed to follow the manufacturer's directions. Most of the feed companies have in their employ chemists and experts in poultry nutrition. It is their job to see that the feed is properly mixed and that the ingredients are sufficient to meet the requirements of the animals to be fed.

I would suggest that you omit the tincture of iron, Venetian red and sour milk from the ration.

If your flock is affected with bacillary white diarrhea, no amount of chemicals in the drinking water will cure this disease. Only a bacteriological examination will determine the presence of bacillary white diarrhea.

H. C. K.

Scratch Grain

Can you let me know how much corn or corn and buckwheat it would take from October till May to feed 14 hens?

G. K.

IT is generally conceded that one hen will consume in the neighborhood of 40 pounds of scratch grain per year. This would mean that in seven months a hen would consume approximately 24 pounds of scratch grain. Fourteen hens for seven months would require in the neighborhood of 336 pounds of feed.

If half of the scratch grain mixture is wheat and half is corn, the consumption would be approximately 168 pounds of each.

If buckwheat is used in the ration, some wheat should also be added. A satisfactory scratch grain ration can be made by using two pounds of corn, one pound of wheat and one pound of buckwheat. H. C. K.

8 POUNDS OF LARRO GROWING MASH is all she needs



EIGHT pounds of Larro Growing Mash—just a few cents' worth—that's all it takes to turn the average six-weeks-old chick into a big, husky, vigorous pullet.

It's just good, common sense to raise pullets the Larro way when, for this small investment, you can be sure of the safe, rapid growth, general health and year-round egg-laying capacity that make every bird pay you the biggest profit.

Larro Growing Mash has been proved right. It produces even, uniform growth. It keeps the birds in good flesh, without excess fat and brings them to maturity at the right age, when growth is complete and they are ready for profitable production.

Don't take chances with your flock. Don't experiment with home mixtures and untried rations. A mistake in feeding now will mean less profit for you when the birds are ready to lay.

Give them the one best growing ration — proved best at Larro Research Farm before a single pound was offered for sale.



Larro

FEEDS THAT DO NOT VARY

Chick Starter — Chick Grains
Growing Mash — Growing Grains
Egg Mash — Scratch Grains

All Larro Mashes contain the correct amount of dried buttermilk—minerals—vitamins. Results prove they have everything necessary in just the right proportions to make an ideal feed.

TIGHT BINDING TEXT CUT OFF

THE YOUNG PEOPLE

4-H Baby Beef Accomplishments in the Keystone State

DURING the past three years the interest in 4-H Baby Beef Club work has been centered in the southeastern section of Pennsylvania. This is natural, as steer feeding has long been a profitable farm practice among the farmers of those counties relatively close to the Lancaster market. For years they have found that steer feeding not only afforded them an excellent opportunity for utilizing roughage which otherwise would be hard to dispose of, but also that it was a form of livestock farming that helped to maintain the soil at a high degree of fertility. What is more important is that they were able to realize a profit which was reasonably constant from year to year.

A small baby beef club had operated in Chester county, finishing up at Lancaster in 1925, but Adams county was the first to try this work on a large scale. In the spring of 1925, 55 boys and girls started feeding calves that weighed 450 to 500 pounds each. They concluded their work in January, 1926, at the State Farm Products Show in Harrisburg, where 49 of the club members exhibited and sold their baby beeves. The 49 head sold for a total of $5,969.54, or an average of $13.48 per hundred. The total weight was 44,282 pounds, an average weight of 903.7 pounds. The average daily gain was 1.73 pounds for the feeding period of 251 days. However, the most satisfactory part of the story is that the club member realized an average of $26.84 above feed cost. Very often it was found that there was a direct relation between a high daily gain and a handsome profit.



"Over the Top"—Bobby, Eleanor and Dorothy Boyle, of Allegheny County, Pa.

231 Per Cent Increase

The result achieved in Adams county opened the eyes of lots of folks to the possibilities of the work. So in the spring of 1926, 227 baby beef club members, an increase of 231 per cent, enrolled in four clubs located in Lancaster, Lebanon, Cumberland and Adams counties. Of this membership, 212 exhibited and sold their steers at the 1927 Farm Products Show." This was the biggest single feature of the show, and the receipts from the sale totaled over $28,000.

All of this work was carried on under the supervision of the Agricultural Extension Service in the various counties, with the assistance of the state club leader's office and the beef cattle specialist. All the steers were purchased through established dealers. Every boy and girl was furnished with directions for feeding, as well as a record book to keep account of the cost of the feeding operation. Then again the various clubs were organized on a community basis and meetings were held in a similar manner. It was felt that it was of extreme importance to fan the flame of competition.

Each year a club tour was conducted in each county. At meetings of club members they were shown how a steer should be fitted for show. This demonstration included curling, trimming feet, polishing horns and the art of showing.

Ration Recommended

Following the first year's show and sale, the reports of feeding operations were assembled and tabulated and the results were studied for the purpose of finding out: first, if the work was profitable, and second, what possible improvements could be made in feeding recommendations.

The ration recommended for feeding baby beeves by J. M. Vial, beef cattle extension specialist, was as follows: 60 per cent cracked corn, 25 per cent oats, ten per cent bran and five per cent oilmeal. The ration used by the 212 boys and girls of the 1926-1927 group consisted of 65 per cent corn, 25 per cent oats, nine per cent bran, eight per cent oilmeal or cottonseed meal, and three per cent commercial or ready-mixed feed. Feeding this ration for a period of 257 days they made an average daily gain of 1.70 pounds. While this was not exactly as recommended, yet there was a decided trend in that direction.

Much depended on these feeding recommendations, because in the final placings daily gain counts 40 points, two pounds or more per day being considered perfect; individual merit of the animal 50 points; and the record book ten points.

Daily Gain

The youngsters started with animals having an average weight of 571 of pounds and put on 427.02 pounds at an average cost of $10.77 per hundred. The average selling price received was $13.34 per hundred, just 14 cents less than that received the year before for only 49 head. However, the grand champion was the subject of spirited bidding, selling for 45 cents per pound, which was 20 cents more than the year previous. The average return above feed cost was $22.79 per club member.

The profits realized from the work did not turn out to be phenomenal but on the whole were quite satisfactory. In the spring of 1927 the demand for feeder calves strengthened and prices were high. This fact caused one county to decide against taking up the work, but despite high prices clubs were organized in five counties and a total of 151 baby beeves were purchased by 4-H club members who planned to fit them for the 1928 State Farm Products Show at Harrisburg. The work was carried on very similarly to that of previous years. The show and sale came off as scheduled and the results were most gratifying.

The factor that is most under the control of the club member is the daily gain of his animal. Thus, with this as "indicator", the 30 steers showing the highest daily gain were compared with the 30 showing the least, and both groups were compared with the average of the entire 149. This gives a comparison between approximately the high and the low fifths as well as with the entire lot.

	Av. high 30 steers	Club aver. 149 steers	Av. low 30 steers
Labor profits per club member,	$70.02	$47.79	$29.21
Initial wt. of steer,	502.7	490.7	497.17
Final weight ..	1,100.2	994.1	990.3
Pounds gain	597.5	502.4	493.16
Daily gain 284 da.,	2.09	1.76	1.49
Feed cost	$52.32	$48.22	$45.58
Pounds feed	3,680.1	3,340.7	3,142.4
Lbs. oilmeal ..	156.02	149.62	176.5
Per cent in ration,	4.	4.4	5.6
Lbs. cotons'd meal,	73.03	81.35	118.9
Per cent in ration,	1.	2.4	3.7
Pounds oats.	657.15	600.94	525.
Per cent in ration,	17.8	18.2	16.7
Pounds bran	294.8	288.68	271.5
Per cent in ration,	8.8	8.9	8.6
Lbs. corn, total	1918	1812	15.
Per cent in ration,	2.1	1.9	.4
Cost per cwt. gain,	$.70	$.90	$1.20
Selling price per cwt.	$17.50	$16.84	$16.20

The table speaks for itself and needs little explanation. It should be noted that the better class group fed over 500 pounds more feed than did the opposite group. Following the steers into the show ring we find that the top fifth includes all the club champions, the reserve and grand champion steers of the show. The first group sold for an average of $17.51 as compared to $16.20 for the latter.

Compared with Other Years

Comparing last year's clubs with those of the previous year it was noted that they started with steers that were 80 pounds lighter in weight, fed them 27 days longer, put on 75 pounds more gain, and the average daily gain was 1.70 pounds as compared to 1.70 pounds for 1926-27. Records on 209 of the club members who completed the work in the winter of 1926 show that they paid on the average of $59.61 for their steers, while the 149 who completed a year later paid $62.16. The latter group fed an average of 3,340 pounds of feed while the former fed but 2,720 pounds. In 1928 but little pasturing was reported. The cost per hundred pounds gain dropped from $10.64 to $9.97 per hundred pounds.

Due to a more favorable market the 1928 group found the work much more profitable. The average price paid was $16.84 per hundred as compared to $13.34 for the year preceding. The labor profit per club member jumped from $22.74, average in 1926-27, to $47.79 in 1927-28.

Considering the work as a whole, the things that stand out above the horizon are not the dollars and cents, the grand champion ribbons, or the applause of the crowd. The real highlights are such events as the evident sorrow that a 4-H club girl reveals when she says "good-bye" to her steer, the good sportsmanship with which the boys and girls take their losses, or the thoughtfulness and care with which one of the older boys will look out for one of the younger chaps.

James F. Keim,
Assistant State Club Leader,
State College, Pa.

I like to read the Young People's page. I seldom see letters from Maryland. I live on a farm and help to do the farm work. We have nine cows, five horses and three colts. I have three brothers and one sister.

I go to Friendship public school and am in the sixth grade. My average in my exams was 95 per cent. A creek runs through our meadows. In summer we have a good time bathing and in winter we have a good time skating and sliding.

I am sending a picture of myself and my girl friend. I am the one with the bobbed hair. Frances Moxley.

Frederick county, Md.



Frances Moxley and Her Chum

Little Folks Corner

The Little Green Toad

(Continued from last week)

Hoppo heard footsteps coming along the path towards him, and two rosy, romping boys appeared. He had learned from some of his friends how horrid little boys could be sometimes, tormenting them and poking them with sticks. So when the boys gave a shout of delight at sight of him, poor little frightened Hoppo jumped faster than he ever had before, and landed in a bed of friendly pansies who shielded him and the boys could not find him.

Afraid to stir, Hoppo stayed there for a long time, not knowing what to do next. He was tired, homesick and miserable. Suddenly, he heard the swish of a hoe—scrunch, scritch, scritch. He heard it too late and a sharp hoe grazed his side. Jumping and hopping frantically away he fell headlong into a sharp, prickly hedge. Hoppo gave one more feeble hop and hopped right into nothing, and fell, oh, ever so far. He landed in a little heap and was too exhausted even to open his eyes.

When he finally lifted his head to see where he was he blinked his eyes in amazement, for there he was in his own dear home by the bank. He had fallen from the wall back of the tree. The weeping willow was caressing him with her drooping branches; the tall grass gently fanned him, and the brook was singing a cheery little song. Hoppo closed his eyes in contentment, and just rested and rested, declaring he would never, never run away again with bad little strange toads.

AN EASY ONE

Some of our "twelve-and-under" folks think our puzzles too hard. This one is very easy so no complaints, please. How many words can you find in PENNSYLVANIA FARMER? You must use only the letters in these two words.

Put down the words, one under the other, and number them. Six prizes for the best lists. Address Little Folks' Corner, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

A SONG FOR HEALTH DAY

Tune: "Marching through Georgia"

Sing a song of healthy folks who have a happy life,
Free from all the ills and pains that fill some days with strife
Free from those diseases which we hear are often rife
While we are marching to Wellville.

Chorus—Hurrah! Hurrah! Pure food and water too!
Hurrah! Hurrah! No time for feeding blues!
So we sing and so we hope you'll all be singing too
While we are marching to Wellville.

Sing a song of vegetables that in the garden grow,
Carrots and potatoes and the things we all love so,
That they'll bring us rosy cheeks some everyone should know,
While we are marching to Wellville.

Sing a song of exercise that makes our muscles strong,
Sing a song of everything that helps the work along,
Don't you want to join our band and sing our happy song?
While we are marching to Wellville.

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1.—Crown Prince of Norway and Princess Martha of Sweden married at Royal Church ceremony. Photo shows Crown Prince Olaf of Norway and his bride, Princess Martha of Sweden, driving through the streets of Oslo after the ceremony.

2.—Ed Allen, Boeing pilot, using one of the radio phones installed on transcontinental airmail-passenger planes by the Boeing system. It consists of earettes, a soft rubber cast which goes in the pilot's ear, two wires leading to the remote control and a microphone into which he talks. The phone is automatic and once the pilot adjusts his headgear, all he has to do is to talk or listen. Pilot Allen recently talked with the phone to a ground station 200 miles away from an altitude of 12,000 feet.

3.—Wild Swedish swans driven south by cold weather. Photo shows thousands of wild Swedish swans, driven away from their regular haunts by the extreme cold spell, seeking refuge in the southern Swedish province of Scania, where they are fed by the people.

4.—Cell for Chinese merchant. Photo shows one of the cages placed in the streets of Peking, China, for the sole purpose of jailing "Chinese merchants who sell Japanese goods." The wooden cells set in various parts of the city by the Anti-Japanese Boycott Association—an illegal body with which the weak provincial government dare not interfere.

5.—Army's newest defensive weapon going into action. Members of the 61st Coast Artillery regiment from Fort Totten, N. Y., unlimber their three-inch mobile anti-craft gun in practice maneuvers at the Virginia capes.

6.—A view of Lake Geneva as seen from Port Noir, below the suburb of Cologny, Switzerland. The movement commemorates Geneva's deliverance from the Napoleonic yoke.

TIGHT BINDING TEXT CUT OFF

Old Rhiney

By CHARLES ADAMS

Copyright 1901, By Perry Mason Company (Originally Published in The Youth's Companion

A LITTLE farther on we lost sight of him in a wide tract of thick young pines, but at last heard a bull bellowing in a pasture beyond. When we came out in sight there was a pitched battle raging. A good-sized brindled bull had his horns planted against the side of the rhinoceros, and the two were sidling furiously round each other.

For some moments we thought the bull had the best of the contest. In the struggle they presently got across an old pine log, which separated them for a moment. The bull then charged, head on, which gave the rhinoceros an opportunity to bring his nose-horn into play, when he threw his assailant completely on his back.

The fall seemed to disable the bull. He did not rise; and the rhinoceros, rushing at him, threw him over again and again. Several steers that were in the pasture came near and bawled, but were afraid to attack the strange newcomer.

When he tired of tossing the bull, the rhinoceros started for the steers, but they ran away; he then dashed down the rail fence on the farther side of the pasture, and entered the highway again. The rope was still trailing after him, and we could hear him wheeze and pant, as if badly blown. It is likely that from living for years in a cage, the animal was not in good condition for such a trip across country.

He moved along the road more slowly now than at first, and we ventured to draw nearer; for even if the brute turned, we felt sure that we could scale the stone wall which here enclosed the highway before he could catch us.

The rhinoceros paid very little attention to us, however, but plodded on, breathing loudly and at times seemed to stagger.

The schoolhouse in the district three miles east of our own was now in sight, and right opposite the house we saw a horse and wagon coming.

"Shout! Yell to them!" exclaimed Leland; and we all three lifted up our voices, hallooing to the driver to turn and get out of the way of the "hip-posmackus."

The wagon came on, however; and we soon saw that it was a woman, alone, driving a mare, with a very young colt following beside the thill.

Thereupon we shouted again, adjuring her to turn quickly and drive the other way as fast as she could. But even then the woman seemed not to comprehend that we were shouting to her. She afterward said that she thought we were driving a dark-colored cow, and it was not until she had come within ten or fifteen rods that she saw what sort of monster was heading in her direction.

Then, indeed, she attempted to rein the mare out beside the road. But the foolish little nickering colt went ambling forward on his tottery legs and ran fearlessly to the rhinoceros. Till that moment the old mare had appeared quite docile; but when she smelled the rhinoceros and saw where her foal had gone, she sent forth a squeal that made the whole countryside echo, and rearing, dashed after her colt, with wagon, woman and all.

Really, I think that the rhinoceros wished only to be let alone, for he did not offer to molest the colt, and would have plodded ponderously on. But the little colt was now on the far side of him, and in an instant the mare turned sharp about, throwing the wagon off the forward wheels, and sprang after old Rhiney as if crazed.

THE woman, along with a number of jars, baskets, firkins and bags, landed in the middle of the road, but was not much hurt. In fact, our attention was directly chiefly to the mare and her singular behavior. With ears laid back and with the most ferocious squeals, she plunged after the rhinoceros, biting at him and trying to kick him. To us boys behind, it looked as if wheels and horse were alternately on top of the rhinoceros.

Soon the mare kicked herself clear of the wheels, shafts and harness, and then ran, rearing, biting and squealing, beside her enemy.

After this tumultuous fashion they tore along the road, round a bend, out of our sight. We ran, too, and presently came upon them, or at least upon the mare, kicking like a demon at the entrance hole to an old brick-kiln beside the road. The rhinoceros had entered the kiln. I think the big beast was actually exhausted, and seeing the hole into the kiln, where tall fireweeds and bushes had grown up about it, was glad to take refuge there. Perhaps that shaded hole reminded the rhinoceros of some lair in his jungles; or perhaps the brute was glad of any place of retreat from that squealing virago of a mare.

The kiln stood in the side of a clay bank, and had once been operated by a queer genius, named Lufkin. It was made of stone laid in mortar, and was some twelve feet in diameter and about the same in height, with a draft-hole at the apex, and an entrance hole five feet square on the side next the road.

Lufkin had "burned" lime and bricks in his kiln, and latterly charcoal, for which he found a better market than he did for his bricks.

There was no doubt that the rhinoceros was in there; we could hear him wheeze; and on hurrying to the crest of the clay bank, where we could get on top of the kiln, we saw him through the roof hole. He had thrown himself down and was stretching out his big legs, panting noisily all the while.

By this time Mr Stone had appeared, his horse covered with sweat; Mr Briggs and Mr Odway were coming a mile or so behind. They had been driving hard, by various roads, to keep up with the chase and see what damage was done. Mr Flint also arrived, and several others. The woman of the jars and firkins, who had been overturned in the road, and a little pale schoolmistress from the schoolhouse near by, with twenty or thirty of her pupils, mostly little girls, were also gathering timidly about.

"Run home, you! Run home, every mother's son of ye!" were Mr Stone's first words to them. "There's a dangerous critter in there! He may come out any minute and eat up half a dozen of ye!"

With that there was a great scampering and "hoo-hooing."

BUT Tertius, Leland and I drew boldly near, and proudly showed Mr Stone that we were not afraid to go up to the hole and look in—a piece of hardihood he was not ready for himself; but he had not yet seen that the rhinoceros was lying down, panting hard.

"You boys had better keep back!" he called out. "A rhinoceryhos is a terrible critter!"

The trailing end of the rope extended from the hole clear across the road; but nobody cared to tweak it.

Just them Mr. Briggs and Mr Odway drove up, their horse also looking very warm. Mr. Briggs was pale. Mr. Odway [illegible]. They had seen the dead [illegible] and the broken jars of [illegible] in t'e road. Mr. Stone [illegible] on them; he also had [illegible] the dead bull.

"All your doin's!" he [illegible] claimed. "And I s'pose [illegible] know that this 'ere [illegible] means damages agin the [illegible] If you had done as I [illegible] this never'd happened. Th[illegible]

about 'massy' to a rhinocerryhos!"

"But I don't believe in downright cruelty to an[illegible] thing," faintly interposed Briggs.

"O Briggs, Briggs, you haven't liver enough [illegible] side ye to fit out a Plymouth Rock chicken!" cried Stone. "A town officer should have more sense, Briggs!"

Mr. Odway said nothing. He was looking [illegible] ously at the dark hole into the charcoal [illegible] Briggs got out of the wagon.

"I always want to do for the best, Brother Stone," he said, humbly. "I'll agree to 'most anything you say—et it ain't downright cruel."

"Cruel!" repeated Stone. "You don't call [illegible] a good bull cruel—that the town'll have to pay for. What it he killed this woman here? Wouldn't that be cruel?"

"ANYTHING you say, Brother Stone; anything you say," interposed Briggs, to make peace.

"Then I say we must destroy this critter by the shortest way we can," insisted Stone.

"Well and good, Stone. Well and good," put in Odway. "But how'll ye do it?"

"They've got a cannon at Mapleton," said Stone, with resolution. "We had better send two men and a team for that cannon and some powder."

Mr Briggs looked appalled. "Terribly high-handed and cruel!" murmured he, under his breath.

"Well, you had better get stones or logs and pile the critter into the kiln," suggested Mr. Flint, "and he will be out and off before you can get your cannon here."

"Yes, all take hold and stop him in," said Stone. "Block him in there. Hold him fast."

As many as twenty men and boys had gathered round by this time, and all began to carry stones from a wall across the road. The woman who had lost her butter also lent a hand. She had secured her mare and colt, gathered up her damaged products, and was now evincing as much interest in the rhinoceros as anybody. No one appeared to hinder, but she made herself heard, and brought many as large as a bucket.

A tier of such stones was soon laid up in the hole, with several logs braced against it on the outside.

"Now keep a sharp eye to him, Briggs," said Stone; and he and Odway then set off at speed, either to go to Mapleton or to send some one. But the larger part of the crowd lingered with Briggs, deriving satisfaction from peeping down on the rhinoceros through the hole at the top of the kiln.

The woman also remained, she had not said much while Mr Stone was about, but now we saw her calling Mr Briggs' attention to a little shed near by, where Lufkin had formerly kept his stock of charcoal.

"Stuffe him, d'ye say?" we overheard Mr. Briggs exclaim.

"And it won't hurt him," the woman said, "it's a painless death."

"So I've hearn tell," replied Briggs, staring hard at her. "But I dunno what Stone would say," he added, dubiously.

What they were proposing to do did not [illegible] dawn on Leland and me until, after considerable talk and delay, Mr. Briggs turned and bade us go to a barn that was in sight at some distance along the road and find some bits of board.

"We want to cover up that top hole," said he, "and then put some sods over it. We are going to try and stiffe the critter, and fetch it about [illegible] massiful as we can."

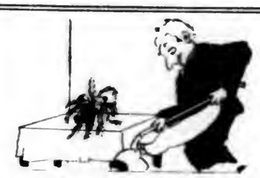
The crowd worked diligently to seal up the [illegible] in his death chamber. A small opening was left at the bottom through which a little kettle of burning charcoal could be pushed. At first considerable difficulty was experienced in making the fire, and when the kettle was shoved inside the smoke came out instead of going in. However, the woman fanned the smoke in with her apron and the opening was closed with sods.

We all stood waiting for the rhinoceros to succumb. No movement or sound was heard save the slow breathing of the animal. This encouraged Briggs in his hope for a "massiful" end to the beast.

Five minutes passed—ten, fifteen, still no sign of a struggle within the kiln. One of the men warned us to stand back, as the animal was liable to "run around terribly" when it began to yield to the effects of the charcoal fumes.

Some of the crowd were of the opinion that the beast had already passed away.

(To be continued.)



The Cheerful Plowman

A NEW SWEEPER

I'VE bought my wife a sweeper. 'Twill be a mighty aid in bringing her more leisure 'twill help her make the grade. How glad am I that women are getting leisure time; the old wife-killing system was nothing less than crime. My mother had ten children and every one a care. She brought them up on spankings, on kisses and on prayer. She had to skip the details, she had no time for those; she watched the big essentials, our morals and our clothes. She could not be specific in every little thing, she had to do group teaching and treat us as a ring.

She managed from a center, lumped orders out for us, worked on collective basis, avoiding petty fuss. She did a wholesale business, departmentized the chores, formed us in squads, I'm thinking, in sixes or in fours.

She had to, bless her genius, she had to stack her cards, to parcel out her arms as sentries, scouts and guards. She had no mum duties quick action was her life, a thousand grilling duties like any farmer's wife, and spite of all her genius for grouping kids and works she still had far more duties than seven busy Turks.

No labor-saving engines were ever in her home. She had a pair of scissors, a washboard and a comb, a flatiron, and a needle, a dustpan and a broom, a set of heavy dishes three kettles black as doom. With that outfit she labored and reared her flock of ten; four honest strapping women and six big strapping men. How much more time, poor creature, she now would have to teach that mammoth herd of children, she'd now have time for each.

My good wife must have leisure, more leisure than my ma, more leisure than my aunties, more leisure than my pa; so this good vacuum sweeper will be an aid, I know; it's such an easy business to push it to and fro.

J. E. T.

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What Our Readers Say

Why Taxes?

HAVE read so much through the columns of this paper in regard to taxation and officials that I desire to make plain my views. What makes taxation so heavy? It is the wants of too many for this and that, for which the funds probably are not sufficient, and the consequences are that a raise in taxes follows.

I have heard much criticism of officials. We may have some not just what they might be, but what is the disposition of the element in general that is criticizing so much? Do we not have state experiment stations for the benefit of farmers in general? Do we not have federal land banks for the benefit of farmers in general? Are we not paid for condemned cattle by the state and the United States? Are these condemned cattle any good to the farmer when diseased? Do we not have a poorhouse for the needy? Does not the state provide a place for criminals? Does not the state provide good roads to travel on and does this not make taxation necessary? Does not the public have good schools and is not this an assistance to make heavy taxation?

Do we not call on the courts when in trouble? Who calls on the courts quicker over trifles than the outlaws? What would this country be if they were to try to run it? Whose policy appears to be to entirely rule everything their way or ruin?

It is bad enough as it is but if these people would get control this country would not be capable of being inhabited by a respectable citizen and therefore a bite in the tune of peace is worth more than ten bites when such an element would get control.

John B. Shank.

Another Bull Story

FOUR years ago this spring, as a group of children were on their way home from school, a huge bull suddenly made his appearance in their midst, and trampled down one small girl, and kept trampling until driven off by an older sister. This animal was known to be ugly, yet the owner let him out with the cows in a pasture facing the highway.

This little girl was seriously injured and lay for weeks hovering between life and death, with some broken bones, face badly lacerated and disfigured. And I was told that the owner of the animal thought it "tough on him" to be asked to pay the physician's services. She lived, owing to the faithful care of her parents and friends, but was not in robust health again.

Clarice Raymond

Moonology

I SEE in your paper of April 13 where a subscriber brings up the old question whether to plant potatoes in the dark of the moon. Of course we always had the answer ready. We planted our potatoes in daylight, when the moon would not be able to take notice and did think that was answering a fool according to his folly. But scientific research is not quite satisfied. I read in a farm paper from Germany and I'm only sorry that I have lost the issue—that some scientist there too was a little puzzled about this moon business.

What could the moon have to do with the sprouting of vegetables? Why moonlight is as near to sunlight as near beer is to the ante Volstead article (of course they never heard of near beer in Germany). But moonlight is only reflected sunlight—and then another light dawned on him. Reflected, yes, but it is more than that, it is polarized light. Might that not have something to do with the germination? So he went to work.

You know how scientists are, when a bee stings 'em in their bonnet. It will not let them sleep no more than a Jersey mosquito will us common mortals. This scientist built a glass house and installed electric lights, one part night and one part polarized light. I'm depending on memory in telling this story and don't recollect whether he used tourmaline or common reflectors. Then he sowed his seeds—I believe he used radish, cress and beets and, by jingo, the seed sprouted 24 hours sooner under the polarized light.

If this is a fairy story, make the most of it, but don't blame the poor old moon any more, if she does make your potatoes come up a day sooner, if you give her a chance, and above all don't blame me.

Felix Zernin

Tile Drains Need Attention

WE have finished renovating a county tile ditch. At points down the drain below our own farm such roots as elder, willow, elm and ash had invaded the tiles and almost completely stopped the flow. Here and there where laterals had entered, faulty or damaged connections had admitted a heavy intake of silt, sand and mud. Normally where the fall is liberal this soil should move right out, but in case the grade is near a dead level such intake of earth may obstruct the tile in time. Where roots have entered they are sure to gather mud and in two or three years the tile is sure to be rendered worthless by reason of complete obstruction.

In case of our tile, three farmers were involved. We undertook the job and supervised the necessary help, which was 90 hours, pro-rating the expense by previous arrangement. At 40 cents per hour we carried out these repairs for $36 during wet weather when field work was at a standstill.

After having observed tile drainage for nearly forty years the writer could say nothing less than the statement that tiles on your own farm or outlets that you tap need more attention than roofs. The roof is before your eyes—the tiles are out of sight, but in general the tiles will need repairs much sooner and oftener than a new roof. There are more elements of accident and neglect in drainage systems than in roofs. Most of our tiles work all right, but constant attention must be given here and there both on our own farm and below us in case of root invasion, sinks, broken-down tiles and obstructed outlets.

Hiram Dobbin.

The Stolen Truck

THE farmer's truck was insured against fire, collision and theft. A thief "got away" with the truck. The farmer bought a new one, put in the usual proofs of loss to the insurance company, and, 75 days later, the police of a neighboring town caught the thief at the wheel of the stolen truck.

"But we don't want the truck now," the farmer protested. "I had to go out and buy a new one the morning after the burglary."

"And you're going to try to hold us on the policy even after the truck's found and tendered to you?" the insurance company demanded.

"Sure," agreed the farmer. "Your policy says that the loss shall be payable 60 days after proof of loss and when that time elapsed then you became absolutely liable to pay the loss even though the stolen property might be found ten seconds after the 60 days expired."

And the Illinois Supreme Court in a recent case ruled that the insurance company was bound to pay, notwithstanding the recovery of the stolen property.

"Obviously, in order to make an insurance policy of this kind of value to the owner of the property, there must be some time fixed after which the return of the property will not release the company from liability," said the Court.

M. L. H.

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Agricultural Engineering

By R. U. BLASINGAME

Life of Electric Plants

ONE night a few weeks ago I had the pleasure of visiting Mr. R. W. Thomas, Indiana county, Pennsylvania. Noticing his electric lights I asked him when the power line was built through his territory. He informed me that the line had not been extended to his place, and possibly would not be for quite a while. He said that his electric lights were supplied by an individual plant which had been in use for seven years. During that time, Mr. Thomas went on to say, he had had very few repairs and was using the same battery.

There are fifty-one lights in all supplied by this plant. They are located in the barn, sheep shed, wagon shed, poultry houses, in the yard, and throughout his nine-room house. Mrs. Thomas says that she uses this plant to do the washing for their family of eight children, does all of her sweeping, and runs the sausage grinder.

Very often we receive letters from our Pennsylvania Farmer readers in which they sometimes seem to have some doubt as to the lasting qualities of individual lighting plants. If this type of equipment receives the right kind of treatment it will last for a long time and give excellent satisfaction as attested to by Mr. Thomas' and many other farmers' plants.

Mr. Thomas also has an 8-16 tractor, the old chain drive type, which he says seems to be about as good as ever.

Wrought Iron at Steel Prices

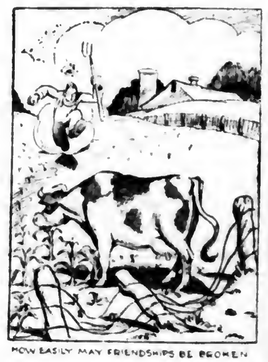
WROUGHT iron was known to mankind long before Christ. Yet, until within the last year or two, no one has been able to produce it on a commercial basis at the price at which we now figure steel. It was about 1870 when the Bessemer converter came into general use, after which time steel could be manufactured so much cheaper than wrought iron that it took the place of iron.

A man by the name of Aston has developed a method for the production of wrought iron on a mass production basis similar to the production of steel. In fact, he uses the Bessemer converter and removes the carbon, manganese, sulphur and silicon from the molten iron just as in steel manufacture. He has developed a method known as "shotting", by which he pours the iron into a large pot containing silicate slag, making the spongy ball of wrought iron which formerly was produced by what is known as the puddling method, which had to be done manually on a small scale.

It has long been known that wrought iron has the capacity to resist rust and corrosion, and it also resists shock better than steel. When it is rolled into bars wrought iron has an appearance, when broken, something like the layers in a piece of wood. Whereas, a piece of steel when broken presents an appearance somewhat like a piece of stone.

The reason that wrought iron resists rust is the fact that the iron particles are coated over with silicate slag, which is somewhat of the nature of glass. One of the wrought-iron pipe manufacturers has developed this new scheme of producing wrought iron on the mass production basis and is now building a ten-million-dollar plant in the Pittsburgh district. This company has for many years produced wrought iron pipe which is considered among the best on the market.

This innovation in the production of wrought iron will, no doubt, be of great interest to farmers, due to the fact that in farm equipment, fence posts, wire fencing, etc., it will be more resistant to the ravages of rust and will last longer when the parts are subjected to severe shocks.



HOW EASILY MAY FRIENDSHIPS BE BROKEN

Concrete Mixers

I was interested in the article written by Mr. Blasingame and printed in a February number of your paper about water-proof concrete. Not being a mason myself I would like to know about how much sand and how much stone should be mixed with the cement. Have in mind the use of this mixture for concrete tanks for storing water.

H. O. B.

IT HAS been found out, through thousands of tests made by the American Society of Testing Materials and the Portland Cement Association with headquarters in Chicago, that the use of too much water in concrete makes it weak and porous, just as too much water in glue or paste will weaken it. Here are the recommendations for making good concrete:

"Six gallons of water with each bag of cement will give 3,000-pound concrete. This concrete is not only strong but it is porous.

"Six and three-fourths gallons of water to each bag of cement will give 2,500-pound concrete. This is not as strong and as dense as where only three gallons of water are used.

"If nine gallons of water are used with each bag of cement the strength will be only 1,000 pounds.

"Seven and one-half gallons of water to each bag of cement will give 2,000-pound concrete.

"By 3,000-pound, 2,500-pound, etc., it is meant this concrete will stand that amount of pressure per square inch. If the sand you use is wet then reduce the amount of water about one gallon per sack of cement. Mix as much sand and stone with each bag batch of cement and water paste as will give a good workable mixture. If you get too much stone the concrete will be harsh and look like cracker-jack. In this case the stone should be reduced. The 2,000-pound concrete mixture well tamped in the forms will make water-proof concrete."

To Pull Fence Posts

How can I pull fence posts with horse and chain? Chas. Brahm.

IF you want to pull the fence posts out and not break them off at the ground, hitch a chain near the ground and use a block and tackle and pull them with the tractor.

I believe that pulling the fence posts direct from the drawbar will be likely to break some part of the tractor or burn the clutch. If you want to break them off you can easily hitch a chain to the top of the post and pull directly with the tractor. R. U. B.



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A New Exterminator that Won't Kill Livestock, Poultry, Dogs, Cats, or even Baby Chicks.

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SPRING MISTAKE

Don't turn the cows out to pasture too soon. In the early spring this is one mistake common with dairymen. At this season young grass is watery and low in nutritive value. It is impossible for a cow to eat enough of it to supply normal body needs and maintain milk flow. The early grass is very palatable and the cow does not eat her dry feed well after she has a taste of grass.

Pasturing, too, is injurious to the young grass as well as the cow. It will pay to hold the herd back until grass has a good start and the long, warm days come.

Luke W. Martin.

Farm and Dairy

By L. W. LIGHTY

"PROBABLY what you say about rations for cows is all right, but I just cannot afford to buy those expensive feeds you speak about," writes one farmer. "My cows do not bring in enough money to do it."

Now that is like the stick of timber that is not long enough at one end or is too short at the other. The cows do not have feed enough to give milk enough to buy feed enough. It goes around in a circle like a dog trying to catch his tail.

Business requires capital. Let this man borrow some capital or let him sell some of his cows and feed the rest as they should be fed to make a profit. Continuing in the way he is going now is worse than doing nothing. The thing to do is to snap out of it in one way or another and do something that brings you somewhere.

Wasting the Feed

"My neighbor, who is a pretty good farmer, watched me feed the cows and he assured me I was wasteful of grain when I fed it to dry cows, as cows giving no milk do very well on only rough feed. What do you think of this?"

Your neighbor is mistaken. A cow that is a good milker—and you should keep no others—pulls down her flesh and her vitality in the ten or more months' work yielding large quantities of milk. The reason we want her to stand dry is so she may recuperate, lay on some extra flesh and bring forth a g I calf. All this requires feed and if she does not get it she will not be in condition for the next season's work.

This of course refers to the cows we generally find on milk-producing farms. There are exceptions, but since they are few we usually do not consider them. A few feeders feed so heavily that the cows gain in weight while in milk and there a rest may be advisable. Again some strains of the Brown Swiss have the ability to make great records of yield on good rough feed only. That may be an exception, but for our average cow a grain ration with plenty of good wheat bran is quite essential when dry.

When Shall I Turn the Cows Out?

"My old neighbor, a man of experience, says not to turn the cows out until the grass has made a good growth. My son who went to vocational school says to turn them out as soon as they can get some greens they need. Who is right?"

Both are right, also both are wrong. The lawyer asks a long and complicated question and demands an answer in yes or no. He is not after the truth but wants to confuse the witness.

The cows need greens in the spring just as folks do and we should make an effort to supply them. If we have a pasture with rough unpalatable grasses as orchard grass, sedges and swamp grasses we should turn the cows in as soon as it makes any growth, because if left to make much growth the cows refuse to eat it. You may have sod to turn on that will give them a bite and that is all right. If you have a good blue grass pasture and want to keep it good the cows should not be allowed to pasture so early that they injure the roots or sod by too close cropping, yet it is a good plan to turn them in a short time daily to eat off the earliest growth on the most fertile areas.

The idea of letting the grass make a large growth before we pasture is like allowing the grass for hay to mature and harden so it will weigh more and be more substantial as a feed. That notion was held by many feeders in the past, but careful observation has proved it is a mistake because digestibility and palatability are of the utmost importance. Also every one knows that when we desire a good lawn we have to mow frequently to thicken and even up the sod. So we start pasturing early and keep the grass and all growth cut down, but never overdo it by allowing the cattle to graze so close as to injure the root system. This is the practice of farmers who have permanent pastures and improve them by use. Most operations on the farm require constant good judgment and the permanent pasture proposition is not an exception by any means.

Dealer's Permit

I am installing a pasteurization plant in my dairy room and would like to know if it is necessary for me to write to Harrisburg about it, to get mercantile license. I produce my milk from my herd and am wondering if I need license as do the dairymen who buy milk from others. Louis Bleiberg.

IT is not necessary for you to write to Harrisburg for a permit to sell the product from your own herd. However, if you go into the business of buying milk from others then you would need a permit. The law on this subject reads as follows:

"Every creamery, shipping station, milk factory, cheese factory, ice cream factory or milk condensery or person receiving, buying and paying for milk or cream, regardless of the method of settlement, shall be required to hold a permit for each and every place where milk or cream is received by weight or measure; provided, however, that nothing in this act shall apply to individuals buying milk or cream for private use or to producers buying milk in emergencies to make up their regular supply or to hotels, restaurants, boarding houses, railroad dining cars or drug stores."

In view of the above it would be evident that this law does not apply to a producer retailing milk from his own herd. A. A. Borland.



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We have a size mill to meet your requirements. 7 H. P. to 30 H. P. 10-20 tractor will operate successfully. Again you can always depend on. Free from costly breakdowns and repairs. Grinds more kinds of feed, cool, finer, better, at less cost per ton than any other feed grinder made.

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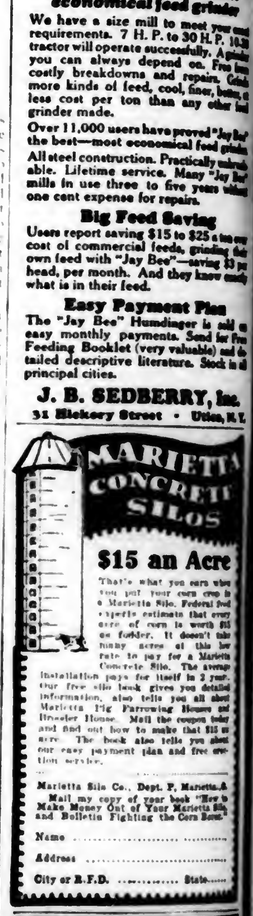
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For Gardeners, Florists, Fruit Growers, Truckers
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Single & Twin Engine—Belt Joint Control
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Dairy Topics

By A. G. HUMPHREYS

WE know a lot of master farmers who will never get any medal pinned on their coat lapel.

• • •

It takes only two hours out of the day to do the milking, but they have a cream check out of every day. It is the yield that makes cow time hard.

• • •

WE thought we had learned some thing new about pet calves and were going to pass it along to the kiddies, but it turned out different from what we expected and we are going to keep mum.

• • •

WHAT has become of the man who sent his Scotch Collie dog after the cows every evening during summer?

• • •

ONCE the manure was thrown outside the cow barn and hauled off during the spring days. Extension workers taught that kind of dairyman a better way to live and obey the golden rule. The dairyman now thanks his teacher.

• • •

RHUBARB pie—the kind that mother used to make—is still in favor. You take one rhubarb and two sugars, and top the whole thing off with rich cream from the morning's milking, and put on more sugar and you have a fine pie. Pie with cream and sugar is still in fashion on farm tables, and farm tables will always be fashionable about meal time.

• • •

IN the hill country, where we were born, biscuits were called "sinkers", and often they deserved the name, but we owe our robust health and fine sturdy form, to some extent, to the fact that our early diet was composed of biscuits, yellow Jersey butter and milk with the cream stirred up in it. Folks who have seen us favor a different diet, but the diet did not develop our facial features or give us our fine silky hair, a part of which we still own.

• • •

ONE time we went after the cows as a part of our daily exercise after walking home from school two miles away, and the weather being fine and the mouth late March we went in swimming, but that was the last time we ever did such a silly thing. We were admonished by our parents to attend to one thing at a time, and that in due season, and the lesson was impressed on memory by an old fashioned method which produced results then and we believe would yet if it were practiced more.

• • •

"MILK is so important to chicken raising," starts out a bulletin from our Experiment Station, but most city marm dairymen feed much milk to chicken. They send the whole milk to market, and when milk is needed for the hen, it is on the open market. We are not saying that is the wrong way, but it looks like milk for chickens might be cheaper before it traveled clear to London to get back to the farm on which it was produced.

• • •

A MAN in the street car was asked to explain why dairymen did not own more farms and more cows if it were such a paying business. We do not know. We know why one does not buy more land. It is because he cannot properly tend to the acreage he has. A business can be profitable and still not lead the proprietor to bite off more than he can chew.

• • •

AT the proper time we are going to admit that we were wrong about the price of cows during the fall of 1929.

• • •

THE yearling heifers can go on pasture without bad results somewhat earlier than milk cows. If the pasture is good it will do no harm to give an occasional feed of hay. It will help the youngsters to ruminate easily and also to lead a more contented life, and every one knows what fine producers come from contented calves.

• • •

THE founder of Mother's Day reflects credit on her great state. It comes on the 12th day of May this year and we will all be glad to pay especial attention to mothers during that day. Sadly and in sweet memories for most of us, for there will be a host of white carnations worn that day.

• • •

THE ice cream men are jubilant. Ice cream weather started off with a bang this year and it started early. If anything can please us more than another it is to have good weather for our particular business.

• • •

THE mastodon bones found near Granville, Ohio, by some excavators are now thought to be the remains of a New Jersey mosquito which wandered too far west and froze to death.

A CRAINE-LINE SILO IS INSURANCE



1. Against the Corn Borer
2. Against too big Feed Bills
3. Against shrinking Summer Pastures
4. Against winter Milk Shortage

Figures compiled by experts show that a silo averages $343.66 a year profit; that it produces milk for 3½ a hundred less and that every farmer without a silo who keeps 10 head of stock pays for a silo each year in extra cost of feeding and in smaller production. Have YOU enough silage capacity on your farm? Good business to get the facts before answering this question.

THE EXPLANATION

This diagram explains how Craine-lex rebuilds old stave silos. Over the old staves is placed our special moisture and acid-proof Silofelt. Then a continuous Craine-lex hooping, from bottom to top. It produces a strong, sturdy, barrel-like silo that will resist wind and weather for a generation. (Some in use today were repaired 23 years ago.) Special price; this summer. Write for particulars.



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12 Cows average $343 Extra Profit

Figuring ALL Costs, that's the AVERAGE extra profit earned by 6 steel silos properly handled in Ohio, Penna., Minn. and other Exp. Sta. tests. Also saved on 100 lbs. milk, 150 gals. more milk per cow, 70 lbs. more butter per year, butter costs reduced 8c per lb., corn feed value increased $4 ton by silo—ing are all direct results of the silo.

Rib-Stone Concrete Stave Silos soon pay their cost. Many exclusive features. First cost is only cost. Absolutely air and water-tight, fire and acid proof. The steel reinforced Rib gives added strength, a continuous door, permanent ladder all round. RIB-STONE, "the silo beautiful" erected complete by us and guaranteed unconditionally.



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Globe Wood Silos, with 13 years tested results are now a Rib-Stone product. They permit home construction, hence lower initial financing, and earn profits for their user. Exclusive roof feature gives utmost full silo after settling. Adjustable door front takes up device guarantees air-tight doors and frame.

Send at once for our booklet "Silos and Silage" by F. R. Pricke, B. S., also printed matter on these remarkable silos.

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Box 406 LE ROY, NEW YORK

Susquehanna County Report

THE Western Susquehanna County Cow-Testing Association Route No. 2 finished its first year, Feb. 1, 1929, with 16 whole year members. In addition there were seven members in the association only part of the year. There were 565 cows in the association during all or part of the year.

The Holstein herd of S. E. Horton leads the association in production in both milk and butterfat with an average of 13,198 pounds milk and 425.9 pounds butterfat.

The registered Holstein cow, Ethel 2nd, 6 years old, No. 801,596, belonging to C. B. Dayton, leads the individual cows in both milk and butterfat production with a production of 18,768 pounds milk and 686.2 pounds butterfat. There are 15 cows more in the same herd in the 400-pound butterfat group.

The registered Holstein cow No. 13, 707488, seven years old belonging to S. E. Horton is second in production of both milk and butterfat in the association, and has a production of 18,359 pounds milk and 665.9 pounds butterfat. One grade Holstein cow in the same herd also produced over 600 pounds of butterfat.

The registered Holstein cow, Ethel 2nd, 6 years old, No. 801,596, belonging to C. B. Dayton, leads the individual cows in both milk and butterfat production with a production of 18,768 pounds milk and 686.2 pounds butterfat.

Herd Records

Five herds with an average of five or more cows exceeded an average production of three hundred pounds of butterfat. A complete list of these herds follows:

Owner	Av. No. Cows	Breed	Lbs. Milk	Lbs. Butterfat
S. E. Horton	12.57	R & G H	11,198	435.9
Chas. B. Dayton	23.08	R & G H	12,601	425.8
F. R. Cope, Jr.	23.92	R & G H	10,822	358.6
Archie Ellsworth	27.92	R & G H	10,500	350.7
O. R. Green	27.42	R & G H	9,988	332.2

Thirty-seven cows produced over 400 pounds of butterfat during the year.

Elwin Hibbard, Tester in Charge. Compiled by F. O. Soldmann
N. C. Dale, County Agent.



The one silo that fits every need—the renter or owner. Its special price brings a permanent, guaranteed, concrete-stave filled silo within the reach of everyone. Keeps moisture perfectly. Backed by 30 years' experience. Big discounts, big allowances for early orders. Time payments if wanted. Write today for interesting booklet.

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or Dept. 249, Springfield, Ohio

National Guernsey Week

1929 MAY 1929

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

MAY 15 Annual Meeting, Commodore Hotel, New York City
16 National Sale, Trenton, New Jersey.
17 Coventry-Florham Sale, Trenton, New Jersey
18 Wall Acres Dispersal, New Rochelle, New York

An opportunity to open during Guernsey Week to purchase at auction some of the greatest animals of the breed

The American Guernsey Cattle Club
25 GROVE ST. PETERBORO, N. H.

TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

THE cattle market continued to show strength this week, with steer sales generally about 25 cents above a week ago, and butcher stock making gains up to 50 cents. Receipts were a little larger than a week ago, but much under the average of recent years for the time of year. The yards were picked bare of cattle from day to day, showing that the packers have a place for the beef, the demand for which is much better than a few weeks ago.

Top cattle this week sold at $14.65, against $14.85 last week, but bulk of sales this week at $10@14.50 compared with $12.65@14.25 last week and $11.75@13.90 the same week last year. Average price of native beef steers this week was $13.75, a gain of 30 cents over last week.

Good summer prices for cattle are expected, provided packers find it possible to move the beef, though low by-product prices are to some extent a handicap. The federal crop statistician for Iowa says:

"At present the normal trend upward of prices for the better grades of fed cattle starting about May or June seems probable. This upward movement of prices, if the supply of fed cattle after the middle of the year is no larger than the present indicates, is expected to be at least as great as that of last summer. These conditions should give sufficient confidence in the future market for feeders to carry out present plans for market next summer and fall." Interpreted that would mean average steer prices at $17 or better next September, a prediction that few would care to make.

Stocker and feeder prices strengthened this week, with a top sale at $13.65, and other sales at $13 and up. It is quite hopeless to expect to get anything desirable under $12.50, and selections are very limited, not only here but at other points. There are many inquiries for cattle, and many are looking for stock to fill pastures, but there is much hesitancy about paying prices asked.

Steady Hog Market

It has been an unusually mild week in the hog market. In fact price fluctuations have been the smallest since the second week of last January, when prices were $2.25@2.50 below the present level. Daily averages during the first five days this week were at $11.35 to $11.50, being at $11.40 on three days, at $11.35 once and $11.50 once. During last week daily averages were varied from $11.25 to $11.50. Two weeks ago the range was $11.25 to $11.60; three weeks ago, $11.35 to $11.60; four weeks ago, $11.45 to $11.85; five weeks ago, $11.35 to $11.90; six weeks ago, $11.10 to $11.85, and seven weeks, $10.65 to $11.25.

Shipping demand this week has been the broadest in nearly a month and wholesale prices of fresh pork showed a fairly good advance over the preceding week, which brought smaller packers into the trade for larger droves. But to offset this receipts showed an increase of about 15 per cent and sharp advances in the market were thus averted.

Eleven markets had 500,000 hogs this week against 460,000 last week. Average price here at $11.40 was the same as last week and $1.85 higher than a year ago at this time. The range of hog prices is narrow, only 30 cents separating the top from the average, comparing with 35 cents a year ago, 45 cents two years ago and $1.60 three years ago.

The trend of the situation in pork is well indicated in the following figures:

Hogs slaughtered under federal meat inspection.—	1929	1928
January	5,737,737	5,478,968
February	4,477,633	5,779,821
March	3,645,301	5,139,754
Total	13,860,671	16,398,543

Pounds of pork, including lard, on hand on the first of each month.—

	1929	1928
January 1	735,256,000	758,280,000
February 1	979,643,000	739,645,000
March 1	1,118,606,000	1,006,998,000
April 1	1,098,001,000	1,162,243,000

New Lamb Top

The lamb market closed barely steady with a week ago, though during the week a new top was set at $18.10, against $17.75 last week, and the average price for the week was $17.10 against $16.85 last week and the same week last year. Best feeders brought up to $16.25, there being quite a demand with offerings light.

Receipts of sheep and lambs here this week totaled 73,800, a gain of about 5,500 over last week. The bulk of the Colorado and Nebraska fed lambs have now been marketed, though this week's receipts included about 38,000 Colorados. But they will dwindle off rapidly from now on and interest is turning to the new crop of lambs, with California and Arizona now sending a good many in. Idaho is expected to start late next month, or early June, with a spanking room Washington, Oregon and Montana probably late in June. When to expect the bulk is the question. Here is what happened last year. Of the 1,352,000 western range lambs, sheep and yearlings unloaded at Chicago, 1,131,000 arrived during the period June to October, inclusive. A total of 165,000 arrived in May, mostly California springers. The three months, August, September and October, were credited with a combined total of 856,000. It is too early to have much idea what the feeder market will be, but usually there is a large demand following a season of profits such as the lamb feeders have had.

Grain Prices Lower

In the absence of other price factors the grain trade has tried to work up some excitement over farm relief legislation, but without much success so far. Reports from the country on wheat are highly favorable, and this fact, coupled with the existence of generous reserve stocks to supply the world, continues to exert a depressing influence on prices. The southern hemisphere is shipping wheat liberally and Canada still has some 96,000,000 bushels of wheat available for export this season. July wheat at about $1.23 at the close of the week compared with $1.26 at the beginning of the week. The buyers of wheat are unable to make any headway against the bear influences, supported as the latter is by what is known of supply and demand. Corn and oats were both lower in sympathy with wheat. Farmers are busy and the country is offering little corn at present. But the supply on hand is sufficient to take care of current demand, and it is expected that the movement from the country will pick up when the rush of spring work is past.

There was a good active horse market here this week, with something over 400 head sold. Individual sales ranged up to $270, and top for a team was $555. Majority of sales were at $100 to $150, with more near the low figure than the high.

Contagious Abortion

Wisconsin will offer cattle tax to own cost of herds of cattle that are free from contagious abortion. Cattle must be tested three times at intervals of approximately six months, and the record must show that no reactors were found at any of the tests. The fact that the state was among the first in the eradication of bovine tuberculosis has been a great asset to breeders, and is the foundation of the large out of state trade they now enjoy.

Cannery Contracts

At one Iowa point, with several hundred acres under contract, a grower will pay three cents a pound for stringless beans and $13 a ton for field run tomatoes.

Sue Wheat Pool

Nebraska farmers, to the number of 114 in one county, have filed a suit in court demanding the return of their contracts with the state wheat pool at Lincoln. The petition states the pool is headed by men who are not interested in the business of farming or marketing wheat; that the purpose of the scheme is to levy a tax on wheat growers of the state for the benefit of a few, that of the farmers that the organization has no elevators, mills nor facilities for marketing wheat, and that its promoters have no property other than a rented room, a few typewriters, other chattels and some stationery. Further allegations that the 114 farmers were induced to sign the agreement by false and fraudulent representations by agents or agents are made. The farmers were told that the government was behind the movement and a guaranteed price would be established through the organization, the petition said.

Chicago, April 20, 1929. Watson.

Produce Market Review

HEAVY rains early in the week prevented harvesting new potatoes in Florida and shipments from that state dropped to as low as three cars. Only mostly crate supplies were available in most city markets and dealers advanced their prices sharply. Old potatoes also brought the highest prices paid for over a month. During the latter part of the week harvesting was resumed in Florida and shipments jumped to 180 cars on Thursday. Even though the supply in the terminal markets was still light this increase in shipments and anticipated heavier supply caused the demand to fall off and while prices were about steady the movement was slow. In general, old potatoes were not affected by this increase in shipments to the extent that new potatoes were.

The April 1 condition of early potatoes in the 10 southern states was reported as 76 per cent, compared with 80 per cent at the same time last year. Prospects are particularly unpromising from Alabama to Louisiana, as the result of excessive rain. Virginia showed a condition of 80, as against 95 a year ago. Reduced acreage and lower yields this year may improve the spring market. Florida is estimated to have about 2,000,000 bushels of potatoes, or 1,200,000 less than in 1928.

Asparagus. Receipts of New Jersey asparagus were lighter than last week on account of the rains and cool weather. Most of the offerings showed considerable white and thus stock does not sell as well as the green. At the present time both Philadelphia and New York markets are receiving truck receipts from New Jersey, Maryland and Delaware as well as rail receipts from California, South Carolina and Georgia. Large green asparagus sold up to $7.50 per dozen bunches but $5 was about the top of grass showing much white. Poorer offerings sold as low as $2.40.

Prices of green vegetables generally tended higher on account of lighter receipts. Spinach was firm with receipts from Pennsylvania and New Jersey selling at 50c to 75c per bushel. Dandelion greens were steady at 25c to 60c per bushel. The first radishes of the season came on the market and sold at $2 to $2.50 per bushel. There were several lots of hot-bed beets from the Norfolk sections of Virginia that sold around 7c a bunch. Rhubarb prices held up well with most sales around 2c to 4c a bunch. The nearby rhubarb shows a wide variation in quality and buyers prefer stalks showing a dark red color with thick chunky stalks.

Sweet potatoes were inactive and while prices made no material change dealers found it difficult to move any large quantity. New Jersey yellows sold at $8 to $1.25 per ½ basket in Philadelphia. In New York City New Jersey yellows sold at $1.50 to $2.75 a basket with some extra fancy wrapped stock from the Swedesboro section as high at $2.90.

Apples. The cool weather helped the apple market and prices of fancy fruit held firm. The movement of ordinary apples continued very slow. Nearby Staymans brought $1.50@2.25 in Philadelphia with Romes bringing $1.25@1.75. Cold storage holdings of apples as of April 1 showed 650,000 barrels of apples as compared with 501,000 at the same time last year. Holdings of apples in baskets were estimated at 1,305,000 bushels, against 1,017,000 a year ago.

Poultry. Receipts of live poultry in New York were heavier during the week. This was due chiefly to the approach of the Jewish Easter which brings an increased demand for live poultry. There were over 4,000 pounds of live poultry received. In the early part of the week fowls declined but later good heavy fowl were in demand and colored heavy stock recovered the loss. Light weight colored and Leghorn fowl remained at the lower price level.

Leghorn fowl were quoted at 30@32c per pound and colored fowl at 33@35c. Rock broilers sold at 50@55c. Reds at 45@50c and Leghorns at 40@45c. Nearby ducklings brought 27@30c and squabs 50@125 per pair.

The supply of dressed poultry was light both from nearby sections and the West. Prices were generally steady with a slow demand. Fowl sold at 30@34c, broilers at 47@53c and chickens at 26@32c.

Eggs. Nearby henmery white and brown eggs with light yolks sold readily on the New York market due to the Hebrew holidays. The fanciest selections brought a premium over top quotations. Mediums and undergrades were in liberal supply and sold from 27c per dozen up.

Pacific Coast white eggs were in demand on account of their uniform grading. Western and southern mixed colored eggs were steady with no material change in price. Receipts from all sections are steadily increasing. Nearby henmery white eggs ranged from 27c to 37c per dozen and browns from 33c to 36c. Mixed colors brought 25½@33½c.

W. R. W.

Miscellaneous Produce

Philadelphia

Eggs. Firsts, 28½c; seconds, 26@27½c.

Butter. Creamery, 1-lbs, 92 score, 46½c; 90 score, 45c.

Poultry. Fowls, 30@34c; chickens, 40@43c; broilers, 35@52c; roosters, 21@28c; capons, 38@46c; guineas, young, 12@2 lbs., $2 per pair.

Apples. U. S. No. 1 peck or bu., Staymans, $1.50@2; Romes and Winesaps, $1.50@2; nearby ½ baskets, Staymans, 90c@1; Romes, 80c@$1; Delicious, $1.

Strawberries. N. C., 32-qt. crate, Klondikes, $7.40@7.85.

Asparagus. S. C., doz. bunch crates, large to very large, $6@6.75; small, $3.75 to $4.

Beans, snap, Fla., ½ bu. hamps., green, $1.75@2.25.

Cabbage. S. C., ½ bbl. bgs., $4@4.15.

Lettuce. Arizona iceberg, crates, 4 to 5 doz., $5@6; Carolina ½ bbl. hmps., Romaine, $2@2.25.

Onions. Texas crates, yellow Bermuda, mixed Nos. 1 and 2, $1.75@2.

Potatoes. Pr. round whites, per 150 lbs., $1.35@1.50; Del., new stock, per bu., Spaulding Rose, 1's, 1, $7.25.

Sweet potatoes. N. J., ½ bskt., yellows, $1.50@1.65; Md. and Delaware, No. 1, 60 to 65c.

Peppers. Fla., crates, fancy count, red, $1.

Radishes. Virginia, Norfolk section, 60@75c.

Rhubarb. Nearby bunches, 6@8c.

Lancaster

Butter. Country butter, 52@56c; prints, 58@59c.

Poultry. Chickens, dressed, $1.25@ each; springers, 75c@$1.25 each; fowls, $1.50@2.50 each.

Eggs. Fresh eggs, 26@30c.

Vegetables. Asparagus, 18@25c bunch; beets, 10@15c per bunch; plants, 15@25 each; string beans, 40@ per ½ pk.; beans, Lima, 35@40c per box; cabbage, 10@20c per head; carrots, 6@7c per bunch; Brussel sprouts, 20c per qt. box; cauliflower, 25@40c per head; celery, 15@25c per bunch; cucumbers, 25c each; spinach, 12@15c per ½ pk.; parsley, 10@15c per bunch; peppers, 1c each; endive, 10@15c per head; lettuce, 20c per head; radishes, 8@10c per bunch; mushrooms, 25@35c per pt. box; peas, 60@ per ½ pk.; onions, 20@25c per pk.; green onions, 8@10c per bunch.

Potatoes. Old, per bu., 65@75c; new, 40@ per ½ pk.

Sweet potatoes. 20@25c per ½ pk.

York

Butter. Country, 47@50c; separator, 60@.

Eggs. Fresh, per doz., 24@30c.

Poultry. Hens, per lb., 34@36c; broilers, dressed, $1.25@1.65 each; roasters, $1.75@2.50 each.

Vegetables. Potatoes, 65@90c per bu.; cabbage, 50@75c per head; lettuce, 8@10c per bskt.; Spinach, 12@20c ¾ pk.; celery, 10@15c per stalk; onions, green, 5c bunch; tops, 15c per ¼ pk.

Apples. Per bushel, $1@2.25.

Baltimore

Butter. Creamery, fancy, 48@49c; prints and dairy prints, 34@35c; packing stock, 32@33c; butterfat, lb., 45@46c.

Eggs. Md. Pa. nearby firsts (loss off), 26½@26½c; western firsts, 26½@27c; southern, 25½c.

Live poultry. Hens, old, 4½ lbs. and over, 31@32c; small to medium, 30@31c; Leghorns, 28@30c; young chickens, colored, Guineas, young, 1½ lbs. or over, each, 60@1.10; roosters, 18@20c; ducks, 25@27c; pigeons, pair, 35@40c; squabs, 30@35c.

Potatoes. Old, 150-lb. sack, $1.50@1.75; new, No. 1 bbl., $6.50@6.75.

Apples. Fancy pack, bu., $1.50@2.

New York

Butter. Creamery, higher than extras, 46@46½c; extras, 45½c; firsts, 44@44½c.

Eggs. White eggs, current receipts, average extras, 32@33c, extra firsts, 30@31c; mediums, 27@28c.

Poultry. Live, in express, fowls, 30@32c; broilers, 40@55c; ducks, 29@35c; geese, 25@28c.

Apples. Eastern and Southern, per bskt., 75c@$1.75; barreled stock, $4@6.

Pittsburgh

Butter. Creamery prints, 52@53c; extras, 52@52½c; tubs, 51@51½c; local jobbing, 50@52c.

Eggs. Fresh, select white, 30@32c; brown, 28@30c; current receipts, 27@28c.

Poultry. Heavy hens, 33@34c; Leghorns, 31@32c; broilers, 45@50c; roosters, 18@20c; ducks, 30@32c; geese, 18@22c; pigeons, 60@75c per pair.

Potatoes. Per 150-lb. sack, N. Y. white, $1.90@2; Mich. Rurals, $1.75@1.85; 150-lb. sack, Maine Green Mts., $1.75.

Apples.—Bbl. N. Y. Baldwin, $4.25@5; bu. basket, N. Y. Baldwin, $1.25@2.

LIVESTOCK

PITTSBURGH

Cattle

With an inadequate supply Monday's cattle market was active and choppy. Lighter, prices showing about steady with a week ago. Bulk $9 to $12.50, though a few choice steers sold at $13.25, and it was such a shortage of desirable kinds that they sold readily at steady prices, while other grades were dull and lower, but did not change much. Veals were hardly steady, closing 50c lower than last week. Yearlings were steady, weight not so good as those offered last week. Very few heavy steers offered, weights running 900 to 1,100 lbs., selling generally 50@75c lower than last week, closing at $13@13.25, with a few choice weights to $13.50. Fleshy but not finished light steers were 50c@$1 lower, with bulk $11@12.50, and a few choice lots at $12.75@13. Fleshy but not finished light heifers were 50c@$1 lower, with bulk $10@11.50, and a few choice lots at $12. Fleshy but not finished light cows were 50c@$1 lower, with bulk $8@9.50, and a few choice lots at $10. Bulls were 50c lower, with bulk $7@8, and a few choice lots at $8.50. Calves were steady. Veal bought $11 to $12, with fair fleshy kinds around $10 per cwt., with fair fleshy kinds around $10 per cwt. Culls and common $8@9. Grassers and fed steers sold down to $10, not good to choice heifers or feeders. Feeder cattle are in good demand, but none offered. A few good cows sold down to $10, not good to choice fresh cows were scarce. A few brought $11 per cwt., with fair fleshy kinds around $10 per cwt., with fair fleshy kinds around $10 per cwt. Culls and common $8@9. Grassers and fed steers sold down to $10, not good to choice heifers or feeders. Feeder cattle are in good demand, but none offered. A few good cows sold down to $10, not good to choice fresh cows were scarce. A few brought $11 per cwt., with fair fleshy kinds around $10 per cwt., with fair fleshy kinds around $10 per cwt. Culls and common $8@9. Grassers and fed steers sold down to $10, not good to choice heifers or feeders. Feeder cattle are in good demand, but none offered. A few good cows sold down to $10, not good to choice fresh cows were scarce. A few brought $11 per cwt., with fair fleshy kinds around $10 per cwt., with fair fleshy kinds around $10 per cwt. Culls and common $8@9. Grassers and fed steers sold down to $10, not good to choice heifers or feeders. Feeder cattle are in good demand, but none offered. A few good cows sold down to $10, not good to choice fresh cows were scarce. A few brought $11 per cwt., with fair fleshy kinds around $10 per cwt., with fair fleshy kinds around $10 per cwt. Culls and common $8@9.

1	1340	10	1368	11	25
1	1190	11	1183	11	40
1	1175	21	1188	11	75
1	1165	11	961	13	65
1	1260	4	927	13	60
1	1340	18	1157	13	55
1	1300	5	956	12	90
1	1250			9	50
1	1150	1	1450	1	11
1	1060	3	1170	10	75
1	1100	1	1100	10	00
1	1200	1	1200	9	75
				1	10

Hogs

Monday's supply was light, only 21 double-deck carloads. Trade was active, with good handy-weight hogs at $12.25@12.40, and these two lots at $12.25@12.40, these two taking in the bulk of the receipts. Other heavy hogs are coming in, selling down at $12, with more in sight for the week end and less for extreme weights. Light Yorkers, below 140 lbs., brought $12 to $12.25. Pigs were scarce but not in much demand, going around $11. Sows were quoted at $10.75 for good straight kind.

Heavy wts., 250 lbs. or over	$11.85@12.10
Heavy mixed	12.25@12.40
Light wts., 250-300 lbs.	12.40@12.50
Light Yorkers, 165-180 lbs.	12.40@12.50
Light Yorkers, 125-150 lbs.	11.75@12.00
Pigs, 90-100 lbs.	10.50@11.25
Roughs	10.25@10.75
Stags	6.00@8.00

Sheep and Lambs

Monday's supply was about 18 carloads, between 9 and 10 carloads consisting of sheep. This was the largest supply of sheep seen here for many a day. Good handy weights changed hands at $11 per cwt. or 50c below last week's high spot. Demand for sheep was rather broad at the prices and they were all sold. $10.50@11 taking the fleshy kind and $8@8.50 the culls. Not many good fat lambs were offered. The good ones brought $16.75@17 and a few choice kinds here and there more. Medium class sold at $15 to $16 and common kind $12 to $14. Yearling division sold on down below $10, only a few spring lambs appeared, the beginning of 1922 per cwt.

Good to choice wethers	$10.50@11.00
Fair to good wethers	10.00@10.50
Good mixed	10.00@10.25
Fair to good do	8.50@10.00
Common to fair do	6.00@8.50
Inferior sheep	4.00@6.00
Good to best lambs	16.75@17.00
Medium grades	14.00@15.50
Culls and common	8.00@13.50
Fall lambs	17.00@22.00

Calves

Monday's supply was liberal, 200 head. The market was active at $17 for tops, $12@14.50 for seconds and heavies, $8@11 for culls.

CHICAGO

Cattle

Chicago, April 22. Today's supply of cattle amounted to around 17,000 head. Yearlings steady, heavy cattle a quarter lower.

Common to fair yearlings	$11.50@12.75
Fair to good yearlings	12.75@14.00
Good to choice yearlings	14.00@14.75
Choice to prime yearlings	14.50@15.00
Common to fair steers	11.50@12.75
Fair to good corn feds	12.75@13.75
Good to choice corn feds	13.75@14.25
Choice to prime corn feds	14.25@14.75
Common to good cows	8.00@10.00
Good to prime cows	10.00@12.25
Heifers common to good	9.00@12.25
Heifers good to prime	12.25@14.85
Canners and cutters	6.25@ 8.25
Inferior light bulls	8.00@ 9.00
Bologna bulls	9.00@10.25
Fair to choice butcher bulls	9.75@11.50
Steers, common to fair	10.00@11.25
Steers, fair to good	11.25@12.00
Steers, good to choice	12.00@12.75
Fair to choice stockers	12.75@13.50
Stockers and feeder heifers	
Stockers and feeder cows	8.75@11.00
Feeders, common to fair	7.75@ 9.00
Feeders, fair to good	10.25@11.25
Feeders, good to choice	11.25@12.25
Fair to good feeders	12.00@13.00
Common to fair feeders	11.00@13.75
Milkers and springers	90.00@125.00
Common to best yearlers	12.00@16.50

Hogs

Thirty-eight thousand hogs made up the receipts. Market 15@25c higher.

Heavy butchers, 270 lbs. up	$11.40@11.65
Medium, 225 to 265 lbs.	11.55@11.75
Light, 190 to 225 lbs.	11.60@11.80
Selected light, 190 lbs.	11.70@11.85
Mixed packing, 250 to 350 lbs.	10.40@10.80
Heavy packing, 350 to 400 lbs.	10.25@10.55
Roughs, 300 to 400 lbs.	9.75@10.00
Stags, subject to 5% shrinkage	9.25@10.05
Pigs, best grades	9.50@11.25

Sheep

Receipts totaled about 10,000 head, 6,000 coming direct to packers. Market steady.

Wethers, all ages	8.00@13.50
Yearlings	14.00@15.50
Western ewes	7.00@12.25
Native ewes	7.00@12.25
Fed western lambs	16.50@17.85
Native lambs	12.00@17.50
Feeding and shearing lambs	15.75@16.75

Shorn stock 1@2 cents below spot quotations.

Stock Movement

	Cattle	Hogs	Sheep
Receipts last week	41,547	121,095	74,900
For previous week	39,692	105,218	68,301
Same week last year	45,662	127,167	56,500
Shipments last week	13,416	28,860	18,552
For previous week	11,658	23,224	16,211
Same week last year	13,236	30,661	16,618

WEEKLY WOOL MARKET REVIEW

Boston, April 18. Lower prices were accepted for domestic wools on a very spotty and slow market during the past week, says the U. S. Department of Agriculture Market Service. Declines were distributed quite widely over the various grades. The sales generally were very moderate in volume.

Weakness developed in all grades of domestic fleece wools. Easier prices quoted on semi-bright wools with an apparent desire to seek an immediate outlet weakened the position of even the choice offerings of the bright fleeces similar to the Ohio lines. The drop of most significance was perhaps on the 58s, 60s offerings which sold at 45@47c in the grease for strictly combing lines that were previously being held at 48@50c.

Among the western grown lines, the 58s, 60s also showed the sharpest decline. Easing was somewhat more gradual on 64s and finer but it was noticeable on all classes and included the original bags and graded lines. A downward revision of quotations was quite general on graded territory wools. Sample lots of Texas 12 months wools were sold at slightly lower figures. The best lines of original Montana wools showed some irregularity with $1.02 scoured basis the highest price reported, while some equally good wools were moved at $1 per pound. New wools from Arizona sold at less than $1, scoured basis.

Private cable reports indicated weakening of prices in Australian markets during the latter part of the week.

Domestic Wool Quotations
Grease Basis, Ohio and Similar

64s, 70s, 80s, fine staple combing	40@42c
64s, 70s, 80s, fine French combing	37@38c
64s, 70s, 80s, fine clothing	35@36c
58s, 60s, ½ blood, staple combing	45@47c
58s, 60s, ½ blood, French combing	42@44c
58s, 60s, ½ blood clothing	40@41c
50s, ⅜ blood, staple combing	43@45c
50s, ⅜ blood clothing	40@41c
48s, 50s, ¼ blood, staple combing	43@45c
48s, 50s, ¼ blood clothing	39@41c
46s, low ¼ blood, staple combing	42@43c
36s, 46s, fine, common and braid	40c

CASH GRAIN

Chicago, April 22. The following cash prices ruled here today: No. 2 yellow corn, 91¾@92¾c; No. 2 white oats, 48@48½c; No. 1 rye, 95¾c.

There was recently hailed into one of the courts up this way a small Irishman, to whom he encounter with the law was a new experience. But he was unabashed.

"Prisoner at the bar," called out the clerk, "do you wish to challenge any of the jury."

"Well," returned the Irishman, "O'im not exactly in training, but I could go a round or two with that fat guy in the corner."

INTERNATIONAL PAPER COMPANY

New York, April 17th, 1929.

The Board of Directors have declared a quarterly dividend of sixty (60c) cents a share on the common stock of this company, payable May 15th, 1929, to common shareholders of record at the close of business May 1st, 1929. Checks to be mailed. Transfer books will not close. OWEN SHEPHERD, Vice-Pres. & Treas.

The DOUGLASTON, an imported Briar Pipe—guaranteed against cracking or burning through. Send $1.00. If not satisfied money refunded.



DOUGLASTON SERVICE 4716 Gladys B'dway, N. Y. C.

AYRSHIRES
THE SCOTCHMAN'S COW
274 Head to select from
Fully accredited for both tuberculosis and abortion. Also bulls ready for service, from dams with records over 15,000 lbs. 4.20%. Choice cows and calves at farmers' prices.
PENSHURST FARM, Narberth, Pa.

DAIRY CATTLE

FOR SALE. Jersey Bull Calf, dropped Dec. 11, 1928. Sire Reg. of Merit Sire Meridale Merry Prince, Grand Champion West Va. State Fair. Dam also show winner with H.M. record 7,500 lbs. milk, 5.62% fat. Imported in dam from Isle of Jersey and daughter of Imp. Golden Fern's Noble. This calf has large, long deep body and straight back, a show prospect and blood tested. First check for $100 takes him. Fed. Accr. Her. No. 47377. Highland Farms, Greensburg, Pa.

Jersey Bull Calf dropped Nov. 17, 1928, by excellent type, straight back and good middle. Dam now on official test and Penna. State Leader. 50 lb. list for January with 79.22 lbs. fat. Fed. Acc. Herd no. calf blood tested. Price $90. Tested for shipment.
HIGHLAND FAL-45, Greensburg, Pa.

TWO RICHLY BRED, thrifty, registered Jersey bull calves, 2 months old. Accredited herd.
W. F. McFARRAN, Furnias, Pa.

Fritzlyn Guernseys
Superior young bulls, two to twelve months old. Rich in May Rose blood. Dams with records up to 700 lbs. fat. Also cows and heifers. Herd accredited and blood tested. Write for description and prices. Fritzlyn Farm, Pipersville, Pa.

REGISTERED GUERNSEY COWS, HEIFERS and bulls ready for service. Good breeding, good individuals, accredited herd. Jacob D. Shank, R. 6, Hanover, Pa.

For Sale Two young registered Guernsey cows, May Rose strain, accredited herd. W. C. Rippel, R. 1, Monongahela, Pa.

CATTLE

HEREFORD BULLS.—Yearling bulls, the pick of our herd. Ready for service and priced to sell.
GEO. O. COCHRAN, Dawson, Pa.

BUCK & DOE RUN VALLEY FARMS
Hereford Cattle—Poland-China Hogs—Hampshire Sheep. Draft Horses. THE SAINT AMOUR COMPANY, Mortonville, Penna.

Angus Cattle at reasonable prices. Write BAYARD BROS., Waynesburg, Pa.

MILKING SHORTHORNS. Cows heifers, and bulls. Best breeding, accredited herd.
C. M. Kennedy & Sons, Ulster, Bradford Co., Pa



The economy of good fence

Your yearly fence cost, including depreciation and repairs, depends entirely upon whether you buy a good grade of fence, or an inferior one. You can buy Cambria Fence with confidence in its ability to reduce your yearly fence costs.

Cambria Fence is just as good fence as it is possible to make. The steel in Cambria Fence was selected by Bethlehem metallurgists as the most suitable grade for the purpose. The wires are protected by a heavy zinc coating that will not flake, crack or peel. The hinge-joint, cut-stay design assures uniformity and flexibility throughout its long life.

Cambria Fence will reduce your cost-per-year of fence to a minimum. So you can identify it, every bale carries a "CAMBRIA FENCE" label.

BETHLEHEM STEEL COMPANY
General Offices: Bethlehem, Pa.

A Hinge-joint Cut-stay fence

BETHLEHEM

OHIO STATE SALE
Wooster, Ohio May 7 & 8, 1929
100 HEAD REGISTERED HOLSTEINS

These cattle are the pick of a number of Ohio's good herds and they have been selected by a National Holstein Judge. The McDonald herd of Wakeman, Ohio, 82 head will be sold in this sale and this herd has been pronounced as one of the greatest small herds in America. It has produced 2 State Record cows as well as other outstanding records. The dam and 3 young full sisters of the one 1,300-lb. State Record 3-year-old, will be sold, a daughter and a number of grand-daughters of the other 1,200-lb. State Record 4-yr.-old are selling, as well as other outstanding individuals, both sexes, all of the same breeding. The State Sale offers the best 40 lb. cows, heifers, and bulls.

ALL SALE CATTLE in the SHOW the morning of the 7th and $150 IN GOLD given as prizes. Selling starts at noon. Breeders banquet first evening. Sale again at 10 o'clock on the 8th.

Managed by
OHIO HOLSTEIN-FRIESIAN ASSOCIATION
I. D. Hadley, Field Secy., 2029 E. 102nd Street, Cleveland, Ohio

IN THE editorial columns of the Pennsylvania Farmer of March 10th the following statement was made relative to the judging of the wool show: "The wool show developed an interesting divergence of judgment in the Merino classes. The veteran breeders of Merinos were not convinced of the correctness of that judgment which ignored their old standards in the fleeces of breeding animals. They understand the requirements of the market, but they believe also that in breeding they must strive for the ancient fundamentals as the only way to preserve quantity and quality of wool on foundation stock."

Far be it from me to rise up and attempt to justify my placings on the fine wools at the Tri-State Show. I am ready to concede that the awards were made according to the individual's viewpoint and some one else might have reversed the placings with equal sincerity. I am concerned, however, about the "ancient fundamentals" and as a fundamentalist I am one of those of whom there are none whicher. My observation at the show was that many breeders seemed to feel that not enough attention was paid to oil, in many cases gum, or character of wool. There will be plenty said later concerning oil, so we will discuss character.

Crimp and Character

With many, character is synonymous with a distinct crimp. A crimp of this type is attractive and frequently denotes character, but not always. Character implies fineness, elasticity and spinning quality and some of the very best wools in the world do not show crimp to the extent our breeders desire. Crimp may be overdone or be beyond a true half circle, which is a worse fault from a manufacturing standpoint than a wool with a light crimp. These flat crimped wools waste heavily in combing and are weak at the bend of the crimp, this causing them to break.

Take a wire, give it a true half circle wave, and then bend one so as to have a short turn at each curve, and test their breaking strain under tension and you get the comparison. These flat curved wools with a very pronounced crimp look beautiful to one not conversant with their worth and have always been looked on by the majority of fine wool breeders as greatly desired. Let me repeat, however, that crimp is only an indication of character and is not always associated with it.

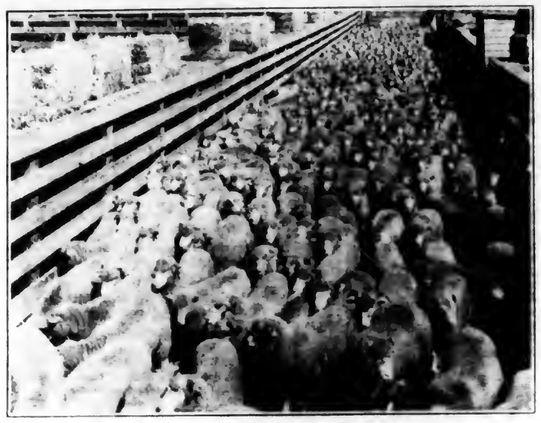
Early Authorities

Now as to grease. Here is where I want to go back to the ancient fundamentals and see what kind, and how much, those who developed the Merino in the United States thought desirable. Let us in the beginning step outside our boundaries and look to those countries that helped develop the various Merino families.

One of the earliest American observers of the Merino was Mr. Livingstone who studied the breed in Spain and France. In describing the Spanish Merino he said, "The wool was free from gummy yolk and opened with a fine lustre." In estimating the shrinkage of these wools he put it at from 54 to 58 per cent. Of the Rambouillet he said, "Due to housing, heavy feeding and feeding on plowed ground the wools showed more dirt and grease and shrank 60 per cent."

Mr. John A. Taintor of Hartford, Conn., an early importer of Rambouillets, gave the same estimate of shrinkage in these wools. A Mr. Hunt in a volume on Merino sheep published in England in 1804, speaking of a flock of English Merinos consisting of 16 rams and 40 ewes, said, "The yield was about six and one-half pounds per head, shrinking 55½ per cent."

Randall, one of the best historians of Merinos, said of the Saxony Merino: "There was sufficient yolk in the fleece to give it pliancy and brilliancy. It was colorless, limpid and never assumed a viscid waxy consistency." He stated the shrinkage of Saxony wools at about 50 per cent. Mr. Chamberlain writing of the Silesian Merino said, "The wool has oil but no gum whatever. German manufacturers always insisted on large deductions where gum is found. The oil is white and free."



GRADE DORSET LAMBS

This five-car string of lambs were sired by pure-bred Dorset rams and born from western range ewes. They were raised in Humboldt county, California, and were sold at the South San Francisco Stockyards for a record price for 1928. Observers of that year's lamb crop stated that these Dorset lambs take the prize for the best lambs of the 1928 season. This is proof that Dorset blood is well adapted for range purposes as well as for the production of early or hot-house lambs for the eastern markets. R. J. H.

The Fundamentals of Fine Wool Growing

By J. F. WALKER

Foundation Flocks

From these four sources the American Merino has been developed. Note carefully. The oil was light, clear and free flowing, there was only a sufficient quantity to protect the fleece and the shrinkage where recorded was much less than we find today in many purely commercial flocks in the Panhandle section.

What were the fundamentals looked for by the early American breeders?

Three flocks stand out as the foundation flocks of most of the present-day Merino sheep. The Jarvis flock, to which many Pennsylvania and Ohio Delaine flocks trace their origin. The Rich flock and the Atwood flock which later was developed by the Hammonds. The last two flocks mentioned were the foundation of the heavier or Vermont type Merino which at one time were introduced into practically every Merino section of the world.

Of the Jarvis flock it was said, "They had but a small amount of external gum and the wool was quite white. The yolk was thin and colorless." The Atwood flock was thus described: "The heaviest yolked sheep in their day. The yolk was thin, generally colorless and quite limpid. It often stood in small globules between the fibers. The Rich flock had less yolk than the Atwood and more than the Jarvis."

How much shrink in these flocks? The old Elithorp ram purchased of Mr. Atwood in 1844 sheared a fleece of 15 pounds which gave six pounds of scoured wool, a shrink of 60 per cent. How many fine-wool rams can you find today that will equal this shrinkage? A very noted ram of recent years sheared 42 pounds grease wool and had eight pounds left after scouring.

Excess Oil Not Wanted

In the first volume of the Vermont Merino Association it is stated, "We do not wish to be understood as advocating or encouraging that kind of oil or rather gum that gathers in lumps or clots instead of circulating freely through the fleece."

Mr. Jno. H. Klippart, secretary of the Ohio State Board of Agriculture, writing in 1862 on wool, stated that softness in wool depends on the formation of the fiber and the liquid condition of the yolk. Clear easily flowing yolk is to be desired while heavy, tallowy yolks are to be avoided.

In 1863 Mr. Geo. Campbell of Vermont exhibited 12 Merinos at Hamburg, Germany, winning first prize at that show. Mr. Campbell warned against excess oil in the fleece. A Campbell ram exported to Australia did much in establishing the Wanganella Merino sheep, a ram of which strain in 1927 sheared 41½ pounds of grease wool shrinking 50 per cent or 20¾ pounds of scoured wool. Is there any ram in America to compare with him?

In 1871 the prize pen of ewes at the Ohio State Fair was described as follows: "Weight 100 to 125 pounds, short broad heads, heavy neck, plain body, fleece 12 pounds, surface dark, oil light straw to white, CLEAR OF GUM."

Things Desired in Fleece

Such were the points looked for by early breeders, fineness, elasticity, spinning qualities, evenness over body and only sufficient oil to protect the fleece. I still believe these to be the essential points in wool production and consider them more ancient fundamentals than some of the present-day ideas in breeding. There was not a fleece awarded a ribbon at the Tri-State Show that failed to measure up to these qualifications. I do not believe there was a ram fleece that would not shrink less than 62 to 65 per cent or a ewe fleece that would shrink less than 60 per cent placed, save possibly in the commercial classes. Certainly that should be enough oil to protect the fiber.

What is desired in a fleece of wool and what induced the breeding for heavy yolked sheep? Let me quote Mr. Randall in an address before the New York Agricultural Society in 1862, and remember no better authority on sheep lived in the country in his day than this gentleman:

"Trueness and Soundness. Wool should be of equal diameter from the root to the point of the fiber. It should especially be free from any finer and weaker spot or 'joint' in it, occasioned by a temporary illness or other low state of the animal. This can often be detected by the naked eye, and always by pulling the fiber. Wool is said to be sound where it is strong and elastic.

Of First Importance

"Pliancy and softness are considerations of the first importance, not only as indicative of their qualities, but intrinsically. If we can suppose two lots of wools exactly to resemble each other in every other particular, but that under the same treatment one is comparatively stiff and hard to the touch, while the other has a silky pliancy and softness, the latter is decidedly the most valuable, because it will produce manufactured articles far superior in beauty and for actual use. But in point of fact, full-blood wool is almost invariably soft in proportion to its fineness, and is always so in proportion to its marketable value. A practiced buyer can decide on that value in the dark.

"Style is, perhaps, a word which has rather vague boundaries to its meaning, but it includes that combination of useful and showy properties which give value to the choicest wool, viz: fineness, clearness of color, lustre, uniformity and beauty of curving, and the peculiar mode of opening on the body, or disposition of the fibers in the shorn fleece, which indicates the last extreme of pliancy and softness. These qualities, in combination, present an appearance which at once, without a sufficiently close inspection to discover the separate fibers, or even without a touch of the hand, point out the best fleece in the pile.

Yolk

"Yolk. This, in its most usual form, is a semi-fluid, unctuous secretion from the skin, found in the wool of various breeds of sheep, and particularly in that of the Merino. Sometimes there is not enough of it to lubricate and make a shining coating on every fibre, in others it appears additionally in the brilliant globules among the fibres, in others still it forms a separate, viscid and abundant mass in the lower part of the wool. In some instances it is as thin as the most delicate oil; in others pasty and viscid; in others it has the consistude of soft wax, and appears in particles or even in crumbs of considerable size within the wool; and when it is sufficiently abundant in the fluid form to ooze consistently to the outer extremity it catches and retains dust, the pollen of hay, etc., and gradually inspissates into that black gummy mass now so eagerly sought after by a class of Merino breeders.

"I think it admits of no dispute that the excessive amount sometimes seen, giving to the long fleece, under the autumn or spring sun, the appearance of having been literally soaked in oil, only fluid, is not often the accompaniment of a specially thick fleece, or one which gives the best account of itself after scouring.

"All Merino rams' fleeces have much more in cleansing than fleeces, but will any one undertake to say that it is good legitimate breeding to grow rams even those whose fleeces will shrink nearly four-fifths in washing? Our best breeders, however, go further, and decidedly object to much internal 'gum', whether it will wash out or not.

Heavy Yolked Rams

"And there is another party who found quite as ready to encourage this line of breeding and management, the manufacturer, namely, the wool buyer. Does he inquire what number of good, well washed, clean wool is produced by the animal he wishes to purchase? By no means. He

(Continued on page 30)

National Flower and Garden Show

AMERICANS spend millions for flowers. The saying "Say It with Flowers" has become a household term. Those in the industry engaged in growing these most beautiful of all living things are past masters in their art and masters too in selling their goods.

The National Flower and Garden School is only one of the activities of the Society of American Florists and Ornamental Horticulturists. It is a meeting place for the trade itself, and it is the mecca for flower lovers. This year it was held in Buffalo, N. Y., with an excellent setting in a monstrous armory and located in position to command entries from the East, Central States and Canada.

To sit in the balcony and take a prospective of this show gives the impression of a gigantic garden and wonderfully landscaped country estate. Great stone pillars, iron gates and groups of impressive evergreens form the entrance, a contribution from the city park department. The design was laid out by a young landscape artist of the city, R. J. Kinkel, a graduate of the Ohio College of Agriculture.



Back-Lot Garden

Here on the floor of this great armory are displays of America's greatest growers, the rarest and most highly improved plants, model gardens and flowers in such grandeur that we had not dreamed before were possible. Garden clubs vie with each other in one class in setting up the ideal back-lot garden. Several entries have 1,000 square feet each to set up the most artistic rock gardens. The first prize exhibit is arranged on a hillside with numerous irregular, weathered rocks about a pool which has a tiny stream falling over a rock ledge, the old oaken bucket stands by the well in the background; dozens of the choicest of rock plants fill in the niches between the rocks.

Orchids are displayed by several growers, one small table about 10 feet square having $10,000 worth in bloom. There are the choicest kinds that bloom in the Andes, others from the Himalayas, from the Philippines, and one drooping yellow sort from Mexico. The largest American grower, from California, showed all steps in growing this exquisite flower. The seeds must be magnified 200 times to see, they are grown in glass phials just like bacterial cultures on gelatin in a laboratory. At a year started in thimble-like pots, and then handled in a greenhouse for several years, five to seven before they finally reward the grower with their exquisite bloom, and then they last for many years.

New Creations

Great beds of jonquils, of tulips, massive beds of hydrangeas in tints of blue and purple and pink, stately and dignified lilies, both Madonna and calla, line the paths in never-ending rows. The dainty lady slipper in hundreds made up one exhibit. Rhododendrons, azaleas and the brilliant bougainvilla, from the South and Mexico, brightened beds in gaudy colors.

Next to such brilliant masses or beside a model bulb garden or English garden might be a drab picture that looked like desolation, suggesting the great arid spaces of the Southwest. These were the Cactus gardens, several of them with hundreds of varieties of cactus in their natural skullbone, one of the newer types of garden which appeals to some people but looks too ghostly and uncolorful for others.

Some would prefer the formal English garden with clipped grass edges, beds in formal design. Others would desire a rear yard like those set up by the garden clubs of New York, central grass plot with informal beds about the fence or shrubbery background, a little pool in the corner and a rustic bench set in a secluded bower. Then the rock garden has its charms, and each year gains more fanciers, because it is unique, fascinating, unusual, natural.

Finally the rose show! For years I have visited rose gardens and green-houses that specialize with this flower, but never had seen such bloom as displayed at Buffalo. Tall baskets and jars would be filled with an armful of roses, with stems fully five feet long and flowers five to six inches across when fully opened. There was the White Killarney in all its glory and purity, the lovely Butterfly, Premier, the newer introduction called Talisman with new pink and bronze shadings, and two new creations called President Hoover and Mrs. Herbert Hoover. These roses, along with other varieties, made up a show that attracted hundreds about it constantly. Carnations and snapdragons also made an especially pleasing show. Some of these latest novelties in snapdragons had stems three to four feet long with flower spikes more than a foot in length.

The meetings of the society of American florists are largely of routine business. We are impressed with the magnitude of this industry, the keen minds that direct it, the enthusiasm and harmony displayed by the membership. Their publicity campaign to "Say It with Flowers" costs about a quarter of a million dollars annually, but they seem pleased with results attained. The telegraph delivery has also increased sales of flowers. The national trade organization has made its influence felt throughout all America through its service, its advertising and through flower shows.

Specialists

Such a meeting affords an unusual opportunity to meet some of the outstanding figures in the industry. There is the president, Leonard Vaughan, a young man of unusual personality, who is associated with the Vaughan seed stores of New York and Chicago, among the largest in the country.

The little fellow with the Dutch accent is Max Schling of New York, one of the leading bulb specialists. That other little man with the white hair is A. F. LaMare, the publisher from New York, who has put out so many books on flowers and publishes the Florists' Exchange. The man who is on the floor so many times with reports on activities about Washington, the proposed national arboretum and the Chamber of Commerce is E. R. Pierson, awarded this year the Society's gold medal to the person performing the most outstanding service in the horticultural field. The man who closely resembles in appearance the late President Harding is the Hon. Philip Breitmeyer, once mayor of Detroit and a former president of the S. A. F. The grey haired man who is always so busy and seems to carry the whole organization's business in his handful of manuscripts is John Young, its secretary.

Next year the show will be held in the Twin Cities, and for 1931 Cincinnati is now making a strong bid. L. L. R.



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SUNNYFIELD EXTRA LARGE Single Comb Black Minorcas, exclusively. Chicks, Eggs, Stock. Extraordinary layers. Lay exceptionally large white eggs, two matings, low prices. Catalogue. Sunnyfield Minorca Farms, Grampian, Pa.

CHICKS.—Barred Rocks, April, $12.00 per 100; May and June, $10.00 per 100. Postpaid. 100% live delivery guaranteed. West Denton Hatchery, Denton, Maryland.

REAL DORCAS WHITE WYANDOTTES. Eggs, Chicks, Stock. 250-Egg Record Ledger North American contest. Winter layers. Excellent type. Fine matings. Low prices. Catalogue. Keiser's White Acres, Grampian, Pa.

QUALITY CHICKS.—White Leghorns, 9c; Barred Rocks, Reds, White Wyandottes, Black Minorcas, 10c; Buff Rocks, Hamburgs, 12c; Heavy mixed, 9c; Light mixed, 8c. Plum Creek Poultry Farm, Sunbury, Pa.

QUALITY SINGLE COMB WHITE LGEHORN Chicks from a single flock, free range, $10.00 per 100. Special prices in lots of 500 and 1,000. Thompsontown Hatchery, Box 2, Thompsontown, Pa.

AMERICAN MOTTLED ANCONAS.—Record Layers. Lay large white eggs. Extra large, vigorous. Exceptional markings. Fine matings. Low prices. Catalogue. American Ancona Farms, Grampian, Pa.

PENNSYLVANIA STATE SUPERVISED Chicks. Barred Rocks, White Wyandottes, White Leghorns, all Leghorn Flocks headed by R. O. P. Cockerels (Tancred Strain). Write for prices. Lincoln Way Hatchery, Chambersburg, Pa.

BABY CHICKS.—Leading strains of Barred Rocks and Reds. Kulp's famous Brown and White Leghorns. Catalog free. W. W. Kulp, RFA, Pottstown, Pa.

BEAVER'S QUALITY Large Size Tancred-Barron English Single Comb White Leghorn Chicks from my own flock, $9.00 for May. E. L. Beaver, McAlisterville, Pa.

CHICKS from heavy-laying strain. Barred Rocks, 10c. Mixed, 8c. 100% arrival guaranteed. Circular free. R. J. Ehrisman, Box 59, McAlisterville, Pa.

BARRED ROCKS from Standard Bred trapnested stock. Eggs $8.00-$10.00, 100 Chicks $15.00-$18.00, 100. 100% delivery guaranteed. Wood Round Poultry Farm, McAlisterville, Pa.

BEST WHITE LEGHORN CHICKS. Tancred strain. Satisfaction guaranteed. Circular free. Pine Range Poultry Farm, Richfield, Pa.

BABY CHICKS.—White Rocks, Barred Rocks, Reds. Contest winners in White Leghorns. Woodland Poultry Farm, Reedsville, Pa.

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PUREBRED MAMMOTH PEKIN DUCKLINGS. Free circular. Diamond Duck Farm, Upper Sandusky, Ohio.

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GUARANTEED HOMESPUN TOBACCO.—Chewing, 5 pounds, $1.00; 10, $2.00. Smoking, 10, $1.75. Pipe free. Pay Postman. United Farmers, Bardwell, Kentucky.

TOBACCO.—SMOKING, 15 pounds, $1.50. Chewing, 12, $2.25. Cigars, 50, $1.50. 50 twists or plugs, $1.50. Farmers' League, Waterwiley, Kentucky.

PET STOCK

PEAFOWL, Pheasants, Bantams, Pigeons, Birds, Rabbits. Free Circular. John Hass, Bettendorf, Iowa.

The Fundamentals of Fine Wool Growing

(Continued from page 28)

wishes to ascertain what aggregate wool, yolk and dirt can be sheared from it and called a fleece. He has two objects in view. He wants a ram surcharged with yolk for the purpose of breeding up a flock surcharged with yolk, and he wants one whose weight of fleece he can boast of and perhaps publish, for he has some eye on becoming a ram seller himself by-and-by. He has learned that these highly yolky rams greatly increase the weight of fleece when bred with a dry-wooled flock, and he strives therefore to make his flock as yolky as possible. He has not learned that beyond a certain point this source of increased weight prevents a further and still attainable increase of weight.

"In respect to selling an outrageous excess of yolk and dirt for wool, because somebody will buy it, I shall raise no questions of casuistry; but whether known or unknown to the purchaser, it should be below the aim of the elevated breeder. If we cannot breed the admirable domestic animals which have been given to us, without purposely alloying and decrading them, let us abandon them and turn to other occupations."

What are the ancient fundamentals? And which of them were departed from in judging the wools at the Tri-State show? The above lengthy quotation from Mr. Randall emphasizes light, free-flowing oil sufficient only to protect the fleece. He stresses character as indicated by elasticity, softness to touch, fineness and spinning qualities. Excess yolk does not always mean soft wools, it may only serve to camouflage a naturally hard, harsh fiber. A strand of sisal may feel quite soft when heavily oiled, but when the oil is removed it is the same harsh fiber. This has deceived many breeders.

May it not be possible that many of our present breeders have been somewhat hazy on just what the ancient fundamentals were? J. F. Walker.

Farm Conditions

Cumberland Co., Southern Pa.

April 16: Weather for April was warm up to the 14, yesterday and today storm and cold rain from the Northeast. Crops looking fine, fruit trees in bloom. Most gardens made and early vegetables through the ground. Some early sown oats are up, most to be sown yet. Plowing is well advanced. Acreage for potatoes is somewhat less than last year. Some potatoes still in the hands of growers, the last carn shipped sold for 23c per bushel. Farm labor more plentiful but not more dependable. A. L. Brubaker.

Upshur Co., Central W. Va.

April 9: Warm and rainy. Fine growing weather. Fruit in danger, as cherry, peach, plum and pear trees are in full bloom. Some apples in bloom. Stock out on pasture in fair condition. Gardens made. Potatoes planted. Peas three inches high. Most plowing done. Eggs 20c, butter 40c, potatoes 60c. A. S. Gum.

Somerset Co., Southern Pa.

April 8: Wheat fields are looking better than for many years. Young clover in fine shape. Fruit trees coming in bloom. Lot of damage done by high winds. Many young chicks and turkeys ordered. Some oats sowed. A rain last night, will stop the forest fires. Not many large fires. An airport expected to be built at Somerset this summer. Sugar season short and poor. Mrs. H. W. Brant.

Washington Co., S. W. Va.

April 15: Trees in full blossom. Prospects for fruit of all kinds are good. Farm work being done earlier than last year. Early cabbage growing nicely. Big crop of tobacco to be planted. New milk plant in county brings added interest to dairy farming. Farmers getting from $12 to $21 per cow per month for whole sweet milk. Corn planting may start in a few days. Weather has been good for spring work but is a little dry just now. N. S. B.

Tioga Co., Southern New York

April 16: Last week the weather was warm, but it turned colder the last of the week and on the 12th a terrific rain and wind storm came, then moderate weather. On the 15th it rained until about five o'clock p. m., then commenced to snow, which continued all night and next day. Snow mostly melted as it fell as the ground was flooded with water. Many meetings of the Farmers' Home Bureau have been held. Much corn raised is changing ownership. M. C. A. B.



"I always encourage my husband to recline in an easy chair and put his feet on top of the radiator."

"Why so?"

"When he goes to bed there is usually about $4 in small change in the chair."

• • •

Speaking Likenesses

A man who was wanted by the police had been photographed in six positions and the pictures sent out to the state police.

In a few days headquarters received this from a small town chief: "I duly received the pictures of the six miscreants wanted. Five of them have been captured and we are on the trail of the sixth."—Dallas Hurray Back News.

• • •

Just Married (with disgust): Why that pie looks just like a waffle.

Also Just Married (soothingly): —That pie-pepite is a correct-able.

• • •

Week afore last some smart alick city feller sold Ann Tique a two bushel basket full of what he said was petrygline eggs. he claimin there was big money in raisin em. After settin em under her hens for moren a week, it now turns out they aint nothing but chestnut burrs. Limotyne News.

• • •

When Joe Vignean was in Russia recently, he was stopped by a Bolshevik sentinel, "Halt, who is dere, snapped the guard. At that moment he sneezed and the guard said, Pass comrade."

• • •

Joan (tenderly): When did you first know that you loved me?

Jack: When I began to get annoyed when people said you were brainless and unattractive.

• • •

Ross (to pretty young applicant): So you want a job? Had any experience?

Applicant: Oh, some very wonderful ones.

• • •

Ire Harper philo-ophically says, "Narrow-minded people are like narrow-necked bottles—the less there is in them the more noise it makes coming out."

• • •

A little Bronx gal wanted to know whether her mother's name was Pullman before she was married to her daddy.

"Why, no, my dear, what makes you think so?" replied the mother.

"Well, I just wondered. I see the name Pullman on most of our towels."

• • •

A drunkard of long standing has been reformed by an operation which removed a bone that pressed against the brain. The Detroit News also reports a number of cures effected by the removal of a brass rail that was pressing against the foot.

• • •

Angry Diner: Waiter, you ought never to have brought this coffee from the kitchen. It's too weak to stir.

• • •

Wide of the Mark

"They gave the president of the South American republic the customary salute of twenty-one guns, but I'm afraid it was a failure."

"How?"

"They missed him."

• • •

Mrs. Nodines: Is your husband tight like mine?

Mrs. Nickelless: Is he? Say, every time he takes a nickel out of his pocket, the Indian blinks at the light.

• • •

Life Is Like That

A little fellow of our acquaintance wants to know why vitamins were put in spinach and cod-liver oil instead of in cake and candy.—Boston Transcript.

SWINE

GREENFIELD FARMS Big Type Boars to buy, Bred Gilts, Fall pigs, Bred and open sows, growing hog prospects, fall gilts, bred and open, ready for service. Popular Bloodlines, Prices right. GREENFIELD FARMS.

POLAND CHINA PIGS and bred sows for sale. Reasonable prices. C. L. JABER, Carlisle, Pa.

PEDIGREED BIG TYPE POLAND-CHINA PIGS, six weeks old. Popular Blood lines. $12.50 each. WALTER KUGLER, Fairhill, Pa.

NORMANDY FARM BERKSHIRES—Outstanding boar pigs from large litters, all from sows including champions of Maryland State Fair 1925 and 1926. $30 each. Ready to ship. Ka-Norman, Street, Md.

CHESTER WHITES Pedigreed big type Chester White pigs, both sexes, from prolific sows. Write your wants. Mead Bros., Beech Creek, Pa.

Registered Ohio Improved Chester Pigs for sale. Mortgage lifters. When buying why not get the best. Seventeen years careful breeding. Write your wants. Geo. N. Ruprecht, Mather, Pa.

BIG TYPE CHESTER WHITE FALL BOARS. Spring pigs and gilts bred for September farrow. Ship C.O.D. A. H. Growcenor, Mt. Sterling, Ohio.

CHESTER WHITE and BERKSHIRE BOAR PIGS, weeks old, $5.00 each, 8 weeks $7.00. Registered. CLYDE WYLIE, Wyalusing, Pa.

Chester White Pigs $10.00 each. Boars $15.00. GEO. F. GRIFFIE, R. 3, Berwick, Pa.

CHESTER WHITES.—Pedigreed big type Chester White pigs, both sexes, from prolific sows. Bred for size. Choice boars, all ages. 13 sows farrowed 113 pigs. Ship C.O.D. and guarantee satisfaction. Flat Rock Farm, Ashland, Ohio. C. E. Cassel.

Reg. Berkshires All ages, both sexes. Superior breeding and quality. Prices reasonable. WOLF CREEK FARM, R. 1, Slippery Rock, Pa.

BETTER BERKSHIRES.—Boars ready for service. Bred gilts, young pigs, prize-winning blood lines. Near-By Stock Farms, Mapleton, Pa.

Large Modern Berkshires, Spring boars and gilts, also breeding sows and gilts bred for fall farrow. Dilts & Gorman, Rarville, Pa.

DUROCS Fall boars and gilts, sired by champions. March farrow, either sex, not akin. Thordale Farm-on-the-Ohio, Morgantown, W. Va.

DUROCS Big Type Reg. Brown Producers. Sired by champions. Bred gilts, fall pigs, either sex. Choice boars. Write your wants. O. C. Shelley, Bellefonte, Pa.

HORSES

Shetland Ponies $65.00 to $75.00. Mares in foal, $125.00. Stallions, $225. New catalog free. PONY FARM, Quincy, Pa.

HORSES—Registered Belgians, Percherons and Shires. Young stallions and mares. Write for what you want or better come and see. HYLLMEDE FARM, Bernville, Pa.

FOR QUICK SALE—Two Belgian Stallions, 4 years old. RAYTHAM FARM, Downingtown, Pa. Ronald Webster Mgr., Huntingdon Valley, Pa.

EGGS

GOLDEN BUFF ROCKS. Our best strain. Real Select hatching eggs from high record farms that are mated with males of no less than 250 egg pedigree. Eggs, $3.00 per 15; $5.00 per 30; $7.50 per 50. Parcel post prepaid. W. H. Shaffer, R. 1, Box 16, Fleetwood, Pa.

SINGLE COMB WHITE MINORCAS, prize winter layers. Purebred, heavy-boned, large combs, true to type. Eggs, $1.25 for 15, $2.00 for 30. Golden Acres, Bow, Pa.

MY BARRED PLYMOUTH ROCKS are pedigreed, large, high producing, both $2.00 per 15, $5.00 per 45 and $10.00 per 100 postpaid. Circular. H. L. Evans, Spring Mills, Pa.

REDS, BOTH COMBS.—Eggs, $1.25 for 15, $2.00 for 30, postpaid. Bred to win and lay. Circular free. Elmer Lime Roberts, Pittsburgh, Pa. Coraopolis, Ohio.

SINGLE COMB BROWN AND WHITE LEGHORN eggs. Eggs, 15, $1.00 up. Free catalogue. Ohio Poultry Farm, Coldwater, Ohio.

BARRED ROCK EGGS—Pleasant home and show record. L. G. Tyrrell, Bear Lake, Pa.

POULTRY

BARRED ROCK COCKERELS—Big boned, Certified eggs. Hatching eggs and baby chicks. Eugene A. Grove, Lime Kiln, Md.

TURKEYS

12 MAMMOTH BRONZE TURKEY hens, $3.00 postpaid. Fertility guaranteed. Instructions with each order. Prompt shipments. Highland Farm, Sellersville, Pa.

TURKEY EGGS From our famous Bronze, Bourbon Red, White Holland and Gobbler strains. Eastern Shore Turkey Farm, Bealleville, Ohio.

MAPLEWOOD FARM MAMMOTH BRONZE TURKEYS. 17 to 24 lbs. Narragansett, Bourbon Red eggs special prices. Walter Jones, Jr., Bealeton, Virginia.

12 PUREBRED BOURBON RED TURKEY toms, $5.00 for 10. George Lehman, Aaronsburg, Pa.

TEN CHOICE BOURBON RED TURKEY toms, $5.00. Ray Lehman, Hanover, Pa.

BRONZE and NARRAGANSETT TURKEYS. L. Henshaw, Box 1024, Uniontown, Pa.

BOURBON RED TURKEY EGGS, $2.00 per 11. E. A. Bonsall, Camargo, W. Va.

DOGS

PEDIGREED COLLIE PUPS—Sable, Sire, $20.00. Females, $10.00. Pleasant Gap, Pa.

COLLIE PUPS—Natural herd drivers, farm raised. Clay Boggs, Big Otter, West Virginia.

COLLIE and FOX TERRIER PUPS from good and intelligent. London Kennels, Glen Rock, Pa.

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WANTED.—Hay, Straw, Apples, Cabbage, etc. Carload market prices. The Hamilton Co., Pittsburgh, Pa.

SEEDS AND NURSERIES

TREES.—Baldwin, Cortland, Delicious, Rhode Island Red, Northern Spy, Wealthy, Winesap, Yellow Transparent, Stayman, Jonathan, Rambo, Rome Beauty, Grimes Golden, Early Harvest, Early Ripe, Red June, Oldenburg, Red Astrachan, Sutton Beauty, Williams Early Red, Bartlett Pear, Elberta Peach, Montmorency Sour Cherry, Concord grape vines, 2 year, 3c each; 25 for $1.00; 100, $3.00. Catalog free. GREENFIELD FARMS, Greenfield, Pa.

STRAWBERRY PLANTS, Early Jersey, Charleston, Wakefield, Flat Dutch, 300 $2.50; 500, $3.00; 1,000, $5.00. Postpaid 1,000, $1.00 express collect. Tomato plants leading varieties 300, $1.00; 500 $1.25; 1,000 $2.00 postpaid. 1,000, $1.00 express collect. Drake Plant Co., Franklin, Va.

GREAT VALUE—$1.00 each, all $6.00 40 beautiful Pansies, 50 Gladiolus, 12 Iris, 4 evergreens, 4 vines, 10 Phlox, 12 Dahlias, 4 Monthly Roses, 6 Perennials—Stonecrop, Yeregrinum, Pa. SPECIAL—All for $1.15. Ten Pansies, 25 Gladiolus, 4 Dahlias, 4 Iris.

SEED CORN Lancaster County Sure Crop. Germination 95% Shelled and graded very nice by $3.00 per bushel F. O. B. Leaman Place. Sacks free. 10 bushels $2.75 per bushel. This is the Home of Sure Crop Isaac Hershey Jr., Gordonville, Lancaster County, Pa.

FROSTPROOF CABBAGE PLANTS, Early Flatdutch, Succession, Copenhagen, Flatdutch, Surehead. 500, $1.25; 1,000, $2.00 postpaid. 1,000, $1.75; 5,000, $7.50 express collect. Tomato Plants 500, $1.50; 1,000, $2.50 postpaid. Rooted Cuttings Tomato 500 $1.25 postpaid. Ruby King pepper plants 100 50c; 500, $2.00 postpaid. All plants packed in moss and guaranteed. Ideal Plant Company, Ideal, Va.

FROSTPROOF CABBAGE PLANTS, Copenhagen, Flatdutch, Succession, Celery Leaved Enkhuizen, Danish Ballhead, Wakefield, Tomato Plants, Aster, Phlox, Snapdragon, Verbenias, Vinca, Coleus. (See Dahlia Seaweed Pansies) dozen 60c, 100, $1.00, 500, $4.00. Peppers, Egg Plant, Sweet Potatoes, Geranium, Dianthus, Salvia, Ageratum, Petunias, Nasturtium, Verbenias, Vinca, Coleus. (See Dahlia Seaweed Pansies) dozen 60c, 100, $1.00, 500, $4.00. Peppers, Egg Plant, Sweet Potatoes, Geranium, Dianthus, Salvia, Ageratum, Petunias, Nasturtium, Verbenias, Vinca, Coleus. Catalog. Rohrer & Hand Nurseries, Inc., Smethport, Pa.

FROSTPROOF CABBAGE PLANTS, Jersey, Copenhagen, Flatdutch, Succession, Surehead, Wakefield, Stonehead, Danish Ballhead, Celery Leaved Enkhuizen, Red Tomato, Aster, Phlox, Snapdragon, Verbenias, Vinca, Coleus. (See Dahlia Seaweed Pansies) dozen 60c, 100, $1.00, 500, $4.00. Peppers, Egg Plant, Sweet Potatoes, Geranium, Dianthus, Salvia, Ageratum, Petunias, Nasturtium, Verbenias, Vinca, Coleus. (See Dahlia Seaweed Pansies) dozen 60c, 100, $1.00, 500, $4.00. Peppers, Egg Plant, Sweet Potatoes, Geranium, Dianthus, Salvia, Ageratum, Petunias, Nasturtium, Verbenias, Vinca, Coleus. Catalog. Rohrer & Hand Nurseries, Inc., Smethport, Pa.

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FROSTPROOF CABBAGE and BEET PLANTS, 300, 50c; 500, $1.00; 1,000, $1.75 postpaid. Tomatoes, 100, 60c; 200 $1.00; 500 $1.50; 1,000, $2.50 postpaid. Potatoes and Ruby King Peppers, 100, 60c; 200, $1.00; 500, $2.00; 1,000, $3.25 postpaid. Please mention varieties wanted. Shipped promptly. Hollywood Plant Farm, Franklin, Va.

NEW CRIMSON CLOVER SEED, Hairy Vetch, Rape, Alfalfa, Timothy, Red Clover, Alsike, Sweet Clover, Seed Oats, Barley, Rye, Spring Wheat, Soy Beans, Cow Peas, Canada Field Peas, Seed Corn, Seed Potatoes, Grass Seeds, Farm Seeds, Garden Seeds, Flower Seeds, Bulbs, Plants, Vines, Shrubs, Trees, Spray Materials, Poultry Supplies, Dairy Supplies, Veterinary Remedies, Fertilizers, Lime, Insecticides, Fungicides, Disinfectants, Tools, Implements, Supplies, Sundries. Everything for the farm, garden, lawn, orchard, greenhouse, poultry yard, dairy barn, stable, kitchen, bathroom, sick room, etc. Write for our 1927 catalog. Mailed free. Quality Seed Co., Dept. 1, Mansfield, Ohio.

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LOOK, 100 Frostproof cabbage, 100 onions, 100 tomatoes, 100 peppers, 50 eggplants, $1.00 postpaid. Fairview Plant Farm, Ennis, Texas.

SEED CORN.—Best selection Lancaster Sure Crop money can buy. Write Noah Hershey, Parkesburg, Pa.

SEED POTATOES.—Irish Cobbler, Smooth Rural and Rural Russets. The Cross Farm, Bayville, N. Y.

GLADIOLUS 60, same alike, $1.25; 10 Dahlias, $1.25, evergreen trees, roses. Catalogue. Gladahlia Farms, Chicopee Falls, Mass.

LANCASTER COUNTY SURE CROP Seed Corn, germination 90%, $3.00 F.O.B. John H. Denlinger & Sons, Leaman Place, Penna.

16 BEAUTIFUL DAHLIAS $1.00 prepaid. Large variety mixed. Peter Lasco, Forest City, Pa.

CERTIFIED SEED POTATOES for sale. Jas. Lynch, Coral, Montcalm County, Michigan

MASTODON, ABOMA, DUNLAP STRAWBERRY plants for sale. Parlon Nursery, Parlon, Ill.

NEW BEAUTIES.—Poppy seed, 15c package. Amanda Lehman, Aaaronsburg, Pa.

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DO NOT EXPERIMENT with Your Cows, Horses, etc. Roy Wick of West Newbury says: "We believe your remedy has got our heifer safe with calf." Successful dairymen can recommend our remedies. If they are not successful, they would not do so. Our Tonics, Lotions, Reg Remedy, Remedies for Failure to Breed, Stanchions etc. Information and Booklet Free. Breed O Remedy Co., Box 2240 Bristol, Conn.

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Cash must accompany order Count as one word, each initial, abbreviation and number. In counting name and address. All advertisements set in uniform style, no display type or illustrations.

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CABBAGE PLANTS. Early Jersey, Charleston, Wakefield, Flat Dutch, 300 55c; 500, $1.00; 1,000 $1.75 postpaid. 1,000 $1.00 express collect. Tomato plants leading varieties 300, $1.00; 500 $1.25; 1,000 $2.00 postpaid. 1,000, $1.00 express collect. Drake Plant Co., Franklin, Va.

GREAT VALUE—$1.00 each, all $6.00 40 beautiful Pansies, 50 Gladiolus, 12 Iris, 4 evergreens, 4 vines, 10 Phlox, 12 Dahlias, 4 Monthly Roses, 6 Perennials—Stonecrop, Yeregrinum, Pa. SPECIAL—All for $1.15. Ten Pansies, 25 Gladiolus, 4 Dahlias, 4 Iris.

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STRAWBERRY PLANTS. $3.00 1,000 IT, twelve leading varieties (Mastodon) Heaviest, blackberries, grapevines, shrubbery. Wholesale prices. Cloverleaf Nursery, Three Oaks, Michigan.

FREE PLANTS By C.O.D. mail or express and charges: 500, 60c; 1,000, $1.00; 5,000 $3.75. Five onion plants with every order for Frost Proof Cabbage Plants. Eureka Farms, Tifton Ga.

WILSON BLACK BOY BEANS. $2.00 bushel. Virginia Brown Boy Beans $2.00 bushel. Bags, 25c each. C. & L. Milford, Delaware New crop and recleaned. Joseph E. Holland, Milford, Delaware.

FOR SALE. Lancaster County Sure Crop graded seed corn, germination 90% shelled on farm, $3.25 F. O. B. Leaman Place. $1.75 half bushel lots, cured in wire crib. Wholesale prices on request. S. J. Montgomery, Ronks, Pa.

FROSTPROOF CABBAGE PLANTS 75c, 1,000; Bermuda Onions $1.00. Collards 75c. Tomatoes $1.00. Ruby King Pepper $2.00; Porto Rico Potato Plants $2.00 Quitman Plant Co., Quitman, Ga.

HIGH GRADE PLANTS carefully packed, large, well rooted, open field grown, leading varieties. Cabbage, 75c, 1,000; Tomato $1.00; Bermuda Onion, $1.00, and Porto Rico Sweet Potato, $2.00, 1,000 same Plant Co., Quitman, Ga.

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VERY CHOICE FIRST GRADE SEED Potatoes, grown on best potato soil. Russets and Cobblers, 8th bushel, ten bushels $1.50 Brookside Stock Farm, Hershey, Pa.

FROST PROOF CABBAGE and Bermuda Onion plants. Prepaid mail, 500 $1.00, 1,000, $2.00. Expressed 5,000, $3.75 10,000, $7.50 Coleman Plant Farms, Tifton, Ga.

CERTIFIED SEED POTATOES. Irish Cobblers and original strain Carman No 3. Buy direct from grower. Write today for prices. N A Baker & Sons, Fairport, New York.

CABBAGE and TOMATO PLANTS leading varieties, 300, $1.00; 500, $1.25; 1,000 $2.00 prepaid 1,000, $1.00 express collect. American Wholesale Plant Co., Franklin, Va.

C. O. D. FROST PROOF CABBAGE PLANTS. Leading varieties now ready 500, 65c; 1,000, $1.00; 5,000, $4.50 Farmers' Plant Co., Tifton, Ga.

SEND NO MONEY.—C. O. D. Frost Proof Cabbage and Onion plants. All varieties now ready. 500, 65c; 1,000, $1.00; 5,000, $4.50 Standard Plant Co., Tifton, Ga.

MILLIONS CABBAGE ONION and TOMATO Plants, $1. 1,000. Pepper and Potato Plants, $1.75, 1,000. Clark Plant Company, Thomasville, Ga.

WRITE FOR FREE SAMPLES CLARAGE Seed Corn. Plarage produced World's Highest Yields. Dunlap & Son, Williamsport, Ohio.

HARDY ALFALFA SEED, 98% pure, $10.00 bushel; sweet clover, 95% pure, $4.00 Return seed if not satisfied. Geo. Bowman, Concordia, Kansas.

FROSTPROOF CABBAGE and ONION PLANTS. 500, 75c; 1,000, $1.00 prepaid. R. Williams, Quitman, Ga.

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Efficient—Durable

Frick Saw Mills are made in five sizes—a size for farm use—a size for custom sawyers, and larger sizes for use in lumber camps.

Frick Saw Mills are equipped with Timken Roller Mandrel bearings, Hyatt Roller carriage axle bearings, headblock ells with separate adjustable racks, improved patented belt feed, etc.

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Buy your metal roofing, shingles, Spanish tile, siding, etc., DIRECT from the world's largest manufacturer of sheet metal building materials, at BIG SAVINGS. Thousands of satisfied users. We own our own rolling mills. Enormous output insures lowest production costs. Factory-to-consumer plan makes prices rock bottom. You get the benefit. Many varieties. Edwards metal roofs last longer, look better. Resist rust, fire and lightning. Roofing, shingles, etc., of COPPER BEARING STEEL at special prices. This steel stands the acid test. Outlasts the building to which applied.

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ABSORBINE

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BODY by FISHER
GENERAL MOTORS

Why Has an Axe a Wooden Handle?
As a matter of fact, it would cost less to equip an axe with a handle of some other material—steel tubing, for instance. But the steel tubing, lacking the resiliency of wood, cannot absorb shocks as does wood. In fact, the shocks would be transmitted to the hands. For the same reason Fisher uses wood in its bodies so that the wood will absorb the real shocks and eliminate "drumming" both of which are increased when wood is not used.

THERE is no substitute for wood, because nothing else combines durability, resiliency and strength—no other material will eliminate "drumming" and absorb noise and road shock—to nearly the same degree. That is why Fisher uses wood-and-steel construction in every body that it builds. ¶ In building bodies for Chevrolet, Fisher employs the same basic structural principles as in building bodies for Cadillac. This also holds true for Pontiac, Oldsmobile, Oakland, Viking, Buick and La Salle. Fisher and General Motors could save *many millions* of dollars every year by adopting cheaper body construction—especially in the lower price field—but Fisher and General Motors are committed to the policy of quality construction in every price field. ¶ That is why, when you buy a car with Body by Fisher, you are certain of better body quality. This quality is so far above anything else offered in that car's immediate price field that, when you go outside the Fisher Body group, you must go to cars costing several hundred dollars more to obtain anything comparable. ¶ In your next car, make sure of this greater value and better quality by buying a General Motors car with Body by Fisher.

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***Body by* FISHER**

Published Weekly

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Established 1877

Consolidated with

PENNSYLVANIA STOCKMAN *and* FARMER

May 4, 1929

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"Caterpillar" . . . plowing early . . . harvesting late. Saving men, money and minutes on thousands of modern, profitable farms.

. . . and here's why

The track *doesn't move on the ground!* The "Caterpillar" may be moving ahead at three miles an hour . . . and the top of the track will travel at six miles an hour and the bottom *not at all*. It's the sure, firm, *motionless* track that saves the fuel and wear.

THE "Caterpillar" Tractor's track is the magic fuel saver . . . for there's no fuel wasted in slipping. It rides the surface with a sure, broad-footed grip that doesn't sink in . . . doesn't pack the soil. Hundreds of gallons of fuel saved each year by the famous track principle!

Over soft spots . . . wet spots . . . this wide track carries the

Caterpillar Tractor Co.

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Russell Road Machinery "Caterpillar" Tractors

CATERPILLAR
REG. U.S. PAT. OFF.
TRACTOR

Farm Facts and Fancies

By ALVA AGEE



OUR late ... told the Congress ... the four requisites ... legislation to ... to ... that would ... the ... production. ... with ... Peaches ... with ... or ...

Plant Food Staying Put

... spread through ... land is given an ap... used to think ... dissolved and le... roots wherever ... the last few years ... plants that pho... just about where ... and the wonder is ... factory results is ... moved through ... ture, but pho... ded element is ... stays where ap... implements and ... who work ... potatoes, le... not deeper in ... south better ... is that the ... when the le... while the ... commercial ... and ... fertilizer ... each spring ... phosphorus did ... ... needs ... ... stays ... years ago ...

Public Sentiment

... against ... controlled ... ... seemingly ... said cannot ... branch of ... freight ... ... which the ... interests.

Some ... for the ... some that ... farming ... pockets and ... stand for ... evidence that ... pile between ... who consume ... some of them ... other work. ... producer, he would have a paying business. ... nated under present ... the consumer should ...

Control by Specialists

Several millions ... come the owners ... lines and the ... all sorts in this ... ments are far greater than all the farmers' investments in land. There are relatively few corporations in which any one person owns a controlling amount of the stock, and most of the great enterprises are managed by men whose personal ownership amounts to only a small percentage of the capital under their management. Their control depends on the results they get for the stockholders scattered over the country. They must be specialists in management in their own lines and the reasonable success of investors leads usually to shift into other hands.

I am setting all this down to show the contrast between most great industries and agriculture. In the former is the investment of millions of people who leave management to others, and in farming is the investment of people who retain personal control. In the former it is possible to have efficient management brought to the maximum degree, and in the latter that can not be, but over against that fact is the right to direct one's own methods, me... This vital difference is one obstacle when equal earning power with industry is demanded, and it is best to ... when putting up a ... deal that does not ...

Natural Poor Soils

... great part ... other con... and ... at ... ...



How the *Big* Business gets *Big*

THE underlying principle of growth is not so much the consideration of your own profits, but attention to the profits of your customers. If your customers find that your goods or service make money for them, they will continue to be your customers. And as they grow, so will they help you to grow.

That is why it is a wise thing to deal with a big business. Its very size is a guarantee of reliability. In order to become big it has had to consider its customers first. And in order to stay big it must continue its cooperative policy.

A big firm is better able to benefit its customers, too. Because it is large, it has many facilities for improving the quality and lowering the price of its feeds—facilities that are not available to the poultryman and dairyman who mixes his own.

It is able to practice efficiency in buying ingredients, efficiency in production, and efficiency in selling and distribution. All these mean savings—savings that are passed on to the consumer. And those savings come only through size.

Its bigness also enables it to maintain a scientific staff, experimental farms and laboratories that study ways and means of improving feeds. The discoveries thus made in the field of animal nutrition have done much to make dairymen and poultrymen more prosperous.

Any poultryman or dairyman who buys a bag of Park and Pollard feed becomes a partner in the firm—he receives the benefit of all its facilities and shares in the profits. It is because The Park & Pollard Company has hundreds of thousands of consumer-partners and thousands of dealer-partners that the profits are so great for all concerned.

The Park & Pollard Co
Boston, Mass.—Buffalo, N. Y.

To be sure of profit-making feeds—look for a Park & Pollard dealer

Poultry Feeds: Lay or Bust Dry Mash • Red Ribbon Scratch • Growing Feed • Intermediate Chick Feed • P & P Chick Scratch • P & P Chick Starter—**Dairy Rations:** Overall 24% • Milk-Maid 24% • Bet-R-Milk 20% • Herd-Helth 16% • Milkade Calf Meal—**Other Feeds:** P & P Stock Feed • Bison Stock Feed • Go-Tu-It Pig and Hog Ration • Pigeon Feed • P & P Horse Feed • Pocahontas Table Corn Meal.



I HAVE always found a rush back to the mails after I recommend a general or extensive sowing of buckwheat. The buckwheat is always the surest crop to make on worn-out fields. Since the last reference to the subject appeared here, I received the following letter from a subscriber in western Pennsylvania:



"I usually read your articles in Pennsylvania Farmer and find them practical, clear-cut and helpful. But when you speak of the important office of home adornment at the present time, I take exception to some of your views. There is no excuse for the weed-ted and dilapidated appearance of so many farm homes.

"There is one very valid excuse, and that is, as I see it, the tax assessor may decide on increasing the home place's attractiveness. I think the placing of taxes on improvements is all wrong. Two neighbors with the same fertility of soil may be taxed very differently. The one with shabby unpainted buildings and cheerless surroundings will be taxed lightly and yet have as large an income from his acres as his neighbor who keeps his buildings in good appearance and his home surroundings attractive. The latter will be taxed for his efforts to improve the appearance of his property.

"I know one case where I keep the place as neat and attractive as my means will allow. Some success has been made in improved driveway, the buildings are repainted and the yard is kept mowed. He [illegible] has [illegible] and it required a [illegible] to get [illegible] and [illegible] and [illegible] and

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Volume 100, No. 18 Established 1877

MEDITERRANEAN FRUIT FLY

TO THOSE who have asked about the Mediterranean fruit fly we may say that it is a pest of tropical and semi-tropical regions. Experts say that it can do no damage north of the cotton states but it may become a menace to the fruit industry in those states. The damage is done by the fly puncturing the skin of fruit and laying eggs in it, these developing into worms or maggots. It is safe to predict that science will find some way of dealing with the pest.

CONFIDENT PROPHECY

ONE lone certainty towers above all the clouds of doubt which enshroud the so-called farm relief legislation at Washington. There is not going to be any shortage of patriots willing to become members of the federal farm board, no matter whether that board finally consists of five members as in the House bill or a dozen as in the Senate bill. At $12,000 per annum, with allowance for "necessary expenses," we confidently predict no dearth of man-power.

A SIMPLE PLAN

A READER submits a plan which he is sure will "relieve" farmers and everybody else. It is to create a commission, similar to the Interstate Commerce Commission, with power to fix standard prices below which no farm product may be sold. The standard price should be high enough to give every farmer five per cent on his investment and a salary of $3,000 a year. To enable consumers to pay standard prices he would have another commission to provide a job for everybody at a minimum wage of $5 per day. And then another commission to see that nobody is allowed to eat except those who are willing to work. A wonderful plan, differing not in principle but only in degree from some which our gifted statesmen have proposed.

THE COW'S PRODUCT

TIME and dietitians cast no cloud on the fame of the peach and the strawberry, which hold public approval with little apparent effort. As if they were not already sufficiently steeped in glory we must record another item to their credit. They are accused of being partly responsible for the increase in milk and cream consumption in recent years. Formerly regarded as a luxury now they are available and eaten during most of the year, the cream or milk going along as a matter of course. Regardless of the comparative effect of fruit or the other things which have made folks take to milk, the increase in consumption of dairy products in the last decade is one the bright spots in farming, as it has "given the American dairy industry a practically uninterrupted period of financial well-being during a time when other agricultural industries have had periodical ups and downs." According to the U. S. Bureau of Agricultural Economics, which makes these statements, the increase in consumption, per person, over 1919 is 13 gallons of milk a year, three pounds of butter, one pound of cheese, two pounds of condensed or evaporated milk and a half gallon of ice cream. Assuming an increase of population of 15,000,000 during this period it is evident that the dairy cow deserves her high standing in the opinion of farmers and perhaps even the enthusiasm of bankers for her is justified.

USEFUL MAGNETISM

ANY one who has changed an automobile tire on a rainy night wonders why the inventive genius of our state highway department does not devise a magnet to be drawn over the roads to pick up the metal objects that cause so much trouble. Now we learn that engineering students at the South Dakota State College have built a road magnet which has been used successfully for three years by the Highway Department of that state. It costs $550 and is mounted under a truck which covers 10 miles an hour. The outfit has picked up countless thousands of bolts and nails—as much as a half ton of the makings of tire punctures in one town block.

Who knows how many automobiles and trucks might be re-assembled if all the stray parts were collected from several thousand miles of our eastern roads? It should be a profitable enterprise in more ways than one if our highway departments need capital to make a start in this business of puncture-proofing the roads we cheerfully authorize them to take the money from the curve-straightening fund. Better a hundred curves than one puncture.

ANOTHER CLEAN-UP

ALL the dairy cattle of two townships in Jefferson county, Pennsylvania, have been signed up for the blood test, the first step in the campaign for the eradication of Bang bacillus disease, otherwise contagious abortion. It is safe to predict that this new movement will meet opposition; it will cause hardship to many farmers; blunders will be made; doubt will be expressed about the reliability of the blood test. But the milk buying public is being educated to the idea that certain serious rheumatic diseases are caused by milk from herds infected with the Bang bacillus. Moreover, other breeding states which hope to get many of the dollars we pay for high-priced cows are making strenuous efforts to clean up this disease. The course the cattle breeder must take is plain; the course of the milk producer is equally clear but perhaps less imminent. It will be a repetition of the bovine tuberculosis campaign only, we hope and believe, less painful.

THOSE RUMMY FACES

A READER asks the following question: "Have you or that Englishman you mentioned in your issue of April 13 noticed how fast the taxes have mounted and how hypocrites have multiplied since the absence of those rummy faces you saw a few years ago?" Taxes have increased in recent years, but what has that to do with the matter? Taxes are higher because the people demand and vote for things that cost money, such as roads, schools, transportation for school children, public buildings and so on. As to hypocrites their number is neither increased nor decreased by law. Humanity yields about the same proportion of hypocrites all the time, though we see more of them under some conditions than under others. But where are the rummy faces of the days when anybody could buy intoxicants anywhere?

OUR MARKETING SYSTEMS

"THE farmers of the country, educated up to the minute in production, soil fertility, etc., are woefully lacking in marketing knowledge and facilities and require adequate finances for the marketing of their crops." This is the statement of a Congressman who, in his own words, has given the subject "exhaustive study." The truth is somewhat different. Farmers are not all skilled in economical production, nor are manufacturers or miners or any other large class of producers. Marketing facilities are not generally lacking, nor are marketing systems generally inadequate. Grain marketing has been under government supervision for years without a single major improvement in the system as a result of that supervision. The same is true of our livestock marketing system. Canada's powerful cooperative grain marketing agency has not effected any change in the system of marketing but has made good use of it. All this does not mean that marketing facilities are ample or that marketing systems are perfect but it does suggest that they have merit or else the government agencies, the cooperatives or the "exhaustive study" of statesmen would have discerned some vital improvement or even some better systems in all the years the subject has been under discussion. Those who, like this Congressman, assume and oft repeat the idea that marketing systems evolved by years of experience are "lacking" should likewise assume the responsibility of proposing something better. This they have failed to do.

BUSINESS INDEPENDENCE

A FEW years ago forty-nine companies engaged in the same business were made into one company. Forty-nine presidents, as many treasurers and more minor officials, along with ninety-odd vice-presidents, were succeeded by one president, three vice-presidents, one treasurer, and so on. The man who told us about it said that while the change was beneficial to the stockholders it was tragic to some of the men who had been in business and in authority for many years. He said that men who can possess and operate their own business should learn to appreciate their situation, for they are not likely to be deprived of it by such a change. Farming is one of the few remaining opportunities for individual ownership and control. It is one of the few industries in which a man may build a business for himself and be sure of holding it. It is one of the few jobs not dependent on the will of somebody else than the man who holds it. Maybe we should begin to think about the advantages as well as the drawbacks of the business of farming.

NO NEED TO FIGHT

THE Grange is massing its energies to fight present tendencies toward corporation farming, basing its opposition on the idea that large numbers of farm-owning citizens are worth more than relatively few managers of big estates and the "accompanying mechanical features." In this idea the Grange is correct, but corporation farming is not something to be hastened or checked by legislation. It's a money proposition. If corporations produce cheaper than farmers can it will eventually displace them; otherwise it has nothing to worry about. Since individuals can employ the machines which are the chief reasons for corporation efficiency, and since a man will work harder and use more care and judgment for himself than he will for a corporation, it is doubtful whether corporation farming will soon displace the individual system of production. Human nature may be slow to change before farming becomes a completely organized industry.

Pennsylvania Farm Comment

By MILES HORST

THE two forestry schools now functioning in this state will be merged into one institution after June 30th.

One of these schools, the State Forest School at Mont Alto, Franklin county, was organized in 1903. It is one of the oldest forestry schools in the country. From its beginning it has been under the direction of the State Forestry Department. The other is the Department of Forestry at the Pennsylvania State College. This was organized in 1908.

After the merger of these two schools, the collegiate work in forestry will be done at the College. The facilities of the Mont Alto institution will be used for the field training of the boys taking the forestry courses. This arrangement will undoubtedly make for greater efficiency in the training of our forestry students.

• • •

COUNTY AGENT CRAUMER of Union county tells me that 30 more better calves for club work in his county will be purchased within the next two weeks. This will increase the number of boys and girls enrolled in the county calf clubs to 140 members. All the calves in these clubs are pure-breeds of dairy blood. Some of the first calves distributed in the county two years ago are now in production.

• • •

THE quantity of eggs in cold storage warehouses in Pennsylvania on March 31 of this year was 659,000 dozen. This is less than half the quantity in these warehouses a year ago and less than they have contained on the same date since 1926.

Meats on the other hand show the opposite condition. These same warehouses on March 1st were holding 719,000 more pounds of beef, 643,800 more pounds of pork and 1,470,000 more pounds of fish than they held a year ago.

• • •

THE importance of docking tails of lambs and castrating the males which are to be fed for market is evident to all those acquainted with prices obtained in the leading markets. Wether lambs sell in these markets at $1.50 to $2.50 per cwt. more than ram lambs of the same weight.

• • •

WE have known Robert W. Lohr of Somerset county for many years as a prominent and successful potato grower. In fact during the past five years he has been honored by the presidency of the Pennsylvania Potato Growers' Association. But turkeys seem to have challenged a part of his interest. Last year he bought 1,000 poults and succeeded in raising better than 900 turkeys from them. This spring he bought 2,500 little turkeys. To handle a flock of this size is no small undertaking. But Mr. Lohr tells me the flock is coming along fine.

• • •

IN Venango county is a small country church known as the Bethel Church. Its membership is not large in numbers, but it is full of community spirit. Led by this spirit, the men and the women of the congregation met at the church one morning a week ago. With plows and hoes the men cleared the church yard of undesirable weeds. The ground was graded and then seeded down with lawn grass. A few simple shrubs were planted. What a change in the appearance of this church this renovation of the ground will make, and how much prouder of it these folks will be.

• • •

LAST week's farm event in Lebanon county was the distribution of forty five baby beef calves among as many boys and girls who will feed them out in time to exhibit and sell at the Harrisburg show next January.

These calves were bought at Kansas City where they weighed 583 pounds as an average. They are all Herefords and hornless. In quality they easily stand above any lot of calves the boys and girls of this county have fed since the club project was started.

• • •

POTATO prices during the past year may have forced the spirit of our growers down a bit. But it is by no means out. There is a determination all along the line to bolster up the weak links of the industry.

In this spirit representatives of the Pennsylvania Potato Growers' Association proposed to the State College authorities that a three-day potato convention be held at the College, August 20, 21 and 22, a convention which would consider not only production but marketing and consumption as well. The College folks were ready at once to cooperate and offered all the needed facilities.

To this convention the growers will invite farmers, manufacturers of potato equipment, the commission merchants, dealers, buyers for stores, manufacturers of potato products, caterers and representatives of consumers' associations.

The College has agreed to devote eight acres of ground to the purposes of the convention. Three acres of Cobblers have already been planted so as to be ready for digging by August 20. Half-acre plots will be planted at monthly intervals until July 1st. Acre plots of sweet clover and soy beans have been planted. So it will be seen that on these eight acres we have the production starting with the cover crop up to and including the digging.

There is no doubt that the machinery manufacturers will exhibit a full line of their tools. They can put all of these into action on the field mentioned above.

From the marketing end, the potatoes when dug will be graded and packed into the various containers now in use throughout the country. The inspection services will supervise the grades.



A CARLOAD of 2,400 fifteen-pound sacks of potatoes, shipped to the Buffalo market by Michigan growers, met with an excellent demand from the best class of trade at premium prices. Encouraged by the success of their initial venture, Michigan growers are making plans to make further shipments of the same kind to other markets. The intention is to pack only large, clean, selected potatoes in these small sacks and to create a permanent demand for them by guaranteeing the product right through to the consumer.

The Home Economics Department of the College and the Department of Nutrition will take up the culinary properties of the potato, and will demonstrate the various correct methods of preparing the potato for the table.

The potato chip industry will be represented both in theory and practice.

The program as now outlined calls for discussion meetings during the forenoons of the week. The afternoons will be given over to demonstrations in the field, the storage and the laboratories. Entertaining features will occupy the time after twilight.

The occasion will be used to dedicate the student hospital made possible by funds donated by Pennsylvania potato growers.

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THE variety of corn known as Wisconsin-25 appears to be one of the most desirable varieties to grow for husking purposes throughout the northern counties of this state. It has been given a two-year test on a number of Bradford county farms. Reports indicate a wider planting of this variety in that county this season.

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THE eighth annual meeting and banquet of the Pittsburgh District Dairy Council was held in Pittsburgh, Tuesday evening, April 23. About 200 producers, dealers, consumers, manufacturers, Dairy Council workers and others interested in the dairy industry in this section were present to hear Dr. C. W. Larson, Director of the National Dairy Council, explain the activities of that organization and report on the increased consumption of dairy products in the last seven years.

Organized Dairy Council work is maintained in 410 cities and counties, according to Dr. Larson. The work consists of publicity through periodicals which have a combined circulation of around 12,000,000, cooperation with educational and service organizations, exhibits at fairs and shows and assistance to boys' and girls' clubs.

The effect of the information dispensed on public health of course cannot be accurately, or even approximately, measured, but it is a recognized fact that the eating habits of our people are changing and the Council takes credit for some of this change. Dr. Larson stated that the Dairy Council has produced more health information than any other organization.

During the last seven years the per-capita consumption of milk has increased 28 per cent, butter 19 per cent, cheese 17 per cent and ice cream 16 per cent. In mentioning these statistics Dr. Larson paid tribute to the increased efficiency of the dairy farmer and breeder by stating that this increase in production would have required 600,000 more cows than we had seven years ago, but due to the better kind of cows now kept it has been made with no increase in cow population.

H. B. Steel, secretary of the Pittsburgh District Council explained what the Council has been doing during the past year in bringing the importance of milk to the attention of the public and in guarding the quality of the milk supply. Extension workers have given 1,274 health lessons before schools, while nutrition specialists have conducted 116 demonstrations and lectures, besides numerous interviews. People reached through personal contact totaled 173,176. Health plays were witnessed by 38,160 persons and 760 school children took part in them. The Council conducted 67,307 sanitary tests on milk; showed motion pictures to 225,012 persons; weighed and measured 21,322 children—and was unable to keep any record of the number who attended the shop, schoolroom and convention hall exhibits.

A feature of the banquet program was a series of scenes and acts showing what the Council does and how it goes about it to present its case to the public. Acting the story is more effective than lecturing on it, which doubtlessly accounts for the success of the Council in increasing milk consumption and promoting health of school children.

The following officers were elected for the coming year: President, T. H. Richards; 1st vice-president, Mrs. J. C. Heckman; 2nd vice-president, P. S. Brennaman; treasurer, W. B. Burnet; secretary, Irvin H. Kaufmann. H. B. Steel, former secretary, is leaving the Council to devote all his time as secretary to the Dairymen's Cooperative Sales Company.

• • •

AT least $12,000 worth of colts have been produced by the pure-bred Percheron mare, Fleurette, now owned by E. A. Nicodemus of Waynesboro, Pa. She is 21 years old and has proved herself one of the most valuable mares of her breed, says Secretary Ellis McFarland of the Percheron Society of America.

• • •

THE several county and district sheep and wool growers' association of Pennsylvania are again planning to conduct pure-bred ram sales at a number of points in the state this coming fall. The places for holding sales already designated include Indiana, Titusville in Crawford county, Montrose in Susquehanna county, Brookville in Jefferson county and Smethport in McKean county.

• • •

VETERINARIANS from all parts of the state will gather at State College on Tuesday, May 21, to inspect the livestock, poultry and facilities at that institution.

• • •

AT Dawson, Fayette county, April 24, the farmers entertained the business men of Dawson, Connellsville and other towns at a banquet held in the log hall on the fair grounds. Over 350 turned out for the occasion and enjoyed a dinner prepared and served by the ladies of the Grange. Attending banquets would not be so hard a job if these ladies could set up the "eats" every time.

• • •

THAT club work is filling a real need among the younger folks on our Pennsylvania farms is shown by the rapid increase in the number of farm boys and girls enrolled in the various kinds of clubs. The first club was organized in 1915. By 1920 the enrollment had jumped to 1,500 for the state. By 1925 it reached 2,700 and on January 1, 1929, stood at 4,500.

TIGHT BINDING TEXT CUT OFF



"The Builders," a Pageant Staged at This Year's Shenandoah Apple Blossom Festival

Marketing Needs

By WAITMAN DAVID

THE time of year has come to think about marketing. It seems to me that there has been and still are but two main things the matter with this farming business. The first is a lack of income and the second is a state of mind. The state of mind, which is slowly but gradually being worn away, was brought on largely by years of lack of income, so the farm problem to my way of thinking must be solved by creating an income that will put the farmer on an equal standing with other industrialists.

To do this we will need three things: High production at lowest possible cost, adequate and intelligent financing and efficient and profitable marketing, all advancing in unison.

Production alone will not solve the problem. Too much thought has been given to it alone in the past. The farmers of our grandfathers' day solved their problem by the extension of acreage. The acreage later became unwieldy when other industries offering steady income began to draw the labor away from the farms and that problem was solved by labor-saving machinery and increase of production to the acre. This is still going on out of proportion to our advance in financing and marketing till we now have surpluses as the general rule in several branches of the industry. Diversification will partially solve the problem, but if carried on out of proportion to advance in marketing can but eventually result in surpluses in every branch of the industry.

Blind financing of debts as they arise by long-term amortization loans will not solve the problem. They will relieve pressure temporarily, but once in a lifetime as a last resort will have to be enough for a farmer, or I am afraid we will end up with a surplus of bank-owned farms that will have to be dumped, for bankers will not be likely to go to farming. The major portion of our financing will have to be done through our local banks in the same manner as practiced by other industries. To meet these conditions the farmer will have to have a steady income. We cannot hope to hold our own with industries that have a thirty to sixty-day turnover with an income that comes in once or twice a year and then only "mebbe".

We will largely require quick adequate marketing so that our products will be consumed in time to create a demand for more. To do this we will need complete smooth-running organization between the producer and the consumer with a fair profit all along the line without the lopsided profit for some and loss for others that we have at present. How we are going to do that in its entitity I do not know. But if we all make that position our ultimate aim, compare ideas and build step by step, I see no reason why we cannot reach that desirable end or at least keep our marketing in step with our production.

A Means to an End

Cooperative marketing will not solve the problem altogether. It will help, and in some places and for some products it is practical. It is a means to an end not an end in itself and will have to be used and considered as such. Carried too far it is simply a method of coercion through monopoly. The Continental System ruined Napoleon's Empire. The Orders in council lost England her trade with America and eventually the Colonies, so is it not foolish for American agriculture to think of building toward an end which is based on a principle that all history proves to be a failure when it is reached?

We set about on our farm to have an income every month. We got on a basis that will provide it. Now we want to increase the income. Some farmers provided for an income in a different manner. Many are still planning and working with end of a permanent income in view. Some by dairying, some with poultry and some by breeding stock and plants and seeds for sale within our own industry. The ones who are working toward this end will succeed, for again I say that farming with an irregular and uncertain income cannot hope to hold its own with other industries that have a steady income.

And now I have got around to what I am driving at, the concrete things we are doing to insure our income and increase it through our marketing.

The first step we make toward marketing is in the planting. We study and plan for months ahead to avoid planting anything that will tend to bring on a glut in the market later. To insure a supply equal to the demand we have to plant enough so that in case of a bumper crop we will have a surplus. Then if we see the surplus coming we begin to plan to take care of it in advance. The consumer and the dealer see it coming too and get all set to get some cheap produce. The speculator with capital sees it coming and is all set to buy it cheap if I and the other farmers need money so he can hold it for a rise.

Who says there is no spice to the drudgery of farming? There isn't if we take a low price without effort to get more and say, "I told you so, there is nothing in farming." But how about the joy of outguessing the fellow who is laying to get your produce cheap?

If we farmers have done a lot of blind planting we will of course have an unwieldy surplus and have to take it in the neck. We must cooperate with each other in the amount we plant. We cannot ever hope to eliminate the surplus nor will it be desirable to do so, but we can and should cooperate in an endeavor to keep the surplus from becoming unwieldy. And if we do get a surplus our policy is to get it consumed as quick as possible and learn a lesson for



"Princesses" in Apple Blossom Parade

the next time and then heed what we learned. The clothing dealer does not store away a lot of out-of-date shoes, so why should the farmer hoard a lot of potatoes or wheat? Get that money out, is our policy. Maybe we can turn it over on pigs, chickens or a cow to be fresh in the spring.

So our policy is not cooperative but one of cooperation with existing institutions and with each other. We cannot bring it about alone. That is why I am writing this plea to other farmers and the Pennsylvania Farmer to help.

The first institution we try to cooperate with is the grocery man and the produce dealer. We both wholesale and retail. We absolutely will not retail at the wholesale price. Farmers everywhere still do it. How many farmers were guilty of that contemptible trick last year? How many sold half their load of potatoes to some groceryman for ninety cents a bushel and then went up the next street peddling for twenty cents a peck? Then we had a lot of those same fellows howling later when two or three such jabs as that knocked the bottom out of the price of potatoes.

Of course some speculator saw a chance to dump several carloads of seconds he had bought cheap some place on the market and glut it right, so he could pick up the potatoes of the farmers who had to sell cheap. We do a lot of howling about the effect but that and talk of cooperative marketing will not help. We will have to cooperate with the other fellow and remove the cause. Let's declare an open season on wholesale price retailers this year. They are a much greater nuisance than the much discussed doe was.

We have some grocerymen we have been cooperating with for years. We sell them about two-thirds of all we raise and make our price to them a certain percentage off the standard retail price that day. If they get overstocked and have to unload we stand part of that loss. They sell for us dozens of bushels of berries every year for canning purposes and five and ten bushel lots of potatoes for a charge of about 10c to 25c a bushel. They tell us who wants them. For some reason the people expect to pay us cash. One grocer tells us twenty-five cents is fair price for a telephone call and he gets rid of putting them on the book.

Willing to Cooperate

The grocerymen are all willing to cooperate, we have found. We can deal with them and get home to the corn field in a couple of hours. In case we have to peddle would we not be foolish to lose all that time from the corn or the hay and still sell at the wholesale price? We have cooperated with a produce dealer for years. He surely can handle a surplus and get rid of it quick where it will not glut the market. One time several years back we got caught on the run with twenty-two bushels of strawberries. Some of our customers thought we were not coming and had bought from others. People were staying home because of the rain, it was useless to try to peddle that means. I had lost valuable time running around. I was stuck and stuck right with the biggest picking of the crop. I really at three p. m. I went to the Jew who people said would buy anything. He said "Well, young fellow, this is a mess. We don't want the berry market ruined with them. I will help you push them out. We will sell them three for a quarter and you give me 15 per cent." Berries were retailing two for a quarter and $3.25@3.50 wholesale.

He set a clerk painting a big sign, called a leather lunged tell-a-ug out of the cellar, set one of his girls at the telephone and at six o'clock I went home with a lot of nice empty crates and only a forty per cent loss. The next day the berry market was firm. We have dealt with them for years. Some farmers criticize me and say, "You oughtn't to have anything to do with that price cutting Jew." Well, last year he was handling three carloads of berries a week when the local stand opened.

The old gentleman is now dead but his boy is continuing on with his father's policy. I went to him and had a little talk. He said, "You farmers won't let me handle any of your berries unless you get stuck, but if you don't make any money this summer you won't buy any bananas, oranges, or seed potatoes from me next winter. I'll lay off three weeks till you sell your berries." Does that kind of cooperation count?

We have given a few examples that we have found profitable. Farmers let us not stop at the speeches at the farm meetings this spring but let us go on with practical methods of cooperation. If we need an organization to formulate and carry out this policy let's have it. The other fellow will only be too glad to meet us half way. One thing we can at least do and that is resolve that none of us individually will be guilty of unbusinesslike practices or cut-throat competition.

(Continued on page 22.)

Oh Rats!

By HOWARD MITMAN

OF all the many nuisance pests to this our favored land, the brown rat is the most wasteful, the most despicable, the most pernicious. Men are fond of saying that all created beings were meant to serve some beneficent purpose. It may be so; I do not know; but I do know that the rat has fallen from that great estate even more woefully than has the meanest of the human race he delights to associate with. Whether we like him or not, the rat decidedly likes us and refuses to be parted from us for a day. Of course, this may be called fidelity, of a sort; but it is one of the guts I refuse to thank Santa Claus for.

If the rat has a single redeeming feature I have failed to notice it in a lifetime of strenuous anti-rat campaigning; nor have I ever heard of any other reasonably sane person who takes the rat to his bosom. He is decidedly persona non grata, as we statesmen say.

There are apologists for the crow. I believe them often mistaken in their conclusions, but they can and do present facts that in a measure mitigate the crow's general cussedness.

There are those who profess to be fond of snakes, even fond enough to eat 'em, and that is some fondness. Me, I take the stand of non-intercourse and non-interference as did the late lamented Josh Billings when he said, "When I see a rattlesnake poking his head out of a hole I pass by on the other side and say, 'That 'ere hole belongs to that 'ere snake.'"

But rats! I have never heard of any one who can find a redeeming trait in the whole tribe of brown rats, for it is the brown rat and his understudy, the mouse, that are the destructive foes of the farmer.

When we begin to study the rat one significant fact stands out like a sore thumb—he is the only wild beast that increases in numbers in spite of man's operations and all his efforts to destroy vermin. Does a man or a race move onward to settle some new land, the rat senses this desire, gets there first, and sits on a bullock waiting for him.

If rats are plentiful on the average farm they are even more numerous in the towns and cities. Warehouses, cellars, sewers and other underground passages are swarming with rats. Mills and feed stores are complete nurseries for them. However I do not worry much about the city feller's troubles, for he doesn't care a rap about mine.

In looking backward it seems to me I have given more thought during more than 40 years to the effective control of rat infestation than to any other single phase of our work on the farm. When planning new buildings or remodeling old ones a sense of the rat nuisance was ever present to dictate modifications of the plans. "Rat-proof" became a slogan that always bobbed up. We tried to make everything rat-proof, even the place where we kept the tractor and the crow-bar.

In a measure we have succeeded, but only where everything is of steel or concrete, and if we exercise unsleeping vigilance. Sooner or later the rat will attempt anything of wood, as doors usually must be. Let a board lean against the corn-crib door so as to afford a hiding place and the rat will soon gnaw its way to the unguarded grain. Or let boards or boxes or any trash be alongside the crib and Mr. Rat will begin to tunnel underneath and upward through the floor. I say "Mr. Rat," but I doubt not the Missus aids and abets him in his nefarious proceedings.

Concrete Fortifications

I determined to stop that kind of trench warfare, so I built a new crib with a floor of concrete at least two feet thick at the thinnest place and twice as much where the ground slopes away. The sides are of wire netting one-half inch square mesh. (It should be one-fourth inch, by the way.) There would be no tunnelling, no gnawing through, I was sure. Well, they have not yet come up through the floor, but they have had only seven years to do the job and I am sure they are still hoping.

In the meanwhile both rats and mice have been in that crib as was shown by a lot of shelled corn and other unmistakable evidences. It took a long time and very close inspection before I could determine how the entry was affected; then it was very simple. The door is at the end and exposed to the weather. It warped a little and at the bottom end offered a passage an inch wide for an enterprising cat. An extra button now holds that door in place below, and the rat is forced to find some other way of entrance. I am sure he will find it and I am not sure that it will not be up through the concrete.

A neighbor has built a corn crib that is better than mine because he ran his one-fourth inch netting underneath the floor above as well as on the sides of the crib. Everything now is protected by steel or concrete, except the door.

I speak of one-fourth inch mesh, because small mice will go through the half-inch mesh. I have found where some a little too big attempted it and stuck. All of us who are now building use the smaller mesh, as the cost is practically the same.

I believed my pullet laying house was rat-proof and I often said so to myself and to any one else who would listen. For some time I noticed an occasional bird evidently injured, having bloody breast, wings or head. The only thing I could think of that would make wounds like that was a rat—but there were no rats in a rat-proof poultry house! Yet, not long ago, when I was paying the ladies a good night visit, a rat as big as a small horse scurried out of a feed hopper and disappeared into the upper regions. Please note that I say "a small horse"—I don't want to exaggerate.

Following the climb of the rat, not so nimbly, though from his size he must have been older than I, I came upon a neat hole behind an upper floor beam, said hole leading apparently nowhere. Daylight next morning, however, solved the riddle. Where the rat disappeared a lean-to roof covering a lower section of the pullet quarters butted against the main building. The roofing curved here, passing upward on the main building like a flashing. Under this curve was a tunnel just made for an investigating rat. Twenty feet away was an exit to the outer air.

An Engineering Genius

I must say that rat displayed an engineering brain in doping out that business that cannot be despised and that makes it almost eligible to go fighting on a battleship. For the only place any rat could have eaten its way through into the room below was just that particular spot it chose. Elsewhere for 20 feet in one direction and 30 feet in the opposite direction, the space was occupied by a six-inch timber. How did that rat know? A man could not know without careful, minute inspection from the inside. The rat knew from the outside.

Of course, every one who has been compelled to associate with rats can recall similar instances of their uncanny skill and intelligence. While a lifetime seems all too short to win complete victory over the rat, at least progress can be made toward that desirable end. We have progressed so far that none of our buildings have wooden floors on the ground [illegible] floors. In that the cellar floor is of concrete and rats are barred.

The chief place in which rats can now harbor is the approach to the barn floor, an inclined driveway built up with side walls of stone and filled in with hundreds of loads of field stone. We have not yet tackled this pile, as it is a great labor and a costly job to concrete it. Even then the side walls alone can be of concrete for the driveway must remain of earth lying on stone as long as horses are used.

(Continued on page 22.)



Mary Weller, a sixteen-year-old maiden in the Remington, Indiana, high school, has the distinction of leading the some 500 contestants in the Pest Crusade which is held annually by three Indiana communities. The contestants exterminated 11,706 rodents and 12,786 English sparrows in eight weeks.

Japanese Beetle Trap

By W. R. WHITACRE

A NEW Japanese beetle trap, that looks like a cross between a radio loud speaker and a megaphone, has been developed and introduced by the Japanese Beetle Laboratory, at Moorestown, N. J. This new style trap has proved very effective in catching the beetles when tested under field conditions. Last year under severe conditions it was found that the megaphone trap was 14% per cent more effective than the standard trap introduced by the laboratory several years ago.

This new device consists of a large celluloid megaphone, which replaces the all-metal trap cover. It is baited with germinol, that has proved so effective and is now on sale at most stores. The entomologists state that the odor of the bait passes out into the air through the megaphone and in this manner it is spread over a much wider area than with the standard trap.

The megaphone trap swings on a swivel and is turned by the slightest breeze. A large fin or sail keeps the trap headed with the wind. This helps spread the odor of the bait over a larger area. The celluloid is a transparent material that is almost invisible to the beetle. It has been found that a beetle never enters a dark place of its own volition. Contrary to common belief, a Japanese beetle never flew into a trap just because it wanted to taste any tempting food that it might contain.



Beetles have been caught in the past because in flying around the trap in search of the germinol they have accidentally hit the smooth surface of the cover of the trap and have slid down inside. The celluloid casts no shadows, which might have a tendency to frighten the beetles away, and they fly inside the megaphone without seeing the side walls. In an abandoned apple orchard near Moorestown a series of traps were set up last year and their efficiency tested. In a 16-day period the standard trap caught 18,020 beetles while the megaphone trap caught 43,970. The entomologists state that both traps were baited alike and both had an equal opportunity to attract the beetles. The scientists emphasize the point that this trap is not yet perfected and is not on the market in a commercial way.

TIGHT BINDING TEXT CUT OFF

The Farm Home

Dressing Up Your Hands

By ELLEN S. BRINTON

IT SEEMS to be a common thought that housework is hard on the hands. Those who have dish-washing, dusting, laundry work, cleaning and some gardening to do often accept with humble submission the idea that rough and unsightly hands must be their lot, and look with longing eye to the neat polished appearance of some office worker, who (they think) "has no hard work to do."

I have had some experience on both sides, and my conclusion is that with the same care and attention the housewife has as good, if not a better, chance for smooth pretty hands.

The city office worker knows that her job depends on looking attractive at all times. She may be merely a cog in a big machine but she must keep neat. She soon learns that she can take care of her hands herself with constant attention. No one can work over a typewriter, adding machine, duplicating apparatus or other office appliances without getting stained hands and often oil and ink under the nails. The constant washing (often with unsuitable soap and water) makes a very dry skin that seems to absorb the city dust like a sponge. Nevertheless those hands must always be smooth and clean. Just recently an employment office manager told me that men employers insisted on attractive girls, almost always selecting one with smart appearance.

Select the Right Soap

Two things are essential for attractive hands. As you do your daily tasks, give them all the protection possible, and then allow a leisure half hour each week for a complete manicure.

First see that you are using soap that is easy on your hands. Soap manufacturers will tell you that present-day soaps are entirely different from those of our grandmothers' time—even those of the same brand often being made of different ingredients. There are cakes of soap of varying hues and odors, flakes, crumbs and powders, with all kinds of claims printed on the package. The important thing is to try out a variety over a period of time until you find some cleaning agent that does the work with your water supply with the least damage to your particular skin.

Hot water is extremely hard on hands. But why put your hands into it? Wash the dishes with a mop or a long-handled stiff-bristled brush. Place them in a wire dish drain and pour over a tea-kettle of very hot water. They will dry without wiping in a few minutes. There is no need of hot water for laundry work. Most modern soaps lather in cold water. Cheap cotton gloves should be worn while doing all gardening and other work where the hands come in contact with a gritty substance. You will enjoy them after you once get used to them. Even the men who dig streets and work on the railroads use gloves to save their hands—why should not we women learn to do likewise?

Necessary Materials

The nearest ten-cent store will supply you with manicure materials for less than a dollar. You will need practice and patience most of all.

Here are the things you should get:

Flexible nail file.
Bottle of cuticle remover.
Bottle of nail polish—natural color.
Bottle of polish remover.
Bottle of hand lotion.
Manicure scissors—orange wood stick.

Learn to use the nail file and keep the nails in a slightly pointed shape with length just about to the finger tips. Narrowing the nail at the sides makes less space for dirt to collect. A good pair of manicure scissors is a big help in removing rough places of cuticle, but do not use on the nails.

Wrap some cotton around the point of the orange-wood stick, and push the cuticle back even and neat. Doing this regularly every week and sometimes in between will almost entirely prevent hang nails. Cold cream may be used on the cotton to soften the cuticle but dipping the cotton into the cuticle remover is sometimes essential. Rinse the hands in water and dry, and then apply the liquid polish with brush provided. At once your hands take on a new appearance and all the work is worth while. Follow all directions carefully. Two coats of polish and your nails will be good for a week, provided you keep them clean and give your hands reasonable care.

I use the hand lotion frequently. It smooths the skin and bleaches out stains. I once saw a recipe for acid crystals which can be secured at any drug store and also remove stains like magic.

Does this sound artificial and unorthodox? Perhaps, but a recent bulletin on health measurements issued by a very business like corporation club came out with this statement: "Cosmetics are a necessity in this age."

The Dignity of Labor

"I HAVE had a very hard day today." How often that sentence is echoed and re-echoed all through our land. My work at present is in a hospital. At the end of the day I often feel that I have accomplished very little for work of an institution is exacting like housework. If we allow the thought, it often seems but a daily grind.

I heard a great speaker once say: "As you women folks go about your daily tasks, preparing every recurring meals and washing endless stacks of dishes remember that by doing these simple things you make it possible for others to live happily. They may then go out and accomplish things in the world."

This thought helps me as I go up and down among the sick, and the result of my labors is not to shine. Comfort and help are brought to many because I go cheerfully about making beds, rubbing backs and offering fresh drinks.

The biggest thing in life is to create something useful to the community. Thus the home maker can do for every good home is of value to the community, state and nation. Keep this ideal in mind and crown your labors with dignity.

I. May Wells.

Editor's Note: The following poem, written by a nineteen year old servant girl in England is appearing in this week's dailies. Mr. Rockefeller had printed copies made and he passed them out at a recent New York church service.—E. S. B.

Lord of all pots and pans and things, since I've no time to be
A saint by doing lovely things or watching late with Thee,
Or dreaming in the dawnlight or storming heaven's gates,
Make me a saint by getting meals and washing up the plates.

Although I must have Martha's hands I have a Mary mind,
And when I black the boots and shoes Thy sandals, Lord, I find
I think of how they trod the earth, what time I scrub the floor.
Accept this meditation, Lord, I haven't time for more.

Warm all the kitchen with Thy love, and light it with Thy peace;
Forgive me all my worrying, and make all grumbling cease;
Thou Who didst love to give men food, in room or by the sea,
Accept this service that I do, I do it unto Thee.



Nothing is nicer than a cooked whole ham. A ten-pound ham will cook in 50 minutes at 15 pounds pressure in the pressure cooker. For entertaining at picnics, porch or lawn parties nothing equals a home-cooked ham. It makes entertaining easy for the hostess, as the meat course can be prepared and out of the way long before the guests arrive.

A Whole Ham

THERE [illegible] serve during the [illegible] more delicious than ham. And if you are going to entertain a crowd it pays to use a whole ham. As ham is delicious either hot or cold, there need be no waste. If the whole ham is cooked, the delightful flavor goes through every part of the ham making it juicy and tasty and just equally as tasty as the center piece.

Ham is a very popular meat in combination with [illegible] eggs to [illegible] foods and vegetables.

[illegible] and use it but a small part of it, [illegible] over, it can be [illegible] Ham a la king [illegible] as to ham au gratin and cheese [illegible] and [illegible] eggs.

[illegible] Commissioner of Health of New York City, says: "Ham is one of the best [illegible] energy producing foods, containing those essential [illegible] for the maintenance and proper functioning of the body. It is easily assimilated."

Ham may be boiled, baked or roasted. It takes from [illegible] to six hours to cook a whole ham unless you possess a pressure cooker in which case it will cook in 50 minutes.

A pressure cooked ham is prepared as follows: Pour one cup of water in the bottom of the pressure cooker. Place a ten pound ham on the rack; fasten cooker cover on securely and cook 50 minutes at 15 pounds pressure. This amount will serve 16 to 20 people. Crumble up three ginger snaps in bottom in which ham is cooking. This imparts a nice flavor to the meat.

Remove the outside skin, sprinkle ham with brown sugar and fine cracker crumbs and stick with cloves one-half inch apart. Brown in hot oven.

Ham is nice served with a raisin, horse-radish, mustard or ginger snap sauce. Raisin sauce is made as follows:

2 tablespoons butter — 2 cups cider
2 tablespoons flour — Salt
½ cup seeded raisins

Melt butter, add flour, blend. Then add cider and cook until sauce thickens. Add raisins, salt to taste, and serve as an accompaniment to ham.

Grace Viali [illegible]

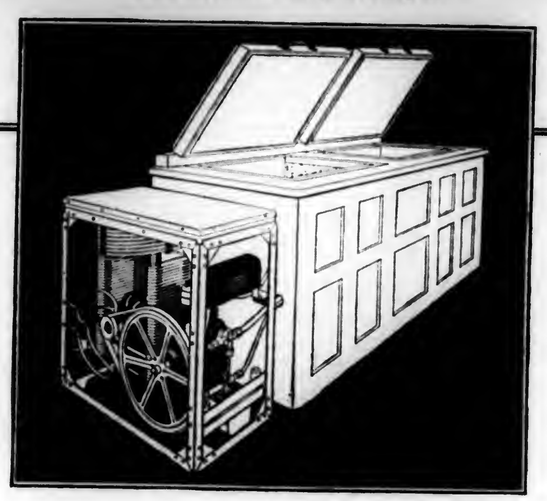
* * *

Ham with Macaroni. Cook macaroni in salted water and to each two cups of macaroni add one cup diced cooked ham. Put in baking dish, cover with one cupful cooked tomatoes, one sliced onion, and a layer of bread crumbs. Brown in a quick oven and serve in dish in which it was cooked.

Mrs. L. M. Thornton.

Broiled Salt Mackerel

AS with any cured fish, the salt used for preserving mackerel must be to a large extent removed before the fish is cooked. The Bureau of Home Economics says that when you have selected a good fat salt mackerel, soak it overnight in cold water to cover. Taste it. If sufficient salt has been removed, the fish can then be placed under the flame of the broiling oven and cooked slowly to a light brown. If the fish is still very salty after soaking, place it in a skillet, cover it was cold water, allow the water to come to a boil, and pour it off. Then broil. Put the cooked fish on a hot platter skin side down, pour melted butter over the fish, and garnish with thin slices of lemon and parsley.



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TIGHT BINDING TEXT CUT OFF

Try a Few New Vegetables

By C. R. MASON

"NOW for some of these vegetables that most of our women have not had experience in cooking," opened a second interview with Miss Z, the Home Economics Specialist. "Is there any general recipe that will apply to many of them?"

"Yes, there is. I might say right at the start that the simple ways of cooking are best. There is no better way to appreciate the flavor of asparagus or spinach or carrots than by using simply fresh butter melted by the heat of the vegetable. Many people prefer serving with a white sauce, or creamed as it may be called. The advantage here may be the addition of milk which adds a good deal of calcium to the food as thus prepared, and of course it is a variation that may be used one time, butter sauce the next.

"For most of the vegetables a medium white sauce is preferred:

1 Tablespoonful fat.
2 Tablespoonfuls flour.
1 Cup milk or liquid from the draining of the vegetables or combination
½ Teaspoonful salt.
⅛ Teaspoonful pepper.

"Now let's make a list of the little known vegetables with some of the principal methods of using them." Following is the list:

Brussels sprouts.—Whole heads are plain cooked and served with butter or cream sauce.

Other Greens

Collards.—A loose headed cabbage that is cooked the same way as cabbage and often served in combination with other vegetables as turnips and meats. As with cabbage there is danger of too long cooking; 20 to 25 minutes is the limit.

Chives.—A leaf onion that is fine for imparting a mild onion flavor to salads, meat dishes and stews. Its leaves chopped fine add a green color as well as flavor to potato salad and cottage cheese.

Kohl-rabi.—The edible part is the enlarged stem. These stems are peeled, diced and cooked like turnips. Served with butter or white sauce.

Kale, mustard, dock, Swiss chard. French sorrel, dandelion, all leaf greens and various wild greens, may be cooked and served in the same manner as spinach, with butter or bacon fat.

Swiss chard.—Either the leaves and stems may be chopped, cooked and served like spinach, or the green leafy part may be separated from the stem, served like spinach or other greens, while the stems are cooked and served on toast like asparagus, with butter or white sauce.

Leek.—This is a large, mild "scallion" that may be eaten raw like "green onions", creamed like large onions, or made an ingredient to add flavor to stews and meat dishes.

New Type Spinach

Salsify or oyster plant.—The roots of this plant are best after they have frozen in the ground over winter but they may be used in the late fall. The roots may be sliced or diced, cooked until tender and served with melted butter or white sauce. They may also be sauteed, as may carrots and parsnips.

Hamburg or root parsley.—In this type of parsley the root is the principal part for which the vegetable is grown though the tops find use in flavoring and garnishing the same as the common parsley. Since the tops are plain leaved rather than finely curled they do not offer as decorative material as the curled.

New Zealand spinach is a type of greens that thrives in hot weather, and is therefore most desirable since providing spinach at a time of year when other sorts do not thrive. The edible part is the tender shoots that grow from the axils of the leaves of the many branched stems. These shoots are cut when three or four inches long and are cooked and served in the same manner as common spinach.

Curly endive and escarole broad-leaved Batavian endive) make excellent substitutes for lettuce when the interior leaves are blanched to remove some of the bitter flavor. An advantage of both sorts over lettuce is that they may be stored with roots attached in a cool cellar or even in a well protected trench for use during the early winter. Unblanched escarole is also often cooked as greens and served with butter or bacon fat, or wilted in a hot sour sauce in the same way that dandelion is often prepared. The vinegar sauces are, however, not the most desirable methods of preparation. A bit of lemon juice is better.

Lettuce Substitute

French endive or witloof chicory.—This delicious forced winter salad is a substitute for lettuce during the period from January to May. Its flavor is best appreciated when used with French dressing rather than mayonnaise.

Celeriac.—Also called root celery and knob celery, is grown for its large root rather than the tops. The root may be diced and used in soups or stews, or served with butter or creamed in the same manner as celery.

Chinese cabbage.—The name for this vegetable is a misnomer since the Chinese class it as a lettuce. The flavor does have a suggestion of cabbage but its crispness resembles the heart of head lettuce or of celery. Its chief use in this country is in salads, as a lettuce substitute or in combination with lettuce. It is, however, also cooked until tender and served like creamed cabbage."

"There are a few other questions I'd like to have cleared up for our home cooks both in town and country. I find in the garden work that new table vegetables continue to appear. Our gardens contain summer squash, that so many people consider squash simply a pie filling the same as pumpkins. Aren't there other ways to prepare them?"

"Surely," replied my cookery adviser. "And squash does make a delicious cooked vegetable. Probably the finest way is to cut them in halves or quarters, remove seeds and stringy center pulp and bake until tender. Then serve with melted butter and salt. Delicious!

Another method often used is to remove the rind, and seeds, cut into strips and cook in a small amount of boiling water until tender, then add butter and salt. Steamed squash is excellent! Squash may also be peeled, sliced and dipped in egg and cracker crumbs to fry like eggplant. But you know we are getting away from meal hours."

"How would you use eggplant?" I protested. "That's a pretty fine dish when fried right."

"Have you ever tried it escalloped?" she returned. "You'll never wish to go back to the fried dish if you once have it this new way. The eggplant is peeled and diced and allowed to stand for a while in salted water to remove the strong flavored juices. It is then drained and placed in a baking dish mixing with it one chopped onion and one chopped sweet pepper. Cover with diced buttered toast and bake for a short time in moderate oven."

Creamed Scalloped Carrots

Two cupfuls ground carrots, one-half teaspoonful salt, one-eighth teaspoonful paprika, one tablespoonful melted butter, one cupful bread crumbs, one-fourth cupful milk, one-third cupful grated cheese.

Grind carrots fine. Cook in top of double boiler until tender, add paprika, salt and milk. Cook five minutes. Place in baking dish (casserole). Sprinkle with grated cheese, cover with buttered crumbs and brown in oven.

Kale Au Gratin

One quart kale, one-half teaspoonful salt, one cupful to tablespoonful pepper, two cupfuls medium white sauce, one-half cupful buttered bread crumbs, one cupful grated cheese.

Butter casserole, put in a layer of cooked kale, layer white sauce, layer cheese and sprinkling of salt and pepper. Repeat for three layers of each. Buttered crumbs on top. Bake in moderate oven 20 to 30 minutes or until brown.

Cream of Vegetable Soups

One cupful white sauce, medium, one-half cupful vegetable pulp, one cupful liquid, salt and pepper.

Mix, add chopped parsley. Vegetable cooked and blender, then pulped. May use vegetable water for part of liquid. May combine vegetables as celery and potatoes, potatoes and onions, carrots and peas, corn and celery, etc.

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How to Order

Write your name and address clearly. State number and size of each pattern. Price 15c each, two for 25c. Our Fashion Magazine will help in preparing your wardrobe. Copy alone 15c; with a pattern only 10c. Address Pattern Department, Pennsylvania Farmer, 7500 Penn Ave., Pittsburgh, Pa.

Scissors to Grind

ONE of my finest stunts in sewing is my sharp shears, and you may be glad to learn how to keep them ever ready to cut. I sharpen my own, and it is a fine trick.

First I use a small fine three-cornered file, and carefully file the edge. Next comes some work with a coarse whetstone on the cutting edge. Last touches are made with an oil stone, and believe me, my scissors cut.

I keep them in such good shape that the last cutting round our house is to cut collected, and we have no ha... shears. The cloth scissors do... their work, too.

* * *

When canning, I watch for articles regarding canning, and they are never put away much in top-top shape. Keep this file separately.

In my "canning room" (one end of the... room's hall with a window), you will find a serving or dining table with... baskets, chair, ... drawing board I invented myself. ... and pencils, chalk and ... hangers are always handy in the desk. ... Keeps me ... comes, for ... ready for ... I can.

Now I cut and make a simple ... in the morning and wear it ... afternoon, just because equipment is handy and always in its place. K. E.

Note.—So many good things ... pressing that we now pass along a seasonal recipes. Strawberry season ... just around the corner. What is your best recipe for this happy season? Jams, jellies, marmalades, unusual dishes of any sort? Send them to Household Editor, Pennsylvania Farmer within the next five days. A beautiful ... for summer reunions will be sent for each recipe used. G. S. S.

Cocoanut Cream Pie

How do you make good cocoanut cream pie?

Mrs. R. E. E.

COOK together until thickened two tablespoons cornstarch, two cupfuls milk, one-fourth teaspoon salt and one-fourth cup sugar. (In these hurried days we do not always say "in double boiler," for many women prefer to stand by and stir.)

Add one cup grated cocoanut, two eggs slightly beaten and one teaspoon vanilla. Pour the mixture into an unbaked crust and bake rather slowly for twenty minutes. This makes six generous portions.

Note.—Condensed milk may be used to good advantage in this filling. Use that case use one cup milk and one cup water.



Outwit the romper wreckers

Children are hard enough on clothes without adding wash-tub rubbing to the wear. So do the family wash with Fels-Naptha — good golden soap combined with plenty of naptha, the dirt-loosener "dry cleaners" use. You get the extra help of soap and naptha working together—and together they remove even ground-in dirt without hard rubbing. For tub and for washing machine . . .

Nothing can take the place of

FELS-NAPTHA

BUY IT BY THE CARTON OF TEN BARS



America's Finest Washing Machine Engine! The majority of leading washing machines advertised in this publication are equipped with Briggs & Stratton gas engines. These washing machine manufacturers are giving you easy starting with dependable power. We guarantee Fullpower engines for one year.

Fullpower Engines are also particularly for generator sets, etc. Write Dept. PA-1 for Free Booklet.

DAYTON CORP. Dayton, Ohio

THROWING AWAY THEIR WASHBOARDS!

Women are literally throwing away their washboards on account of a recent discovery used in washing clothes. No rubbing, yet clothes are gloriously clean. Will not injure fabric. Write to L. E. Rittredge, Tuckhannock, Pa., for FREE sample. Agents wanted

LOOK!
Baby Turkeys and Hatching Eggs

Bronze Poults, Bird Bros. strain of prize winners; Bourbon Reds, prize winners at International Turkey Show, Chicago, Ill.; Narragansetts, Axtell's strain of prize winners; Bourbon Reds, Axtell's strain of Prize Winners. Hatched weekly. Prices right. Live arrival guaranteed. Catalogue free.

HAGOS POULTRY FARMS, Box 2, Gambier, Ohio

BABY CHICKS Order direct from this ad and save time

	25	50	100	500	1000
Pure Range bred					
White and Brown Leghorns	$2.75	$5.25	$10	$47.50	$ 90
Barred & Buff Leghorns	2.75	5.25	10	47.50	90
White and Barred Rocks	3.25	6.25	12	57.50	110
Buff, White, & R. I. Reds	3.25	6.25	12	57.50	
White Wyandottes	3.00	5.75	11	52.50	
Light mixed broilers	2.75	4.25	8	36.75	75
All good, strong, quality guaranteed. Catalog free. For Quicker Service Order Direct From This Ad.					

Utah Poultry Farm & Hatchery, Box T, Fort Trumbull, Provo, Utah

ZELLER'S EXTRA QUALITY CHICKS from Large Type S. C. White Leghorns. Trapnested, production bred matings 112-160, 161—200, 201—Intense. Also quality Rocks and Reds. 100% livability. Order from this ad. Circular free.

EDGAR A. ZELLER, 3914 Wasada St., Harrisburg, Pa.

Klines' Barred Rocks

Healthy stock. Penna. State College Extra. Strong chicks guar. Summer prices, $12.-100; $110.-1000; $260.-2,000; $500.-5,000.

I. W. KLINE, Box 90, Middlecreek, Pa.

Hampton's Black Leghorn DAY OLD CHICKS

The blood that lays. Circular free.

A. E. HAMPTON, Box F, Pittstown, N. J.

EGGS, Etc.—Small consignments from producers to your territory bring very attractive prices NOW. Prompt returns always. Refer to Dun or Bradstreet. Write us your next. Prod. New York City.

ZENITH BUTTER & EGG CO., 170 Duane

Chick Prices for May deliveries. S.C. Leghorns, $9.00-100; Brd. Rocks and Reds, $11.00-100; Heavy mixed, $10.00-100. Light mixed, $7.00-100. 100% live arrival guar. Cir. free. Penn's Creek Hatchery, Selinsgrove, Pa.

BARRON and WYCKOFF STRAIN

S. C. White Leghorn chicks. Large, vigorous, heavy laying strain. Shipped C.O.D. subject to approval and safe delivery guaranteed. Circular free. 41 years. Order from this ad.

THE PENN'A HATCHERY, Liverpool, Pa.

PENNA. STATE CERTIFIED LEGHORN CHICKS

Pure Hollywood and Barron-Wyckoff Strains. The Best Combination producing our 200-egg chicks. Hatched from Pedigreed, Record-bred, R. O. P. Entries.

POULTRY FARM, W. A. Campbell, Jamestown, Pa. RIDGEWAY

TANCRED STRAIN White Leghorn Chix

$10.00 per 100; $47.50 per 500. Extra nice healthy chix, shipped C.O.D. subject to approval. Write for catalog. Meadside Poultry Farm, McAlisterville, Pa.

Spare Wild Flowers

RESPECTABLE people do not pick flowers in other folks' gardens without invitation, it just isn't done. Even at the owner's urgent request, we would pick sparingly and oh so carefully.

It seems more than strange, then, that decent folks (like us) should work such destruction among wild flowers. Nature's garden surpasses by far the most elaborate imitations worked out by man—or woman.

There is the shy trailing arbutus with its bodyguard of young trees, the fragrant pink moccasin flower nodding on a rocky ledge with dark pines for a background, the clematis and Virginia creeper so beautifully clothing the stone walls, the feminine rock gardens with delicate maidenhair ferns, wild geranium and violets. Surely Mother Nature practices landscape gardening most successfully—when we let her!

We cannot deny that the native flowers are growing rarer each year and in some places entirely extinct, just from people's careless handling. Not the only offenders are city folks. Country people, especially boys and girls, need to be reminded of the danger of losing our heritage. Since practically all this destruction is due to ignorance, it seems fitting for our "S. P. C. W. F." movement to try to teach folks to care for our native plants properly.

Might we not frame a few rules for this summer's excursions in the country. Here are some suggestions:

1. Never pick all you can see. "Picking clean" belongs to fruit, not to blossoms.

2. Be thoughtful of the root. Break or cut stems, rather than pull up.

3. Never take big bunches of arbutus or any other rare flowers.

4. Encourage others to be kind to the wild flowers.

To sum it all, let us treat the wild flowers as we would the choicest blooms in our own flower garden.

Vida M. Bates.

Honor Guest's Gifts

THE delightful custom of giving a special gift to the guest of honor at the party has much to commend it, as it gives the one receiving it a pleasant memento of a happy occasion. It is not necessary to use anything costly, or even to buy a gift, since something from the farm can be dressed up daintily for the occasion. If the guest is from town a country gift, speaking particularly of a fine afternoon on a lawn, a picnic party or a holiday entertainment will be far more appropriate than anything bought.

Among the things country hostesses have used with good effect are the following—bouquet of bittersweet and grasses and straw flowers, basket of flowers and grasses, box of tulip bulbs, box of home-made cookies, fruit cake, jar of maple syrup, box of small linked sausages, basket of apples, jar of nut meats, jar of jam, pickles, basket of fresh eggs, watermelon rind pickles, potted plant, jar of shelled pop corn, bag of nuts, a string of red yellow and white corn ears to be used as a decoration, gladioli bulbs, a big bouquet of ripe cherries on the stems, a most beautiful gift is a cushion stuffed with hops supposed to be very beneficial in sleeplessness.

Of course much depends on the age and the tastes of the guest, but out of the abundance of the farm something can be found that will please. The boxes in which the gifts are presented can be covered with gay wall paper, or the linings of holiday card envelopes and can be made very pretty at small cost. At Christmas my grocer gave a number of round stick candy boxes that were beautiful when covered with bright wall paper. A ribbon passed through the box near the top will hold on the lid and make a brave bow.

Hilda Richmond

The VOSS FLOTO-PLANE WASHER



The Low Priced Quality Washer for Farm Homes

Before you buy any washer investigate the VOSS. It is priced $5 to $50 less than other washers of comparable quality.

The VOSS is made in the "Farm Belt" (Iowa) and has been especially designed for farm service. It will wash the heaviest, dirtiest garments, yet you may safely entrust your daintiest clothing without fear of injury. It washes cleanly, quickly and economically any and all laundry, and with a minimum of effort on your part.

Your VOSS Will Last a Lifetime

Every part that goes into the making of a VOSS, from the famous Briggs & Stratton gasoline engine to the Timken bearings, is of highest quality. Your sturdy VOSS will give you a lifetime of trouble free service.

There is a Voss dealer nearby

Visit him. He will explain the 12 big features that make the VOSS the best washer for the farm home on the market today, regardless of the price you pay. He will tell you of the "Buoyancy Point" washing principle, an exclusive VOSS feature which alone would convince you of the supremacy of the VOSS.

Send Coupon and we will mail you free, an interesting booklet, descriptive of VOSS Floto-Plane Washers.

VOSS Floto-Plane Washers, with electric motors are also available.

VOSS BROS. MFG. CO.
DAVENPORT, IOWA

VOSS BROS. MFG. CO., Davenport, Iowa. Please send me Voss Floto-Plane Washer booklet. ☐ Gasoline Power ☐ Electric Power. Name ... Address ...

BABY CHICKS

	25	50	100	500
Wh., Bl., Br., and Br. Leghorns	$2.75	$5.50	$10	$49
Rocks, Reds and Wyandottes	3.50	7.00	13	64
Heavy Broilers	3.25	6.50	12	59
Light Broilers	2.75	4.50	8	39

Twenty four page catalogue free. 19 years in business. Hollywood tested flocks. Postage paid. 100% delivery.

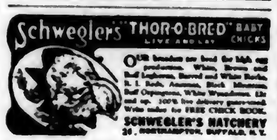
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PENNSYLVANIA COOPERATIVE LEGHORN FARM

Breeding COCKERELS with RECORDS to 302 EGGS. PURE TANCRED-HOLLYWOOD-BARRON STRAINS White Leghorns. Brown and Buff Leghorns—QUALITY EXTRAORDINARY—PRICE WAY DOWN. Ship C. O. D. Get our prices quick.

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Breeders are bred for high egg production. White, Brown and Buff Leghorns, Barred and White Rocks, R. I. Reds, Black Minorcas, Buff Orpingtons, White Wyandottes. Live delivery and 100% live delivery guaranteed. Write today for FREE CHICK BOOK.

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20 SHERIDAN TER., BUFFALO, N.Y.

TAKE NOTICE 75,000 CHICKS for May Delivery

	25	50	100	500	1000
S. C. White Leghorns	$2.00	$3.50	$10.00	$47.50	$ 90
Barred Rocks	3.50	6.50	12.00	57.50	110
Rhode Island Reds	3.50	6.50	12.00	57.50	110
Silver Laced Wyandottes	4.00	7.50	14.00	65.00	
Light Mixed	2.50	4.50	8.00	37.50	70
Heavy Mixed	2.75	5.00	9.50	45.00	85

From carefully selected free range flocks. 100% arrival Post paid. Write for illustrated catalogue.

THE RICHFIELD HATCHERY, Bx. 170, Richfield, Pa.

BEST CHICKS YET

Ohio Accredited chicks. Every breeding bird banded. Strong, healthy and well bred flocks carefully bred for high production.

WE SHIP C. O. D. $2.00 books order. Pay the postman for your chicks when they are delivered. Illustrated catalog and price list on request. Prices reasonable. Quality high. Write today.

BLUFFTON HATCHERY, Box H, Bluffton, O.

BABY CHICKS
FROM HEAVY LAYING FREE RANGE FLOCKS

	25	50	100	500	1000
S.C.W. & Br. Leg.	$2.00	$3.50	$10.00	$47.50	$ 90
S.C. Rocks & Reds	3.50	6.50	12.00	57.50	110
S.C. Buff Orpingt'ns	3.50	6.50	12.00	57.50	110
Wh. Wyandottes	3.50	6.50	12.00	57.50	110
Assorted Chicks	2.75	5.00	9.00	37.50	70

100% prepaid safe delivery guaranteed. Order from this ad or write for circular.

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12 Leading Varieties—White Leghorns, Black Minorcas, Rocks, Reds, Wyandottes, Hamburgs, Specified Sexed, Buff Orpingtons.

$9.00 per hundred and up.

Free Catalog and Price List.

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Baby Chicks
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High Egg Laying Flocks

11 years reliability. Satisfied Customers our specialty. Prices Reasonable. Write for catalog and price list.

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BABY CHICKS C.O.D!

Send no money, just mail your order. We ship C. O. D. and guarantee live delivery of chicks. From pure-bred, inspected and culled flocks.

Prices on	25	50	100
S. C. Wh. and Br. Leghorns	$2.00	$3.50	$10.00
Bd. Rocks and R. I. Reds	3.50	6.50	12.00
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Broiler Chicks	2.50	4.50	8.00

100% live delivery guaranteed. Box 900

Bellefonte Poultry Farm, Bellefonte, Pa.

BABY CHICKS

Prompt Delivery—Will Ship C. O. D.

	50	100	500	1,000
White & Bd. Rocks	$6.50	$12.00	$57.50	$110.00
S. C. R. I. Reds	6.50	12.00	57.50	110.00
S. C. White Leghorns	5.50	10.00	47.50	90.00
Heavy Mixed	5.50	10.00	47.50	90.00

PINECREST POULTRY FARM & HATCHERY
Herbert Miller, Prop. Box 2, Richfield, Pa.

WHITE CAMPINES
Greatest All-Year-Round Layers

Superior to Leghorns. One customer writes: "245% net profit in 5 months." Another: "A flock of 34 hens laid an average of 198 eggs in a year." Still another: "210 Leghorns had 28% production in Dec. and 56% production in Jan. while 245 White Campines had 42% production in Dec. and 70% in Jan. CATALOG FREE; stamps appreciated

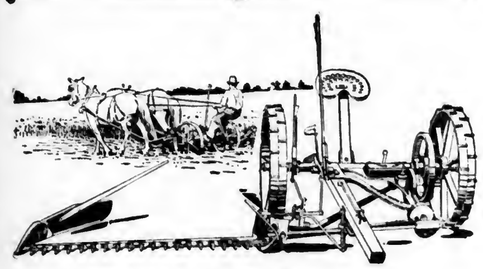
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BARRED ROCK CHICKS

A Big modern Breeding Farm and Hatchery devoted exclusively to the production of BARRED PLYMOUTH ROCKS

MARVEL POULTRY FARM, GEORGETOWN, DEL.

TIGHT BINDING TEXT CUT OFF



You'll Like Their Easy Handling

JUST as soon as you get into the field with these John Deere haying machines, you will appreciate the special features that make them easy to handle.

John Deere High-Lift Mower

Handy controls give easy, high lift—35 inches at outer shoe with foot pedal; 44 inches with lever control.

The 21-point clutch insures instant starting of knife in heaviest hay. Carefully fitted, high-quality cutting parts mean clean cutting, long service.

Cutter bar floats—reduces draft. Great flexibility permits bar to follow ground evenly.

Any necessary adjustments are easily made. Repairs can be made with ordinary farm tools.

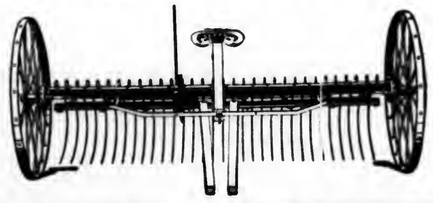
The Sulky Rake

Slight pressure on foot trip lever gives quick, clean dumping. Hand lever sets teeth high or low. Other adjustments are equally simple.

Interchangeable wheels give double wear on rachet teeth. Dump rods are reversible.

Tooth holders accommodate minimum or maximum number of teeth—two rakes in one.

Inspect this easy handling mower and rake at your John Deere dealer's. For free literature write John Deere, Moline, Illinois, and ask for Booklet ND-636



JOHN DEERE

THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

Certified Seed Potatoes

Quaker Hill Farms

NORTHERN MICHIGAN RUSSETS—PRINCE EDWARD ISLAND COBBLERS AND MOUNTAINS—NEW YORK RUSSETS AND RURALS

High-yielding strains—Officially inspected and certified. Let us quote prices on your requirements of potatoes and other farm seeds

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DISAPPOINTED! and he gives the job up.

LIBERTY CROW CHASER effectively keeps crows and other pests away from corn fields. LIBERTY CROW CHASER is present day and night to ward off the thieves of the corn field. It is non-poisonous and harmless. Will not clog the planter. Make up your mind to use LIBERTY CROW CHASER this year.

One-half pint, $1.00 POSTPAID Enough for one bushel seed

One pint, $1.50 Enough for two bushels seed

Order direct enclosing money order or check, or pay postman on delivery.

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Learn Tree Surgery, a well paying profession, where ability wins early recognition. If you are between 18 and 30, love nature and outdoor work, like to travel, have well-formed habits, we will train you and pay you while learning. Write today.

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Under direction of the F. A. Bartlett Tree Expert Co. Stamford, Conn.
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"FRIEND" Traction Sprayers

Write for catalog and learn about the many exclusive features of this

"FRIEND" MFG. CO., Gasport, N. Y.
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The UTILITOR Tractor

HEAVY ENOUGH TO DO YOUR PLOWING—easy to operate, women run it successfully and profitably. Prepares seed bed, Plants and CULTIVATES one to five rows. Lifts bulbs, root crops. Cuts, rakes, hauls hay, mows lawns. Power work to 5 h.p. Full Equipment Furnished. UTILITOR is a money maker. Write for circular. Dept. P

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BASKETS BASKETS BASKETS

Buy your baskets now for early Spring



and get rock bottom prices. Write for catalog. Box 175,

WEBSTER BASKET CO., Webster, N. Y.

Horticulture

By S. W. FLETCHER

How to Ring Trees

In the Pennsylvania Farmer of April 13th, page 1065, I noticed an article on ringing trees. I was very much interested, as I have a few dwarf fruit trees that I have planted about six years, and bought them for fruit bearing age at the time, but as yet they have shown no signs of bearing fruit. They are well grown and healthy. Would be very thankful for any information you can give me in regard to the ringing process. It would help, and first how to go about it as I would not like to harm the trees in any way. I. C.

WHEN the trees are growing most rapidly, which probably will be about June 1, cut through the bark down to the wood, clear around the trunk or branch. Make another ring about two inches from the first and parallel to it. Do not remove the bark. While two rings make the severed area double will be safer again but the check will be sufficient in most cases to cover the purpose of ring bark. Never ring any but vig'rous trees.

The method is particularly applicable to young, free growing trees which are of sufficient age and size to produce good crops, but have not yet shown a set of fruit buds. Rarely should it be practiced on trees less than six years old. The same trees can be ringed in consecutive years, without injury, this is seldom advisable, however, except with filler trees, which are to be removed shortly.

Pears, plums and cherries may be ringed, also, but it is seldom necessary with these fruits. It should be emphasized that ringing is a special practice, to be used only in special cases, the great majority of trees need no ringing.

"Bearing age" trees are usually disappointing. They may be old enough to bear when set, but they have been cut back so severely each year by the nurseryman to keep them within reasonable shipping size that the bearing surface is not large. Moreover, it takes longer for these large old trees to become established in the soil than for small young trees. "Bearing age" trees may produce a few fruits a year or two after planting, but usually not enough to be worth while, especially when their high cost is considered. In most cases it is better to plant young trees. S. W. Fletcher.

• • •

About Grafting

I would like to know where I can get information about grafting fruit trees, the time how to graft and kind of wax to use? L. I. Van Voorhis.

EXTENSION circular No. 103 from the Pennsylvania State College discusses this subject in detail. Presumably you refer to cleft grafting which is used to topwork trees five years or more old. In brief, the cions should have been cut before now, while the buds are still completely dormant, and stored in moist sand in the cellar or outside storage. Use wood that grew last season, water sprouts will do.

Grafting may be done any time from late April the first of June, so only the cions are dormant. Apples, pears, plums and cherries can be grafted readily, peaches with difficulty. Stubs preferably should be not over four inches in diameter, larger limbs are best grafted with the bark or cleft graft, in which the stub is not split to insert the cion but the cion is slipped beneath the bark or notched into it.

Cut the cions wedge-shape, leaving two or three buds. Split the stub with a grafting knife, and insert one cion on each side of the cleft. The cion will not grow unless the cambium or green inner bark of the stub comes in contact with the cambium of the cion. To assure this, set the cion slightly inside the stub and tilt the top outward slightly.

Cover the stub with grafting wax made of four parts of resin, two parts beeswax and one part tallow, melted, poured into cold water, and pulled until of fine texture. For a few stubs paraffin may be melted, and poured into a cylinder of paper tied beneath the stub as far as the cleft extends. After the first season cut out one cion if both grow. Cions should begin to bear in three or four years.

The Market Place

THE fruit and vegetable grower in Pennsylvania, New Jersey, or in other nearby states generally believes that the California grower is "sitting on top of the world". Many of his products reach the market at a time when they have but little competition and sell at high prices especially when compared with those that are received for the home-grown product later in the season. California asparagus precedes the nearby "grass" and the grower in this section often feels that it takes the cream of the market and that the price of his own asparagus is not as high at the opening of the season as it was in the days when his asparagus was the first to reach the market. This is not only the case with asparagus but also with numerous other products.

In spite of this advantage, the distant grower has many handicaps and a large share of the selling price of his products goes to pay transportation charges. It is a much easier task to put perishable products on the market in good condition when they are hauled a few miles by motor truck or rail, than when they must cross the entire country.

While reading the Monthly Bulletin published by the California Department of Agriculture, I came across the following statements which, I believe, apply to the nearby grower just as strongly as to his western competitor:

"The first shipments of fruits and grapes for the season from various localities should be of higher quality than is at present offered because they are bought by wealthy people whose patronage we must have and the degree of satisfaction of the early arrivals will largely be responsible for the future demand and value."

I have noticed that this statement applies to many nearby products to a certain degree. Perhaps peaches are one of the best illustrations. The early peaches that come on the market are generally poor in quality and lack flavor. This makes a poor impression on the consumer and does not encourage their use as they become more plentiful. I have heard housewives say, "I am not buying any more peaches, all that I have had are flavorless and poor." As a matter of fact later in the season there were many fine peaches available at low prices. By the first cantaloupes that you buy are poor, you are likely to pass them up and put your money in something that you know will be good.

The other statement in this California Bulletin that impressed me as practical and which applies equally to Pennsylvania potato growers or those of other states was:

"The future of the California fruit and grape industry rests primarily with the degree of satisfaction with which our offerings are received by the consumer, and in our future practices, both cultural and packing, we should endeavor to find out his desires and meet them as nearly as possible, regardless of what we think he should be satisfied with." W. F. F.

an EXTRA truckload of POTATOES from one acre sprayed with Pyrox



Mr. C. S. Newcomer, of Chambersburg, Pa., got an extra truckload of potatoes per acre by spraying with PYROX. This is merely he did. DEVELOPED potatoes grown with a homemade sprayer.

PYROX, the universally proved dust that does three things at once. That is why it is so economical, and helps produce bigger and better crops. PYROX sticks, prevents the development of blight and disease, and stimulates plant growth. Does away with the costly Lime-Sulphur mixture, and eliminates the danger of improperly mixed chemicals. Is easy to use. Will not wash off. Use any dusting sprayer made. Use PYROX this year for BIGGER PROFITS. Sold in dust form in 50 years' successful use. Write today and ask your dealer for the new Spray Guide. Pyrox Booklet Chemical Company, 420 Fourth Avenue, New York.

Reading Bone Fertilizer

Quality Service Satisfaction

HIGH GRADE FERTILIZERS

READING PLANT FOOD

READING MEAT MEAL

(This trade mark means quality)

Ask your dealer for Reading Bone Fertilizer.

We will mail a 5 lb. package of Plant Food to any address upon receipt of $1.00

Reading Bone Fertilizer Co., Reading, Pa.

WANTED



MOUNTFUL RIDGE NURSERIES

MOUNTFUL RIDGE NURSERIES, Box R, Primera Anne, Md.

STRAWBERRIES

BIG HEALTHY TRUE TO NAME PLANTS fresh dug for your order. Satisfaction guaranteed.

	100	250	500	1000
Premier (spec)	$0.60	$1.00	$1.75	$3.00
Big Joe (spec)	.60	1.00	1.75	3.00
Dunlap (spec)	.60	1.00	1.75	3.00
Chesapeake (spec)	.60	1.00	2.25	4.50
Aroma (spec)	.65	1.40	2.50	4.50
Gandy, E. H.	.50	1.25	.00	4.00
Gandy, F. H.	1.10	1.90	3.00	5.00
Judsonia, K. H.	.60	1.75	3.00	6.00

Order direct or send for free catalog.

PAYNER BROS. "Plants that Please" Salisbury, Md.

The New Beekeeping

There is an entirely NEW and far better beekeeping just ahead. It is a tremendous change. Honey production can be doubled in the average apiary in the United States by a new system of management, without new equipment and with less cost. Write and ask us to tell you about this revolution in beekeeping, how you can learn all about it and begin it this season.

A. I. ROOT CO., 214 Liberty St., Medina, Ohio

Buy direct from grower, fresh best BLACK WILSON SOYBEANSEED

It pays. Limited quantity, $2.50 per bushel. Address

LESTER MILLER, Westover, Md.

Certified Seed Potatoes

Green Mountains, Irish Cobblers, Smooth Rurals and Russet Rurals—College inspected. Satisfaction upon arrival guaranteed. Write for prices.

New York Co-Op. Seed Potato Ass'n Inc., Utica, N.Y.

For Sale All kinds of fruit trees, shrubs, privet, etc. Evergreen, berry plants, California privet, chinese privet. Improve your Property. Catalog.

MITCHELL'S NURSERY, Beverly, Ohio

21 VARIETIES gooseberry colored prints. The Gardener's Greatest Beautifiers combining Utility, Beauty, Hardiness. Ten orders for only $1. Color circular free.

A. B. KATRAMIER, Macedon, N. Y.

Truck Crops

By GILBERT S. WATTS

A SUBSCRIBER has pointed out that the relatively high analysis goods now being offered do not, and by reason of their concentration cannot, contain a considerable quantity of organic material such as tankage, bone or guano.

As a rule organic base fertilizers cost more than mineral fertilizers when compared on the basis of equivalent plant food. The question that confronts the grower is which will give the greatest return for each dollar invested. Another question is likely to lead one into controversial ground. The fact remains that organic base fertilizers have given consistent results for years. I know many farmers and experiment stations and on many farms mineral fertilizers have been used exclusively with sustained or increased yields.

On my own farm I discontinued the use of organic fertilizers several years ago. Results have been as satisfactory as ever. After all it seems that the real basis for a need of fertilizer plowing and planting is equivalent amount of available plant food.

• • •

Spray for Tomatoes

Please give me the formula for spraying tomatoes. How often would you advise spraying during the summer? I received one of Prof. White's pamphlets on green manure. According to this pamphlet wheat is even better than rye in conserving nitrogen. Would you say what any preference over rye? W. Kehr.

IN this state it is not customary to spray tomatoes regularly for the reason that greater yield of foliage is likely to be induced with consequent poorer quality of fruit. However, there are exceptions to the rule due to the presence of blight, early blight, leaf spots, anthracnose, which may do serious damage. Bordeaux mixture is recommended for this purpose. The proper material to use and directions to be followed in preparing it may be found by reference to any spray calendar. Here this discussion must be limited to general directions. Possibly a solution of two pounds of copper sulphate to each 50 gallons of Bordeaux will increase the repellent action of the spray.

I regard the comparative value of rye and wheat to plow down as a green manure. Prof. I. W. White of State College has found that green wheat is about one fourth richer in nitrogen. Under conditions of low fertility or late sowing where the rye would outgrow the wheat I imagine rye would still do the land most good in the end. On rich soil when sowing can be done in September possibly wheat would be more desirable.

• • •

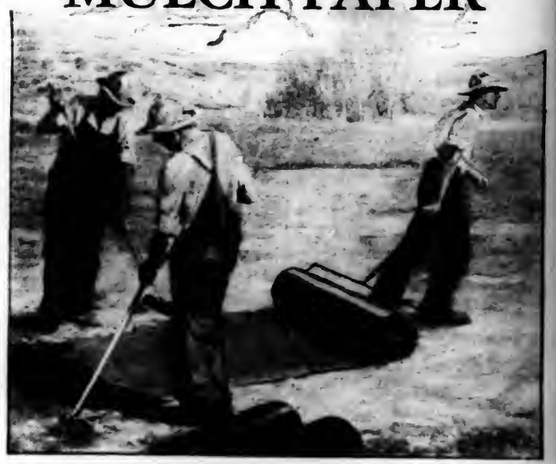
Chicken Manure

I have a quantity of chicken manure and I would like to know if it would be all right to put it on my cabbage plant bed. L. E. E.

I DO not believe I would put chicken manure on a cabbage plant bed unless the land is extremely poor. Chicken manure is very high in nitrogen and would be likely to cause the plants to grow very rank and tender, lacking the qualities of hardiness and sturdiness that are so desirable. In case the chicken manure is applied the best plan would be to broadcast thin and harrow well before planting.

In preparing my cabbage plant beds it has been my custom to apply a few hundred pounds to the acre of a complete fertilizer containing two or three times as much phosphorus as nitrogen, and a good proportion of potash. This is worked in before sowing seed.

The Miracle of MULCH PAPER



Consider the Final CROP not the First Cost

WHEN the last crop has been marketed and you check costs against income, THAT'S the time that Gator-Hide Mulch Paper proves its REAL worth.

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The Old Reliable LINESVILLE HATCHERY Linesville, Pa.

Write today for free booklet and prices, also free book on brooding.

Chicks C. O. D.

Immediate delivery. Leghorns $12 per hundred. Hatched from healthy Mountain-Bred, 5 lb. tested, 2 and 3 year old breeders. Order quick, pay post man and have your own heavy-weight pullets laying in five months time. Our customers do it. So can you. $48 for five hundred. Satisfaction guaranteed. A postal card will do.

FARM SERVICE
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CHIX from large Breeders

	100	500	1000
Ferris Strain W. Leg.	$10	$47.50	$ 90
Everlay Brown Leghorns	10	47.50	90
Bassom's Barred Rocks	12	57.50	110
Owens' R. I. Reds	12	57.50	110
Mixed Chicks	9	42.50	80

Our breeders are selected for size, type and egg production. The kind that lay and pay. Send for literature. It is free. Tells all about our great egg machines.

JUNIATA POULTRY FARM
CHIX Box P, Richfield, Pa.

CHERRY HILL CHICKS

	100
S. C. W. Leghorn—Wyckoff Strain	$10.00
S. C. Everlay Brown Leghorns	10.00
Barred Rocks—Wm. Nace's Select	12.00
S. C. Rhode Island Reds	12.00
Mixed or Broiler Chicks	7.00

5c less in 500 lots, 1c less in 1,000 lots. 25 chicks add 2c, 50 chicks add 1c. Full count, 100% live arrival guaranteed. Parcel Post prepaid. Bank reference, order direct from this ad or write for free circular.

CHERRY HILL POULTRY FARM,
Wm. Nace, Prop., Dept. P, McAlisterville, Pa.

BABY CHICKS

	50	100	500	1,000
White Leghorns	$5.50	$10.00	$47.50	$90.00
B. Rocks	6.50	12.00	57.50	110.00
S. C. R. I. Reds	6.50	12.00	57.50	110.00
Buff Orpingtons	7.50	14.00	67.50	
White Rocks	7.50	14.00	67.50	
Heavy Mix	5.50	10.00	47.50	

100% live delivery guaranteed. Send 20% with order, balance C. O. D.
MONROE HATCHERY, Box 10, Richfield, Pa.

STRICKLER'S SUPER-QUALITY CHICKS



High Egg Production Bred, Healthy, Vigorous
Large sizes Tancred-Barron English S. C. White Leghorns, 278-310 egg line matings. No lights used; chicks are extra hardy and vigorous. These quality plus chicks shipped parcel post prepaid. 100% live delivery guaranteed, any week in May at $13 per 100; $25 per 200; $37 per 300; $110 per 1000. 10% books order. Catalog free.
LEONARD F. STRICKLER, Box F, Sheridan, Pa.

STOP! LOOK! and take notice to the special low prices on Cocolamus husky chicks for May delivery.

	25	50	100
Tancred strain White Leghorns	$3.00	$5.50	$10
Everlay Strain Brown Leghorns	3.00	5.50	10
Barred Rocks and S. C. Reds	3.50	6.50	12
Light mixed	2.75	4.50	8
Heavy mixed	3.00	5.50	10

100% live delivery guaranteed, parcel post prepaid. Special prices on 500 and 1000 lots. Free circular.
COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

ULSH'S CHICKS Superior



White Wyandottes ....$13.00 per 100
Wh. & Brd. Rocks .... 12.00 per 100
Heavy Mixed .... 9.00 per 100
100% live delivery guaranteed. Postage paid.
JAS. E. ULSH, Beaver Springs, Pa.

BABY CHICKS

Tancred Str. Wh. Legh'ns,	$10 per 100
White Leghorns	9 per 100
Barred Rocks	12 per 100
S. C. Reds	12 per 100
Heavy Mixed	10 per 100
Light Mixed	8 per 100

500 lots ½c less—1,000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for free circular.
C. F. LEISTER, McAlisterville, Pa.

BIGGER CHICKS
HATCHED FROM TWO OUNCE EGGS OR BETTER

	50	100	500
White Leghorns	$6.50	$12.00	$57.50
Barred Rocks	7.50	14.00	67.50
S. C. Reds	7.50	14.00	67.50
White Rocks	7.50	14.00	67.50
Black Giant	9.50	18.00	86.00
Heavy mixed	6.50	12.00	57.50

COVALLEN POULTRY FARM, F. W. Mutzabaugh, Dauphin, Pa. Member I. B. C. A.

ValleyViewChicks

	25	50	100
Tancred Strain Wh. Leghorns,	$3.25	$6.00	$11.00
S. C. W. Leghorns	3.00	5.50	10.00
B. Rocks & R. I. Reds	3.50	6.50	12.00

Heavy Mixed, $10.00; Light Mixed, $8.00. 500 lots ½c less; 1,000 lots 1c less. Free range. 100% live delivery guaranteed. Circular.
VALLEY VIEW POULTRY FARM,
M. J. Ehrenzeller, R. 2, McAlisterville, Pa.

HERBSTER'S QUALITY CHICKS
Barred Rocks and R. I. Reds ... $12.00 per 100
White Leghorns and Mixed ... 10.00 per 100
Good, strong livable chicks. Can ship C. O. D.
Herbster's Poultry Farm, Box 171, McClure, Pa.

Enteritis Powder

By R. L. SCHARRING-HAUSEN

IN reading over the April issue of the Eastern States Cooperator, I was much interested in the discussion of the use of enteritis powder in the poultry ration as a means of controlling cannibalism in chicks and adult birds, also in controlling outbreaks of coccidiosis. It is thought that cannibalism may be the result of disturbances in the digestive system, perhaps from irritation caused by such feeds as oats or other fibrous feeds, or from acute or chronic coccidiosis. On account of their irritated condition the intestines do not function properly and nutrition is interfered with, setting up an unnatural craving for blood and flesh which results in toe and tail picking among chicks and pickouts in older birds. The function of this powder is to allay the enteritis or irritation so that digestion may proceed normally.

This powder has apparently been little used in Pennsylvania Farmer territory, but according to Prof. Roy Jones, poultry extension specialist in Connecticut, enteritis powder has been used quite extensively throughout New England during the past few years for enteritis, chronic coccidiosis and paralysis. He states that this powder is an effective intestinal antiseptic which cleanses and heals without retarding growth or egg production. Several poultrymen in New England have reported that this powder controls cannibalism in its various manifestations

Will Give It a Trial

According to Prof. Jones, enteritis powder may be fed to mature birds eating mash well at the rate of one pound of the powder to 100 pounds of mash. Feeding may be continual or in two or three-week periods. When fed to chicks it is added after the second week at the rate of one-half pound per 100 pounds of mash, and when fed in this manner continually is said to be a very good control for coccidiosis. It is of course necessary that the powder be free from lumps and thoroughly mixed with the mash.

Personally, I have had no experience with enteritis powder, but if the occasion for its use arises, I shall certainly give it a trial. I am passing this information along because it is so well recommended and I would be pleased to hear from any of my readers who may use the powder as to the results obtained.

The formula for enteritis powder follows: Eight ounces powdered catechu, two ounces powdered calcium phenolsulphonate, two ounces powdered sodium phenolsulphonate, four ounces powdered sulphate of zinc. This can be mixed by a druggist, or I can supply the name of a firm which puts out this mixture already prepared.

World's Poultry Congress

THE Fourth World's Poultry Congress will be held in London in 1930. The National Poultry Council is planning itinerary and tours for poultrymen in this country who will go to England for the Congress. These tours will include the ocean passage, 11 days stay in London during the Congress, a 12-day sight-seeing trip throughout England, Wales, Scotland, North Ireland and the Irish Free State by motor bus and a sight-seeing trip throughout Europe covering a period of 18 days. The approximate cost of the entire trip will be slightly in excess of $500. Arrangements will be made so that the entire trip may be taken or such parts as one may wish.

"It is hoped that a party of from 800 to 1,000 will avail themselves of this wonderful opportunity to see Europe in a personally conducted party at very, very reasonable rates," says the Council. "The Congress in London will in itself be a wonderful educational institution."

For full details regarding the tours, costs, accommodations, booking agencies and all other details, address Harry R. Lewis, National Poultry Council, East Greenwich, Rhode Island.

Mr. Lewis, who is president of the National Poultry Council, has been delegated by the American Poultry Science Association to take charge of transportation arrangements in connection with the Congress.

Nest Box Notes



IT is a great temptation to save runt and crippled chicks which may appear in the brooder flocks, but doing so is a practice which does not pay. Such chicks linger along for a while, but as a rule die even before they can be sold as broilers, and so that whatever feed they have eaten is wasted. Crippled chicks are often toe-picked by their able-bodied fellows, and may be the cause of starting this vicious habit in the flock, and runts may be suffering from coccidiosis or some other ailment which will infect the whole flock. The best thing to do from all standpoints is to knock such chicks in the head and throw them into the brooder stove.

* * *

THE breeding season is about over on most farms, and unless there is some special reason for keeping the males, they should be sold as soon as possible. There is no profit in running a rooster boarding house. Let the poultry dealer have them as soon as the last eggs are set. They won't bring much, but will bring less later in the season when broilers are plentiful.

* * *

ACCORDING to reports, this seems to be a good season for raising chicks. My own losses on 2,000 of various ages have been about two per cent, and some of my neighbors have beat that.

* * *

AS these notes are being written, about the middle of April, we have been having some pretty tough weather. We have had some ten days of cloudy, rainy and windy weather, with one terrific gale and rainstorm. Farmers could do no work on the ground, and oats sowing has been badly delayed. Fruit growers with their orchards in full bloom feel that their prospects are none too bright. Even after this protracted wet spell there are no signs of clearing off.

We took advantage of the wet weather to do some needed jobs of cleaning and fixing up about the poultry houses, and the chicks don't seem to mind the weather and the hens keep busy too. So we try not to worry too much about the oats and the fruit.

* * *

DUE to a mix-up of some sort, letters to Mr. J. K. Benner and Mr. J. H. Hunsberger have been returned to me from the post office. If these men will send me their proper addresses I will forward their replies to them.

* * *

IF there are still persons who want plans for the summer shelter described early in the year, they can get them by writing to the Connecticut Agricultural College, Storrs, Conn., for Extension Bulletin No. 111 on Summer Range Shelters.

Send for Free Sample of
Struven's Fish Meal
and Free Booklet on Feeding



This popular fish meal, made from the whole Menhaden fish fresh from the sea, provides all essentials for rapid, healthy growth of poultry, swine and cattle. Protein and mineral contents are combined in the most digestible and beneficial form insuring you better results and greater profits.

Write today for sample and "Care and Feeding of Poultry, Swine and Cattle." Both free.
CHAS. M. STRUVEN & CO.
114-116 N. S. Frederick St., Baltimore, Md.

Save Baby Chicks



by giving them daily a few drops of Thornton Pacific Mixture in drink or feed. For treatment or prevention of Diarrhoea and Cholera and conditioner to make chicks strong and vigorous. It is the one mixture. Money back if it fails to cure any disease of chickens or to keep them healthy. Druggists say they can't raise poultry without it. Also cures and prevents blackhead, roup and other ills of turkeys. Half-size bottle 60c; full size $1.50. At druggists, or sent by mail postpaid.
BOURBON REMEDY CO., Box 8, Lexington, Ky.

HOW TO KEEP Turkeys From Dying



Valuable Turkey Book FREE. Thousands of turkey raisers in all parts of the United States have found that Rayzem takes the fight back out of Turkey raising. Rayzem is a stomach and intestinal regulator that is guaranteed to prevent blackhead. Order our regular size Rayzem and you will have no fear of losing your turkeys. Large size $1.00 postpaid; medium size $5.00 large size $5.00 C. O. D. If you don't find Rayzem back if you are not satisfied. Order now.
EVERARD-MORRIS CO.
920 Rice St., St. Paul, Minn.

Navy Brand Concentrated Buttermilk
From Tuberculin Tested Cows
24 per cent milk solids, 6% per cent lactose, the ad-vantage with no fat often ingredients. Reduces toe-picking and lessens danger from cannibalism and produces a more productive and permanent laying and hatchability. Good for chicks, brooders and laying hens. Would direct from factory to hands of user at $65 the. Write for prices.
TITUSVILLE DAIRY PRODUCTS CO.
Titusville, Pa.

GREEN FOREST HUSKY CHICKS
English and Tancred Strain
JUNE AND JULY PRICES

Style	C. O. D.	50	100
S. C. White Leghorns		$3.50	$6.25
S. C. Barred Plymouth Rocks		3.75	6.50
Mixed Chicks		2.50	4.25

Leghorn chicks are out of hens with trapnest records of 291-300 eggs. We pay parcel post and insure 100% safe delivery. Free catalog.
GREEN FOREST POULTRY FARM
J. W. Amig & Son, Props. Star Route Rockhill, Pa.

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SHIPPING CRATES LOANED FREE
SHIP YOUR LIVE BROILERS and other poultry to New York's Oldest Live Poultry House. We are bonded commission merchants. Top prices paid. Highest prices. Our outlet is unlimited. Inquire about us. Write for coops, crates, tags, shipping instructions and Holiday Calendar. Folder F 3.
KRAKAUR POULTRY CO., Inc.
West Washington Market, New York City.

PENN'A CHICKS



Have vim and vigor—hatched by new with 18 years experience. Prepaid and 100 per cent live delivery guaranteed. S. C. White and Brown Leghorns, 9c each; Rocks 10c; Reds and Minorcas 12c; Heavy mixed, 9c; Light breeds, 8c; 1,000 lots 1c less. Circular free.
THE PENNA. HATCHERY, Liverpool, Pa.

CHICKS
Healthy, free range stock. Reds, Wyandottes, Leghorns, Mixed; circular and price list. Postage guaranteed.
LONG'S RELIABLE HATCHERY
Box 10, Millerstown, Pa.

FAIRMONT'S BETTER PURE FLAKE BUTTERMILK
EASTERN DISTRIBUTORS CARLOADS WEEKLY
ALWAYS FRESH. WE QUOTE DELIVERED
OSWAKE BROS., GREENCASTLE, PA.

BABY CHICKS
100% Arrival.

	50	100	500
W. Leghorns and H. Mixed	$3.75	$6.50	$31.50
Barred Rocks and Reds	4.25	8.00	39.00
Light Mixed	3.50	6.75	32.50

JOHN SHADEL HATCHERY, R. 2, McAlisterville, Pa.

Chicks, Barron Eng. Wh. Leghorns
White Leghorns 8c; Barred Rocks 10c; heavy mixed 7c; discount on large orders. 100% delivery guaranteed on "Now Circular Free." Mar. 20th and later prices.
TWIN HATCHERY, McAlisterville, Pa.

BABY CHICKS

Tancred Str. W. Leghorns	$9	$17
S. C. Brown Leghorns	8.50	16
S. C. Barred Rocks	9.50	18
S. C. White Leghorns	8.75	17

Mar. Prices: Assorted chicks ..... $8.50 and $17.00 per 100; this delivery. Postpaid. Free catalog. Let us have a special price.
Chester Valley Hatchery, R. 2, McAlisterville, Pa.



The Best ESHELMAN CHICK FEEDS *you ever used*

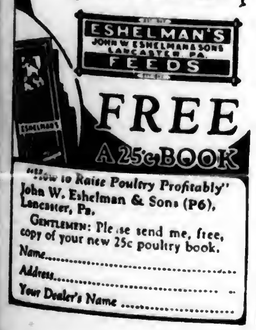
THERE'S one sure way to get good results from chicks—give them good feed.

If you want to raise your chicks to maturity, if you are looking for substantial profits on the other end, if you can't afford to gamble on a chance — feed them *Eshelman's.*

Eshelman's Chick Starter and *Eshelman's Growing Mash* are made for chicks. There's no waste. Every element is thoroughly mixed—there's no picking. Every mixture is perfectly balanced for abundant, well-rounded nourishment.

There's no gamble in these feeds—you know the results before you start. When you have raised every healthy chick to maturity like others have done with *Eshelman's Feeds* — you'll say the same thing — "they're the best *Eshelman Chick Feeds* I ever used."

Buy them from your — ESHELMAN DEALER —he sells them fresh!



"How to Raise Poultry Profitably"
John W. Eshelman & Sons (P6),
Lancaster, Pa.
GENTLEMEN: Please send me, free, copy of your new 25c poultry book.
Name.....
Address.....
Your Dealer's Name .....

Poultry Problems

Chicks Die of Diarrhea

A week ago I bought 1,000 baby chicks from blood-tested, disease-free stock. A number have died from diarrhea. The chicks are confined in two brooder houses, 100 in a house 12 by 16 feet and 100 in a house 12 by 12 feet. The brooder houses are infested with a few lice, although they were scrubbed and fumigated before the chicks were put in. South Helena

THE trouble with your chicks may be white diarrhea, in spite of the fact that the source of stock was all right, as there are many possibilities of infection. Reds are particularly susceptible to this ailment. Undoubtedly if this is the trouble your losses will cease before long as the infected chicks die off, especialy since you are taking sanitary precaution in the brooder houses.

Your chicks are a little bit crowded, and in case you do not have ample hopper space the weaker chicks may be crowded away and slowly starve to death. An inch of hopper space per chick is a rule often given.

If you still have mites in the house after cleaning I am afraid the work wasn't as effective as it should have been. In cleaning up a house, whether for chicks or pullets, I clean the floor thoroughly, whitewash the walls and ceiling with disinfectant whitewash, and oil the floor, drops, roosts, etc., with spent motor oil, which gets rid of all pests that crawl. I don't know what you can do to clean up now that the chicks are in it. R. L. S.

Egg Eaters

In a pen I have 55 Barred Rock pullets. They started laying in early November and now I lose four to six eggs a day. I read once to tear newspaper up and I did. Then was told to cut their bills, that is, to shave down the transparent part and cut off the end, which I did, and still I am losing eggs. Mrs. L. A. Underwood.

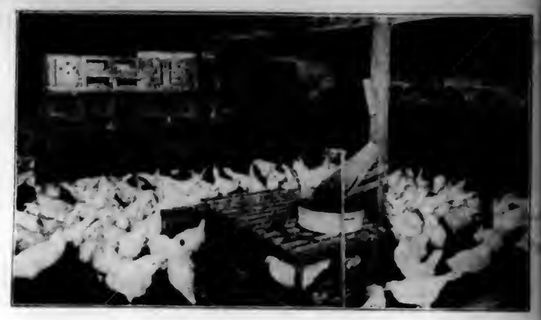
THE egg-eating vice is a hard one to stop once it gets started. You might try filling an egg shell with a paste made of red pepper or hot mustard, and putting this surprise package in the nest for the egg eaters to open. Sometimes one hen is responsible for breaking the eggs, and if she is caught at it and removed from the flock the trouble will stop. R. L. S.

For a Brooder House

I have a house 7x7x6 feet high with a peaked roof. Would this be suitable to convert into a brooder house for one hundred chicks? There is only one window in the house and this is about three feet from the floor. The space directly underneath this window is also open and I thought of closing this with a glass substitute instead of boarding it up. I also propose to put another window frame with panes in the front or south side of the house. Would this be sufficient or too much light? S. H. M.

YOUR little building will be perfectly satisfactory for a small flock of chicks, provided it has a tight floor and sides to keep out the drafts. Plenty of window surface on the south side will be desirable for light as well as ventilation. You might cut out a space half the width of the wall space extending from about eighteen inches from the floor to the plate, which, if your door is 30 inches wide, would be 27 inches wide and 54 inches high.

For windows, take two-inch strips an inch thick and make two frames 13½ by 30 inches for the lower sash and two 13½ by 24 inches for the upper sash. Cover the lower sash with glass substitute and the upper ones with burlap. Hinge the sash to the walls of the house at the sides so that they can be folded back on the inside when the window space is entirely open, and ar-



Something New in Poultry Feeding

New enough to be still untried by many poultrymen who have not heard of it—old enough to be well past the stage of experimentation.

Simply this—a new source of protein for the laying mash.

DIAMOND CORN GLUTEN MEAL

is an ingredient to supplement the meat scraps or other animal feed in your mash. Diamond contains nearly as much protein, considerably less fibre and more total digestible nutrients than meat scraps and costs only ⅔ as much. Replace half the animal feed in your mash with Diamond. Feeders who mix their own mashes will find that this practice cuts down the feed bill but keeps up production.

Whether your flock is your chief source of income or a sideline to your herd of cows, our formulas will interest you. They cost less and produce as many or more eggs. Free for the asking.

Write to
Ration Service Dept.
CORN PRODUCTS REFINING CO.
17 Battery Place New York City



AS GOOD FOR POULTRY AS FOR COWS

40% Protein Guaranteed

So Easy to Kill Lice on Chickens the "Black Leaf 40" way



No matter how big the flock or how lousy, only a small paint brush, a can of "Black Leaf 40" and a few minutes time for "painting" it on top of the roosts are required to rid an entire flock of body-lice. The treatment is so easy, effective and cheap that poultry owners need never be bothered by lice on their flocks that disturb the chickens and retard egg production.

Just Paint it on the Roosts

About a half hour before fowls perch, "paint" "Black Leaf 40" on top of roosts. Some use an oil can for squirting a thin line of the liquid on top of roosts and then spread it with a paint brush. Flock owners express amazement at the results. $1.25 size treats 100 feet of roost. Ask your dealer or write us.

Works while Chickens Roost

When fowls perch upon roosts that have been "painted" with "Black Leaf 40", fumes are slowly released that permeate the feathers, killing the lice. The laborious and disagreeable methods of dusting, dipping or greasing are eliminated. No individual handling of the fowls. "Black Leaf 40" is sold by poultry supply dealers, druggists, hardware, seed stores, etc.

TOBACCO BY-PRODUCTS & CHEMICAL CORP., Incorporated, Louisville, Ky.

"Black Leaf 40"
Kills Poultry Lice

TIGHT BINDING TEXT CUT OFF

20TH CENTURY "MARVEL" CHICKS

Special Mating Imported Barron White Leghorns

Superb Mating consists of 350 Yearling hens, imported from TOM BARRON of England. Layer's hens weigh not less than 4½ pounds and up to 6 pounds, and produce better than 250 eggs per year per hen.

Big Healthy Chicks from the World's Best Strains

Our 20 varieties. Matings sired by pure-bred Males from the **World's Most Trapnested Egg Strains.** Dams of each production, 250 to 302 egg lines. Park's Barron's, Fishel, Sheppard, Dustin, Page and others of similar famous breeding. **I Guarantee Satisfaction** and give you personal service. Prices reasonable. 100% Safe Delivery Guaranteed. Ref.: Commercial Bank, Dun or Bradstreet

Order now at these low prices—Effective May 15

	50	100	500	1000
Big S. C. White, Brown and Buff Leghorns; Anconas	$5.50	$10.00	$48.00	$ 90.00
Barred and White Rocks; S. and R. C. Reds; Black Minorcas	6.50	12.00	55.00	110.00
White Wyandottes; Buff Orpingtons; Buff Minorcas	7.00	13.00	62.00	120.00
Imported Barron Leghorns; White Minorcas; Park's Rocks	8.00	15.00	67.00	125.00

Heavy Mixed, $10 per 100; Light Mixed, $8 per 100; W. P. Ducklings, 25c each.

Ship C. O. D. if desired (pay postman on delivery). FREE Illustrated Catalog tells all about our big sire Winter Laying Chicks and profits you can make with them. Send for your copy.

20th CENTURY HATCHERY Box Y NEW WASHINGTON, OHIO

LANCASTER QUALITY CHICKS

Our chicks come from flocks that have been carefully culled for Egg Production and Standard Quality. By poultrymen trained at the Ohio State University. Our catalog is chicken from cover to cover, write for it or order from this ad. 100% live delivery guaranteed. Ref. Hocking Valley Nat. Bank. Member I. B. C. A.

Varieties—Postpaid prices:	25	50	100	300	500	1000
Quality Big Type Barron White Leghorns	$4.00	$7.50	$14	$41	$67.50	$130
Rose, Single C. Br. Leghorns, Anconas	3.75	7.00	13	38	62.50	120
Barred, White, Buff Plymouth Rocks	4.25	8.00	15	44	72.50	140
Rose, Single Comb Rhode Island Reds	4.25	8.00	15	44	72.50	140
White, Silver Wyandottes, Buff Orpingtons	4.50	8.50	16	47	77.50	150
Light Brahmas, Jersey Black Giants	5.50	10.50	20	59	97.50	190

Special Mating Chicks 3¢ each higher. Heavy Broilers $12.00 Light $10.00

LANCASTER FARMS HATCHERY Route 33 Lancaster, Ohio

Chicks C.O.D. $1 Down

Let us ship you our chicks, $1.00 with order, balance C.O.D. Our chicks are from some of Ohio's best flocks that have been carefully culled for type, color and egg production. 100% live arrival. PRICES DELIVERED

	50	100	500	1000
LEGHORNS, WHITE, BUFF and BROWN; ANCONAS	$6.50	$13.00	$57.50	$110
ROCKS, BARRED, WHITE, BUFF and PARTRIDGE; R. MINORCAS	7.50	14.00	67.50	130
S. C. and R. C. REDS, B. ORPINGTONS, S. L. and W. WYANDOTTES	7.50	14.00	67.50	130

HEAVY MIXED 10c; B. J. GIANTS 18c. Order direct or send for illustrated circular

EMPIRE HATCHERY, Box 70, COLUMBUS GROVE, OHIO

WOLF SELECTED CHICKS

CHICKS C. O. D.—Send only $1.00 and pay Postman the balance.

Special pen mated and extra high bred chicks at slightly higher prices. Shipment made any time you wish.

	25	50	100	500	1000
S. C. W., Br. & Buff Leghorns, S. C. M. Anconas	$3.25	$6.50	$12.00	$57.50	$110
Bd. and Wh. Rocks, S. C. and R. C. R. I. Reds					
Bl. Minorcas	3.75	7.25	14.00	67.50	130
White Wyandottes, Buff Orpingtons	3.25	6.00	11.00	57.50	110
Jersey Black Giants	3.00	5.50	10.00	47.50	170
Assorted Odds and Ends, Mixed Chicks	3.00	4.75	9.00	45.00	90
Assorted Heavy Mixed Chicks	3.50	6.00	11.00	55.00	110

BABY CHICKS DIRECT TO YOU

Immediate Delivery

WOLF HATCHING & BREEDING CO., Box 42, GIBSONBURG, OHIO

HERE: NEARLY EVERYONE RAISES Full Blooded "AMERICAN" Quality Chicks.

Write now for our new low prices. Your opportunity to get our special flock mating chicks at utility prices. Chicks shipped C. O. D. Catalogue and prices on request. 100% live arrival guaranteed. 15 breeds. Write now.

AMERICAN CHICKERIES, Box 318, GRAMPIAN, PA.

YOU NEED THIS CATALOG!

Big Poultry Manual Given Free to All Buyers of Chicks

Write for details. Every chick buyer should know about Hoytville Chicks. Our beautiful illustrated catalog tells all about them. Your copy sent on request. Guaranteed chicks

OHIO ACCREDITED CHICKS — ALSO BABY DUCKS

Every bird in our breeding flock is handled and a record kept. Our flocks are inspected by experts trained and authorized by Ohio Poultry Improvement Association. Find out about our guarantee plan. 16 breeds. We have limited number Chicks from Ohio R. O. P. pedigreed stock. Write today.

HOYTVILLE ACCREDITED HATCHERY, 117 MAIN ST., HOYTVILLE, OHIO

BUY EASTERN QUALITY-PLUS BABY CHICKS

BIG HATCHES MAY 20, JUNE 4-11-18-25. WE SHIP C. O. D.

Large Barron English S. C. White Leghorns	Per 50	100	500	1000
Pullets weigh up to 7 pounds each) at	$4.50	$ 8.50	$42.00	$80.00
Fishel Strain White Rocks	5.00	9.00	45.00	85.00
Jones-Parks Strain Barred Rocks	5.50	10.00	48.00	95.00
Sent parcel post prepaid. 100% live delivery guaranteed. 10% book order. Free circular.	5.50	10.00	48.00	95.00

SHERIDAN POULTRY FARMS. Box F. SHERIDAN, PA.

NATIONAL "SUPER-BRED" CHICKS

Insure Your Future Poultry Profits by Ordering NATIONAL "SUPERBRED" CHICKS NOW

	50	100	500	1,000
S. C. White, Brown & Buff Leghorns	$6.75	$13.00	$62.00	$120.00
Tancred & Hollywood White Leghorns	7.25	14.00	67.00	130.00
Barred & White Rocks, R. I. Reds	7.75	15.00	72.00	140.00
White Wyandottes, Buff Orpingtons	9.00	17.00	82.00	160.00

Light Mixed, $8.00 per 100. Heavy Mixed, $10.00 per 100. Also Black Minorcas, White Minorcas, Anconas, Blue Andalusians and Jersey Black Giants. Send for our free catalog and prices on our Special Mated Chicks. We guarantee 100% live delivery. Member International Baby Chick Association.

NATIONAL CHICK FARMS. Box 404. MIFFLINTOWN, PENNA.

Buy C·M·L·Chicks

C. M. L. CHICKS cost no more than ordinary chicks from the average Hatchery, but our Quality is far superior. For many years we have specialized in Barrons. We Import direct from England. 100% Live Delivery Guaranteed, Postpaid

	25	50	100	500	1000
BARRON S. C. WHITE LEGHORNS	$3.00	$6.00	$11.00	$52.50	$100.00
BARRED & WHITE ROCKS; WHITE WYANDOTTES	3.25	6.50	12.00	57.50	110.00

All stock carefully selected for size and health. C. M. L. chicks mature early and are sure to please you. Better chicks cannot be had at the low prices. Write for Free Catalog or order direct from this ad.

C. M. LONGENECKER, Box 45, ELIZABETHTOWN, PA.

BIG CHICKS FROM HIGH RECORD MATING—Prices Effective May 4

300 to 328 Egg S. C. White Leghorns. Our long experience in breeding will prove a satisfaction to our customers at the following prices:

	50	100	500	1000
White, Brown, Buff Leghorns and Heavy Mixed	$5.50	$10	$47.50	$ 90
Black Minorcas; Barred and White Rocks; Orpingtons	6.50	12	57.50	115
S. C. Reds; White Wyandottes; Barron Leghorns	7.00	13	62.50	120
Giants	9.00	17	80	
Light Mixed	4.00	8	40.00	80
SPECIAL TANCRED WHITE LEGHORNS	8.50	16	75.00	135

Your order will receive my special attention. Satisfaction guaranteed

UHL PIONEER HATCHERY & EGG FARMS

Albert Studer, Prop. Ref.: Farmers State Bank Box P, New Washington, O.

BUY EARLE CHICKS

and you have made the first step in 'making poultry pay'. These pure-bred quality chicks come to you from the best of parent stock, bred to lay and guaranteed to please. We offer the following popular breeds and best strains at the Lowest Prices, considering our quality supreme:

	100	500	1,000
Leghorns and Anconas	$12.00	$62.00	$120.00
Barred and White Rocks	14.00	68.00	130.00
R. Reds (Owens and Tompkins)	14.00	68.00	130.00
Jersey Black Giants	14.00	68.00	130.00
Buff Orpingtons; Richland Pearl Rock	20.00		

Book today or chicks that pay. You may order direct from this Ad. or will mail literature. We ship C.O.D. or upon receipt of 10% will send P. Post prepaid with 100% live delivery guarantee. EARLE F. LAYSER, Prop., Richland Poultry Farm & Hatchery, P. O. Box 1, Richland, Pa.

range hooks and eyes to hold the leaves together when the windows are shut. Perhaps you might care to put the door on the east side and use the entire front for windows and ventilators.

R. L. S.

Boiled Potatoes

I have 80 hens and get 50 eggs a day. Having plenty of potatoes I started to boil a kettleful a day for them at noon. Fed them this way for about two weeks. Am now getting only about 25 to 35 eggs a day. Do you think boiled potatoes stopped them laying?

A. R. Rider.

YOU do not state the complete ration which you are feeding your fowls and therefore it is impossible to say if the boiled potatoes are the cause of the drop in egg production. Most poultrymen do not find it advisable to feed any quantity of potatoes to poultry.

The following ration is suggested as a means of increasing the production in your flock. Scratch grain of equal parts of wheat and corn; mash, equal parts of wheat bran, wheat middlings, ground oats, corn meal and meat scrap.

H. C. K.

Dry Mash Needed

I have about 240 pullets, mostly White Leghorns. They are laying an average of about 11 dozen eggs a day. Every week I lose one. They appear healthy. They are a little fat. Am feeding them three times a day. 12 quarts corn and oats mixed and 12 pounds cooked potatoes mashed with peelings, two and one-half pounds bran, in a wet mash at noon. A. W.

A GOOD mash mixture might be of benefit to your laying fowls. This mixture may be composed of equal parts by weight of bran, middlings, corn meal, ground oats and meat scrap. If you prefer to purchase ready-mixed feeds, select a mash manufactured by a reliable company.

Probably your birds are over-fat due to the heavy feeding of potatoes and scratch grain. Two hundred and forty pullets should consume, at this time of the year, in the neighborhood of 30 pounds of scratch grain daily and have access to a good dry mash. Furthermore, the addition of dry mash will increase your egg production since it supplies some of the necessary elements required in the formation of eggs.

H. C. K.

To Hatch Geese

Please give me information on how to hatch goose eggs under chicken hens. Also the feeding of the little goslings.

Mrs. P. C. Hall.

GOOSE eggs may be incubated by natural or artificial methods. Best results are usually obtained by hatching goose eggs under hens. Not more than four to six eggs should be set under one good-sized hen, and not more than a dozen under a goose.

It is well to test the eggs on the tenth day and remove the infertile eggs and dead germs. It is well to sprinkle the goose eggs with warm water after the first week.

The goslings should not be fed until they are at least 36 hours old. For the next three days they may be fed five times daily. One authority suggests that a mixture of equal parts by measure of rolled oats and bread crumbs with three per cent of sharp sand be used as a starter. After three days this feed may be changed to equal parts of bread, rolled oats, bran, corn meal with three per cent sand. As the goslings develop, add more bran and five per cent of meat scrap. Green food should also be given. After the third week, meat scrap should be gradually increased until it is ten per cent of the mash when the goslings are two months old.

H. C. K.

Waiter: There's 'most everything on the menu today, sir.

Crabby Patron: So I see! Bring me a clean one, so that I can read it.

CHAMPION

National Change Week . . .

May 5th to 11th



Save the Price of New Spark Plugs

ONCE again Champion reminds you that to enjoy perfect engine performance during the next twelve months you should install a complete new set of spark plugs now.

You should renew even Champion Spark Plugs which give much better service for a much longer period than any other spark plug.

If you have used your spark plugs more than 10,000 miles, a new set of the new improved Champions will restore new car power and speed *and save their cost many times over in less gas and oil used.*

Moreover, the far reaching improvements, the time-tested and exclusive superiorities of the new improved Champions are so great as to warrant immediate equipment with them—no matter what spark plugs you may now be using.

Make Champion National Change Week your yearly reminder to install a complete new set of Champions. It is a proved method of maintaining maximum engine efficiency and economy. Any one of more than 100,000 dealers will be glad to serve you.

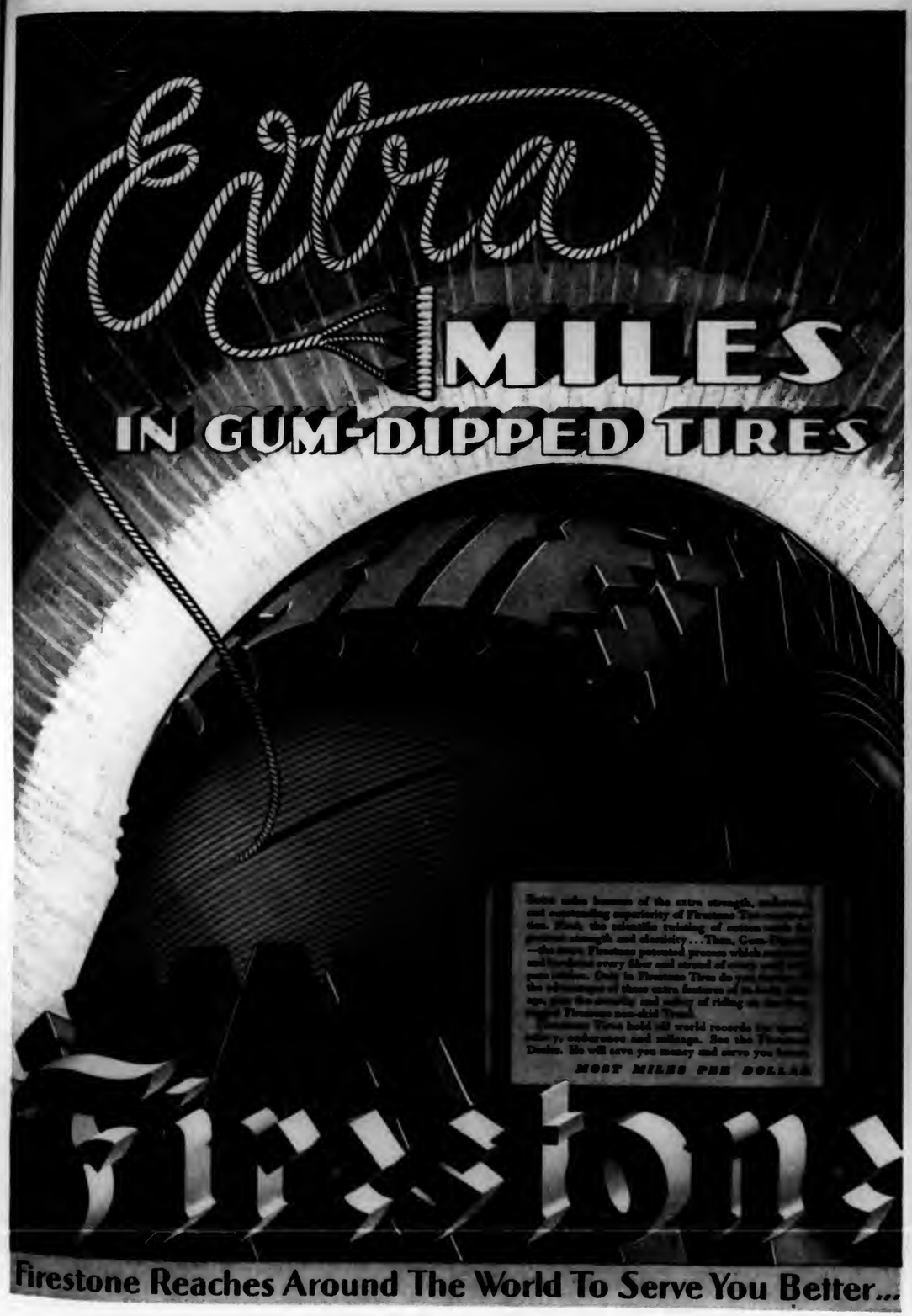
CHAMPION

SPARK PLUGS

TOLEDO, OHIO WINDSOR, ONTARIO

Tune in on the Champion Sparkers' special program over a coast-to-coast hook-up on the N. B. C. Blue Network (33 stations) Saturday night May 4th from 11 to 11:30 p.m. Eastern Standard Time.

Extra 5,000 MILES IN GUM-DIPPED TIRES



TIGHT BINDING TEXT CUT OFF

IT'S CALLED

"The Wake-up Food"

NOT JUST BECAUSE YOU EAT IT WHEN YOU *wake up*
BUT BECAUSE YOU *wake up* WHEN YOU EAT IT





Every bowl of crisp Post Toasties you enjoy is quick new energy. Isn't that cheery breakfast news for the millions who like to eat Post Toasties every day for its delicious, mellow flavor?

Here's a cereal as rich in energy as it is in flavor—as easy to digest as it is to serve. And because it is so easy to digest, its stored-up energy is quickly released to the body. That's why it's called the Wake-up Food.

Pure white hearts of the choicest corn, deliciously flavored, and toasted to delicate crispness—what an ideal energy-breakfast to start off those growing youngsters on their active day of work and play! And what an ideal addition to the morning meal for the husband who *wants* something tempting, and who *needs* something easy to digest, and rich in energy.

Don't forget—there's just one way to get the Wake-up Food. Ask your grocer for Post Toasties—in the red and yellow wax-wrapped package.

POST TOASTIES

The wake-up food

© 1929, P. Co., Inc.

FOR GREATER PROFITS
Hatchery Chicks

CHICKS FROM JANUARY TO SEPTEMBER, 1929
Barred and White Rock, White Wyandotte, Rhode Island Red, White Leghorns, Anconas and heavy mixed. Our flocks have been culled by Mr. Lloyd Baker, a graduate of Pennsylvania State College, also having several years practical experience. Write us your wants. Extra quality chicks from free range selected flocks. Reduction of 1/2 per 100 $2.50 per 500 $4.50 per 1000. Order May 7-14-21-28 chicks 10c. Live Arrival Guaranteed. 100% books order. Catalog Free.
L. R. WALCK HATCHERIES
Greencastle, Pa.

BARRON LEGHORN CHICKS
From Large Type Barron English S. C. White Leghorns. Hens weigh up to 7 pounds. Extra quality chicks from free range selected flocks. 100 per 100 $12.50 per 500 $57.50 per 1000. Order May 7-14-21-28 chicks 10c. Live Arrival Guaranteed. 100% books order. Catalog Free.
ROBERT L. CLAUSER, Box N, Kleinfeltersville, Pa.

Penn'a State "Supervised" CHICKS
Flocks inspected by officials from the Penna. Dept. of Agri. Our 19th year established 1910. Get our low prices on Reds, Rocks, Leghorns and Minorcas. Members I. B. C. A. Catalog free. THE KEYSTONE HATCHERY. (The Old Reliable Plant). Richfield, Pa.

Baby Chicks
From Free Range Selected Flocks

	25	50	100	500	1,000
White Leghorns	$2.75	$5.50	$10.00	$47.50	$90
R. Rocks & Reds	3.25	6.50	12.00	57.50	110
Light Mixed	2.50	4.50	8.00	37.50	75
Heavy Mixed	2.75	5.50	10.00	47.50	90

100% Prepaid Safe Delivery Guaranteed.
Fair View Poultry Farm, R. 3, Millerstown, Pa.

WYCKOFF STRAIN WHITE LEGHORNS CHIX
10.0 per 100 $47.50, 500 $90.00, 1,000
100% prepaid safe delivery guaranteed.
J. F. Yoos Poultry Farm, Box A, Richfield, Pa.

PEDRO STRAIN WHITE LEGHORN CHICKS
Our breeders are large birds, long deep, rectangular bodies. Selected for size type and egg production.
$10 per 100; $47.50, 500; $90, 1000.
JUNIATA POULTRY FARM, Box F, Richfield, Pa.

TANCRED WHITE LEGHORNS 15c each; Wyckoff White Leghorns $9.00-100. Anconas $11.00-100. R. I. Reds $13.00-100. R. Rocks $12.00-100. Minorcas $12.00-100. Barred Mixed $10.00-100. Light Mixed $10.00-100. Sixteenth season.
Lilyan Hatchery, Port Trevorton, Pa.

INTERNATIONAL PAPER AND POWER COMPANY

Boston, April 17, 1929.

The Board of Directors have declared a quarterly dividend of sixty (60c) cents a share on the Class A Common Stock of this company, payable May 15th, 1929, to Common Stockholders of record, at the close of business May 1st, 1929.

Checks to be mailed. Transfer books will not close.
R. C. TAPP, Assistant Treasurer.

New-fangled Contraptions

Grandfather came home from his annual visit to the fair and said he had seen a plow with wheels and a driver's seat. He didn't think much of it. It was twenty-five years before anybody in that locality owned a sulky plow.

The first mowers, cream separators, sprayers and incubators, and the early sewing-machines and carpet-sweepers were treated in the same way. It used to take the neighbors in the next county five or six years to learn that a better implement had been made, and when they did find out they either laughed at it or ignored it.

Today, in half that time people in all the forty-eight states have the new tool at work on their farms or in their homes.

Modern advertising takes an improved product, gives it a name and a trade-mark, builds it to a definite standard of quality, places it in every good hardware and implement store in the country, and tells you why you should own it and where you can get it.

Advertising has brought to you nine-tenths of the conveniences that make farming easier and living pleasanter in this new age.

Read the advertisements and you keep pace with progress.

BABY CHICK ESSAY CONTEST

THE enormous number of essays submitted during the final week of the $10,000 letter writing contest conducted by the Baby Chick National Advertising Campaign on the subject, "Why It Pays to Buy Chicks from a Hatchery," has delayed the announcement of prize winners, according to announcement from campaign headquarters. Judges have been busy for weeks reading manuscripts, and prizes will be awarded as soon as it is possible for the selection to be made. Announcement of winners was to have been made March 31, but the great flood of essays mailed during the final week made it impossible for the judges to get finished within the time promised.

Chick Rations

We have 300 chicks about three weeks old, and expect to get 600 next week. Would like a tested ration for a growing mash for six week-old chicks. By tested we mean one that has been tried out and proved satisfactory. Would it be wiser from the economical standpoint to feed such a ration, or would a commercial feed be cheaper?
Mrs. Ernest L. Kern.

A GROWING mash recommended by Cornell is: 30 lbs. yellow corn meal, 20 lbs. wheat bran; 15 lbs. flour middlings; 10 lbs. ground heavy oats; 10 lbs. meat scrap, 50-55 per cent protein; 5 lbs. bone meal; 10 lbs. dried milk; ½ lb. fine salt. Bulletin 218, of the Penn State College, State College, Pa., also contains formulas for rations.

Unless you have good facilities for mixing, or have your own grain to grind, you will probably find one of the mashes advertised by reputable feed companies to be more satisfactory, everything considered.

Many turkey raisers have found chicken rations satisfactory for turkeys to a large extent. There are many systems for raising turkeys, and sanitation and disease control are perhaps more important than the choice of feed.
R. L. S.

Purple Combs

I am having trouble with my year-old chickens dying. The first symptoms I notice are that their combs become dark purple, then they mope a few days and die. I feed corn, oats and buckwheat for grain and egg mash in hoppers.
E. N.

DARK combs are often the result of digestive disturbances, which can be corrected by giving plenty of green feed in the diet. It would be advisable to give your flock a dose of Epsom salts in the drinking water, at the rate of one pound per 100 birds, and also to clean out the house thoroughly and replace the litter with clean fresh straw. If this does not correct the trouble write me again, describing the color of the droppings, and stating whether you notice anything peculiar about any of the internal organs, and whether you find any yellowish lumps to be present. Also examine the intestinal contents for worms.

Tobacco for Worms

I saw in the March 9 issue of Pennsylvania Farmer about using tobacco dust for rubbing hens of worms. We never used anything for worms, but I thought it might be a good idea if we would once so can you tell me if this is a good time to use it? Our hens are laying a little over 50 per cent.
Elwood Halteman.

IF YOUR hens are doing well, are healthy, and you find no serious evidence of worms, it would be inadvisable to worm them, as the use of tobacco might cause some setback. However, if they are worms, it would be advisable to use it, and tobacco powder in the mash can be used at any time. Many poultrymen worm pullets when they are put in the laying houses or just before, if they find worms to be present in the intestines of their birds.
R. L. S.



Raise Pullets that Make You Money

THE way Quaker Ful-O-Pep Growing Mash builds deep-bodied, broad-backed productive pullets is simply the result of the formula, and feeding methods, that have been developed by The Quaker Oats Company. The base of this great feed is oatmeal, and as everybody knows there's nothing better than oatmeal for building up young bodies.

But the oatmeal is only a part of the story—to it are added essential proteins, minerals, and vitamin-laden substances that grow big birds with capable frames, with healthy, vigorous organs and flesh.

Pullets raised on Quaker Ful-O-Pep Growing Mash are exceptionally good layers. They lay large eggs with good firm shells.

The cod liver meal in Ful-O-Pep Growing Mash insures that the bird's blood is kept in the very best condition. The birds are not anaemic—they are bigger and stronger and better able to withstand the strain of heavy egg production. See your Quaker Dealer.


Oatmeal
626 Eggs

In a test conducted at Liberty Villa Farm, fifty pullets raised on oatmeal feeds produced 626 eggs in their first 28 days of egg record. Fifty pullets raised on the same rations—except for the substitution of cornmeal for oatmeal—produced 72 eggs in the same period. Oatmeal builds pullets of the laying type; well-developed, healthy birds that want to work.


Cornmeal
72 Eggs

Quaker
FUL-O-PEP
GROWING MASH
THE QUAKER OATS COMPANY, CHICAGO, U.S.A.

BUY QUAKER FEEDS IN STRIPED SACKS

TIGHT BINDING TEXT CUT OFF

Years Added to the Long Life of this Great Fence!

Wheeling HINGE JOINT FENCE



Now the full gauge wires of Wheeling Fence are made of the same steel that industry uses for many of its most important forms of construction. Only in Wheeling Fence can you obtain the genuine

COP-R-LOY
THE COPPER ALLOYED STEEL

It will pay you to insist upon this Wheeling product. The Wheeling Hinge-Joint—strongest knot known—makes Wheeling Fence tougher, stronger. Daily tests—*stretching up and inspecting* Wheeling Fence exactly as you would do in the field—insures that extra measure of satisfaction in every-day service. Pure zinc coating applied by the Wheeling method gives added rust resistance to the special refined copper alloyed steel base. Wheeling Hinge-Joint Fence costs no more than the ordinary kind. Inspect this better fence at your dealers.

Wheeling Corrugating Company
Wheeling, West Virginia

Branches: New York, Buffalo, Philadelphia, Chicago, Kansas City, St. Louis, Richmond, Chattanooga, Minneapolis, Des Moines, Columbus, Ohio.

Reg. U. S. Pat. Off.

Channeldrain ROOFING

Make your barn and shed lightning-proof, fire-proof and leak-proof. Here is steel roofing made better than ever because *special* refined COP-R-LOY, The Copper Alloyed Sheet Steel, is used in its making. Patented drain-off channel keeps your buildings "dry as a bone." Easy to apply—no special tools required. See your Channeldrain dealer for complete information.

"On 15 acres of corn, I lost but 3 or 4 hills"—



writes A. B. Wilmot, of E. Thetford, Vt. Crows and other pests had fairly picnicked on his corn-fields. Then someone told him of a way to coat his seed corn in a mixture that no crows or any other pests would touch, after they once had a taste of it. This corn-saver was Stanley's Crow Repellent.

Mr. Wilmot sent for some. He mixed it with his seed corn. He did not have to wait for it to dry, but planted it at once. And it did not clog the planter. It did not injure the seed corn. It was not poisonous. But it did keep every crow, mole, squirrel and other pest off of his corn-field. Mr. Wilmot is only one of hundreds who have written us that they would never plant a hill of corn again without using Stanley's Crow Repellent. "Money Back" guarantee, based on a 20-year record of performance. Large can, enough for 2 bu. of seed corn (8 to 10 acres), $1.50. Half size, $1.00. If your hardware, drug or seed store doesn't have it in stock, order direct. Address Cedar Hill Formulae Co., Box 600-R New Britain, Conn.

Be sure you get
STANLEY'S
CROW REPELLENT



Seed coated with Stanley's Crow Repellent

PLOWS ROCKY, HILLY LAND
OR MONEY BACK!

Hitch the 16-inch single bottom Ferguson WHEEL-LESS Plow to your Fordson and go into any field that you can plow with horses. We guarantee to plow it, no matter how rocky or hilly it is, or money back! No break pins or release hitches—no sidehill hitches necessary. You can't lose. Neither can we because the Ferguson always makes good! A great corn borer plow.

Delivered Direct from Factory to You—Price reduced from $88.00 to $69.75 and save $18.25! Plow through corn-stalks, get big yields on your land in field. Backed by our guarantee. Order now. Only a limited number will be sold. Write for free booklet: "The Turning Point in Power Farming."

FERGUSON-SHERMAN, Inc., P. O. Box F, Evansville, Ind.
Information on 3-Gang WHEEL-LESS Plow on request.

NOW $69.75 (SAVE $18.25) easy terms



Genuine Ferguson WHEEL-LESS PLOW

When writing advertisers please mention Pennsylvania Farmer

Marketing Needs

(Continued from page 8)

Another existing institution with which we have cooperated at a profit is the local newspapers. Every other industry advertises regularly in the newspapers at a profit, so why cannot the farmers? We had this lesson brought home to us several years ago.

We have a lot of sweet cherry trees that sometimes bear heavily. The frost gets them so often that we never depend on them, but sometimes we have a big crop. They are the hardest thing we have to handle. They are soft and have a tendency to get grayheaded over night. They won't stand hauling, the boxes will sink half in a few hours.

We invested $4.75 in an ad in a local paper for our cherries. We got a crowd. The something-for-nothing artists were in abundance. Some were highly insulted when we told them that we had cherries for sale and that we had our own pickers. We got enough interested people to sell forty-five bushels in four days just as fast as we could pick them at a net profit of $3.40 per bushel for an investment of $4.75. Since then we have been advertising regularly.

The roadside markets are another great help. If we can get people back to our place over a mile of mud holes, why shouldn't you get them along a good road with a little advertising? A roadside market is not practical for us due to location, but we want to see them increased. They remove much produce from the open market and are just that much of an aid in keeping off a glut and then they can be made of inestimable value in furthering the spirit of cooperation between the farmer and the consumer by bringing them together for a talk.

Another great aid in marketing is our record book. We keep a record of all the people who buy from us for canning. We have their names and addresses and what product they are interested in. One day last summer we were able to keep fifty dozen sweet corn out of a glutted market by knowing where to place the corn at a price to two women for canning and drying. This we call cooperation with the consumer.

Another institution we will have to cooperate with is the local banks. They will cooperate if we farmers get an income in sight and take up our paper in a reasonable length of time as other industries do. A banker saved my cake last year at an expense of a dollar and a half. You all remember how it rained. The weeds in my truck and potatoes were as high as the truck, to say nothing of the corn field. Finally it dried off and on a Monday I started an a seemingly hopeless job. I stuck it out till ten o'clock and went to the banker and told him I wanted seventy-five dollars and that quick. He reminded me that I had a note which had been dragging on for three years. I convinced him that if I lost my truck he would hardly get a payment on it in the fall. I came home with the seventy-five and at noon had three hoers. The next morning we had six hoeing and pulling weeds and two cultivators going. The rain caught us Saturday at noon not quite finished but near enough. The bill was $68 for one week besides the dinners they ate, but the sweet corn alone sold for over three hundred dollars and the note was easily taken care of without worry.

So cannot we say that the farming problem can largely be solved by marketing intelligently through cooperation with the existing institutions? The whole is equal to the sum of all its parts, so our part here in the East is to strive to make our income sure and profitable. Other sections' problems are not ours only to the extent to which they dump their surplus on us, so it seems to me our job is to keep our marketing profitable while we keep a weather eye on the government that they don't give us a setback trying to help us or some one else.

Oh Rats!

(Continued from page 9.)

Needless to say we have lost thousands of chicks in the years that have passed, through the depredations of rats. We try to keep all trash that might harbor rats away from coops and brooder house. If we are remiss, as sometimes happens, we may be caught napping, but the rat is not. A hundred fine chicks of superior stock and of supreme price were brooded by themselves away from the common herd, in a small, well-built brooder. A little yard made by setting up boards a foot wide and 12 feet long in a square and covering the box with inch mesh wire netting assured safety for the flock; or so we thought. Every night the door of the brooder was closed. That is, every night but one.

That fatal night the door was forgotten. The rat found it. To reach it he had to burrow under the board of the yard. All night he killed and carried chicks.

The hole under the corner of the brooder looked suspicious. Two men carefully tilted the brooder while two others with clubs despatched the hard-working rat as he started out. After the execution we counted the victims of the massacre and there were 65 of them, some of them still alive but all past help. Talk about seizing an opportunity!

Verily, rats have much to answer for; not the least this perpetration:

Howe'er it be, it seems to me,
The rats are making all too free
With grain I need for chicken feed,
And later, when I plant, for seed.

They take delight, by day, by night,
No matter how the thieves I fight,
In boring through an inch or two,
Of weather-boarding old or new;

And work their way, without delay,
To corn for which they do not pay.
In spite of all, both great and small,
The traps and tricks for which I fall.

These rodents wise, with beady eyes,
Each minute make my dander rise.
Until at last I'm coming fast,
To hope that they will all be "gassed."

Today I found upon the ground,
A pullet with a grievous wound.
A rat had crept, where she had slept.
And bit her so I could have wept.

These rat-tailed vegges are fond of eggs.
They carry them clasped with their legs.
My store of fruit they meanly loot
And dirty ev'rything to boot.

My neighbors drive, as I'm alive,
Their rats away from where they hive.
'Tis plain to see they then seek me;
Which is not as it ought to be.

There should be laws without great flaws,
And with a retroactive clause,
Compelling men to fetch again
The rats they drive into my pen.

But, dear oh dear, I greatly fear,
To this my neighbors will not bear.
For such is life; and e'en my wife
Does not assist me in the strife.

"For", says my rib whose name is Lib,
"Sure all your woes you may attribute to the fact you do not act
Until the rats have you attacked.
"Preparedness is the road to bliss
When fighting such atrocities."
"My dear," says I, as nice as pie,
"You may do better. You may try.

"For if you know the way to go,
To curb the rats that foil me so,
I pray you may, this very day,
Catch all the rats and make them pay."

Envoi.

Howe'er it be, it seems to me,
Still rats are making all too free,
With grain I need for chicken feed.
My wife and I are here agreed.

"Do the way I do, George . . feed 'em plenty of *MILK* and they'll grow like weeds!"

"I *do* feed my chicks milk, Bill, but they don't grow half as fast as your birds. And I've lost any number from coccidiosis, roup and white diarrhoea. My feed has buttermilk in it. The sack says so."

"Whatever the sack says, your flock isn't getting *enough* milk! I know what I'm talking about, George. You're throwing away a lot of money just trying to save a few cents."

"Pshaw! It isn't that . . . you know the buttermilk doesn't cost much."

"That's just the point. It doesn't cost hardly anything. And yet you're losing all kinds of money by not using it. Why you can't afford *not* to feed your flock buttermilk! Do the way I do, George. Feed 'em plenty of milk from the day they're hatched—an extra 10% in your feed—and watch your chicks grow. They'll surprise you."

"Do you think it is too late to start now?"

"Of course not! In fact it's chicks like yours that have been cheated out of enough milk ever since they were hatched, that need milk the most. You ought to start right away with 15% or more until the leg weakness and other troubles disappear. Then keep them on a steady diet of 10% added to your regular feed."

"Buy it at the feed store, eh? And just mix it in?"

"Yes, and insist on genuine Collis Process Pure Dried Buttermilk. It's the only brand I know of that's always uniform in quality. I wouldn't buy any other."



COLLIS PRODUCTS COMPANY
Dept. 559, Clinton, Iowa



You've *got* to add buttermilk to your feed to be *sure* there's enough. Add only the Collis brand, 100% pure and always uniform. Start today. Phone your feed store to deliver. Write for Collis book. It tells why milk-fed poultry is the most profitable.

Insist on genuine COLLIS PROCESS
UNIFORM QUALITY DRIED BUTTERMILK 100% PURE



TIGHT BINDING TEXT CUT OFF

THE YOUNG PEOPLE

Johnny Appleseed

A HUNDRED years ago the name of Johnny Appleseed was a by-word in the Middle West. Today he is almost unknown and that is a great pity, for he was unique among all of our pioneer characters—the great tree-planter of his day. Every spring day was Arbor Day to Johnny and he celebrated it with a vengeance.

What a picture he must have made coming down the Ohio River in his crude, home-made canoe loaded with home-made leathern bags, each bag filled with apple seeds. Tradition tells us that he was a "small, wiry man with long dark hair, keen black eyes, and a scanty beard that had never known a razor." He often wore an old tin dipper on his head for a hat, and his loose, ill-fitting clothes were usually made from old grain sacks. Yet he always came with a smile and a cheery song. Often the children would hear him singing on the river before he himself came into view.

He Never Forgot

Settlers over a very wide range of territory knew this strange forest dweller and always welcomed his coming, for he was a planter. He loved growing things. No sooner would he reach some fertile clearing upon which stood a frontier cabin than he would begin to prepare a plot of soil in his own peculiar fashion and begin to plant his apple seeds, always planting a variety and staying by the job until every precious seed had found a likely place to grow. He would then disappear, only to reappear in some far remote section, and always with a new supply of seeds to plant; and so he lived out his life, always planting and planning for the future.

Strangely enough, this tree-lover never forgot where he had planted an orchard and periodically he was certain to return to prune the young trees and to repair the makeshift brush fences that he built about them to keep the deer out. Very often he would trade a newly planted area to a settler for a bit of old clothing or more than likely accept a note in payment which he invariably forgot to collect.

For the Community

It is actually estimated that he left behind him, especially in the states of Ohio and Indiana, a hundred thousand acres of orchards, to say nothing of all the countless patches of medicinal herbs, such as catnip, hoarhound, pennyroyal, and such other "simples" as were used to a considerable extent by our grandmothers—planted always for the benefit of his scores of isolated pioneer friends.

Johnny Appleseed knew full well the value and beauty and comfort of growing trees, and who can say but the fact that he had no boys of his own to "grow" put into his head the next best plan of planting and cultivating trees, knowing that if they could be kept growing a splendid crop would be the inevitable dividend—a crop which would benefit the whole community.

E. H. Cheley



Wayne H. Dubble, Jr., and His Dog, Rover

The Planting

BY MARGARET LEE ASHLEY

I have planted a tree.
Sweet winds, will you wait 'on its branches to grow?
O moonlight snow,
Will you cover its bare limbs with cold?
When my seedling is old?

I have planted a guest for the sun,
A temple for birds passing by,
A net to entangle the moon,
A green shelter at noon.
I have taken a spade
And a naked brown shoot out of clay made
A miracle! Nay, the glory is mine
O God of the dew and the air!
But the wonder is mine
And mine is the prayer!

In my Summers my eyes may not see
Let green branches murmur of me.
I have planted a tree.

A Plea for Trees

WHY not plant a tree? It takes little time and money. When we plant a tree we plant happiness. It we plant a fruit tree in a few years we enjoy the fruit; if we plant a shade tree we may have the greatest pleasure enjoying ourselves under the branches, reading or whatever we choose to do.

Then trees make a home look natural and more lovely. They serve as homes for the birds. Take for instance, a person who has done a hard day's work in a smoky city, the farm home with its surrounding shade and fruit trees is a refuge from toil and noise. How enjoyable it is to city children to play in the parks where there are trees and birds. The different cities contain millions of people who enjoy just a day in the country. If there were no trees they could not enjoy it so well.

The forests that have been taken over by the government as forest reserves is a worthy action. In Germany the forests have great care. When an old tree is taken down a small one is put in its place. If we in the United States would do that our forest resources would not be diminishing.

Nature claims the trees. The spring is beautified by blossoms and green leaves, the summer by green fruit and foliage, the autumn by the red, yellow and different-colored fruit and leaves, the winter by the snow.

If we should think about the pleasure trees bring we would not hesitate to plant more trees than we do. Won't you stop a moment and give this a thought? A High School Girl.

Organize Forestry Club

HOW many boys and girls have ever thought of organizing a forestry club? Is there anything interesting in belonging to such a club? What are forestry clubs in other states doing and can we do the same things here in Pennsylvania?

One of the biggest jobs that a forestry club member can undertake is to protect the lands in their community from fire. This is done by organizing a Junior Fire Patrol, or even if not organized, each club member can strive to prevent forest fires in his neighborhood, to report those that he sees, and also help fight forest fires. Louisiana has done some very fine work along this line.

Another interesting thing to do is to learn to know by sight all forest trees in your neighborhood. Orleans county, Vermont, has a forestry club composed entirely of girls who call themselves the K. Y. I.'s—"Know Your Trees Club."

Of course, the things mentioned are just side lines which should also include a summer camp, when the club, under the direction of a forestry specialist, can learn the many interesting things that can be learned in the woods. The main thing is to get yourself in line for these side lines, by either setting out some forest seedlings one half acre a year for two years or by taking over a piece of the farm woodlot and thinning it properly. In this case you can earn some money by selling as cord wood the trees that you remove.

Some very happy and profitable years can be spent in planting trees, caring for them and watching them grow. You will never fail to experience a thrill of pride when you look at the spot of old earth which through your own efforts has become more beautiful to behold.

WHO WILL BE TREED?

To complete our Arbor Day paper a tree puzzle should be easily solved.

1. What part of a tree is like a dog?
2. What part of a tree is like going away?
3. What part of a tree is like an elephant?
4. What part of a tree is like a hog?
5. What part of a tree is like a stream?
6. What tree is beloved by horses?
7. What tree has a doubt?
8. What tree is not one?
9. What tree never fades?



Teddy, Margaret and Mildred Horner.

RHYMING CONUNDRUMS

Though it stays by the house,
Yet it leaves in the spring;
Though I know well its bark,
I don't think it can sing.

ANSWERS TO LAST WEEK'S PUZZLES

Fifteen Hidden Vegetables.—Pumpkin, tomato, spinach, beans, peas, cabbage, onion, carrot, radish, rock, turnip, corn, potato, artichoke, beet.

Boston Proverbs

Make hay while the sun shines.
Too many cooks spoil the broth.
Look before you leap.
People who live in glass houses shouldn't throw stones.
Don't count your chickens before they are hatched.

Face powder may attract men to the fair sex, but bearing powder draws a biased sight most towards fiddling them.

Little Folks Corner

When Hilda Fixed Her Nest

It was a beautiful sunshiny afternoon. Hilda, indoors, heard the merry laughter of her friends as they played about outside.

"Oh, dear, I wish I didn't have to straighten up my room today!" she sighed. "I'd rather be out with the children!"

For some time, her mother had been telling Hilda that she must keep her playthings in order. But, instead of fixing them up, she had gone out to play, leaving the things in a terrible mess. The room was so disorderly that her mother had told her she would have to stay in until she had straightened it up.

Hilda was not fond of working, and she had not been inside long before she grew tired of her task. So, picking up a doll, she began to undress it. In a little while, she forgot that she had meant to clean the room, for she was having so much fun with the dolls!

It was nearly dinner time when mother came upstairs. When she saw Hilda, sitting in the middle of the floor with her dolls, and the room still upset, she was too surprised to speak, for a minute.

"Why, Hilda! You haven't done a thing!" she gasped.

"Oh, I was having such a nice time with my dolls, I forgot!" laughed Hilda.

"You are like the cuckoo birds!" said mother. "That is why they never get their nests built!"

"What do you mean?" asked Hilda.

"Well, there is an old story about them which says that in the spring, when the birds begin to build their nests, the cuckoos fly about singing. Every young girl who hears them calls to ask when she will be married. The bird always replies 'Cuckoo-cuckoo,' and stops each time to look at the young girl. Then the old men and women who are sick and tired, cry out to the bird. 'When will we get well, birds?' And the cuckoo perches on the branch while she answers 'Cuckoo-cuckoo!'

"There are always so many girls calling to her and so very many old folks asking her the same question, that it takes all the cuckoo's time to stop and reply to them. So, when the nest-building season is over—and all the other birds have their nests neatly finished, and their eggs carefully laid in them—the poor cuckoo has not made any nest at all! She has wasted all her time. Then she has to go to the nest of the little hedge-sparrow and lay her eggs in that."

"And then don't her baby birds have any home?"

"No, because their mother has let the hours go without using them for her work."

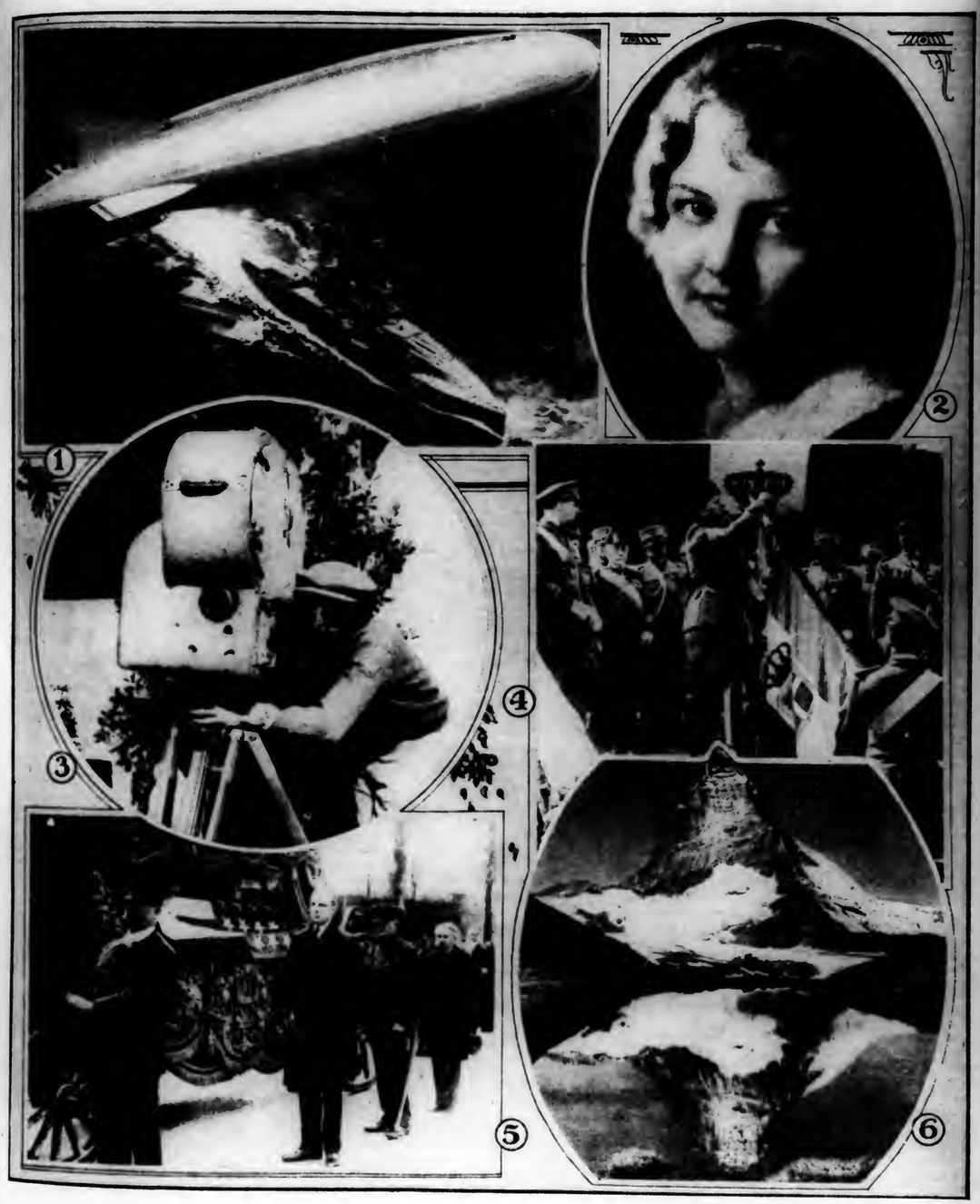
Hilda laid her dolls on the bed.

"Well, I guess I'd better fix up the house for my children," she smiled, "because I'd hate to have them go to another house!" Bertha Godshall.

Spring Birds

THIS game should be played in a large room. Guests are asked to choose the name of some spring bird for themselves and to group themselves in the four corners of the room. Then when the Catcher in the middle of the room calls out, "I want the robins to fly," all those who chose the part of robins must run from one corner to the next, dying for all they are worth as they run. The Catcher tries to tag as many of them as he can. Any one who is tagged must help him catch the other birds until they are all caught. If a player is about to be tagged and wishes to be safe he needs only to flap his wings and sing.

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1.—Warship of the air. Photo shows an artist's illustration of the Navy's giant dirigible, ZRS-4, now under construction, as it will appear soaring over a battleship. Note the armaments at bow, center and stern—big guns for a real warship of the air!

2.—Miss Bernetta E. Kunan of Clinton, Iowa, who was chosen queen of the junior prom at the University of Iowa. The selection, made on a basis of beauty, personality, popularity and activity, was made by a committee of students and faculty members. Miss Kunan, who is editor of the Hawkeye university yearbook, was recently chosen as one of [illegible] by [illegible] students.

3.—"Blimp" movie camera for talkies. Photo shows Eddie Pyle, Los Angeles, Cal., movie cameraman, ready to operate the new sounds-proof camera which has been developed for the talkies. It is a clumsy affair, due to the insulation of asbestos and rubber which prevents the clicking from registering on the sound receiver. Because of its bulk it has been dubbed the "Blimp" camera.

4.—Premier Mussolini decorating the battle flag of the Royal Air Corps in solemn ceremony in Rome, marking the anniversary of the inauguration of the force. Italo Balbo, Minister of Aeronautics, is on the extreme left.

5.—Paris mourns Herrick. Photo shows, center to right: Owen D. Young, noted financial expert; General Pershing and M. Briand, Foreign Secretary of France, accompanying the flag-draped casket bearing the body of America's beloved Ambassador to France, Myron T. Herrick. The cortege led to the French cruiser Tourville which carried the body to America.

6.—Photo shows an impressive view of the famous Matterhorn—14,661 feet high—swallowed up by a tiny lake—the Riffelsee—above Zermatt, Switzerland.

TIGHT BINDING TEXT CUT OFF

Old Rhiney

By CHARLES ADAMS

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A SECOND dose of charcoal fumes produced no apparent effect, and the subdued breathing was no longer audible. After waiting a respectable length of time some one gave a tentative tug on the rope which was attached to the animal's leg. This elicited no response and when more tugs met the same indifference one of the selectmen advised dragging the rhinoceros out and cutting his head off with an ax as an extra precaution, pointing out that while the aninal was evidently dead the chance remained that it might be only unconscious and would revive when the effects wore off.

Accordingly a number of men and boys caught hold of the rope and prepared to drag the animal out of the kiln. They gave a mighty heave and something resembling an explosion occurred within the kiln. Angry snorts were heard and the rear end of the ungainly beast appeared through the crumbling wall, the prison being too small for him to turn around in.

The scene at the pond was duplicated. Men, women and children fled wildly in all directions. Some climbed trees, some jumped in their buggies and drove madly away, others scurried to anything that promised shelter.

From our perch in a convenient tree we saw the harried animal emerge from his cell and amble off over the hill. Leland and I followed, catching sight of the beast as it lay down in a lane near the schoolhouse.

The schoolma'am came out and after discussing the situation from various angles suggested that we pen him up in the lane for safe keeping by blockading the ends, since the rhinoceros had shown a tendency to respect stone walls. With the help of many hands we stopped up the ends of the lane with stones, rails and anything at hand until we had a barrier five or six feet high. By this time the selectmen had arrived and decided to try poison on the beast that was causing them so much worry.

The next forenoon Mr. Odway did drive to Mapleton to buy strychnine in order to poison the rhinoceros.

But the Mapleton druggist had no strychnine. When told for what purpose the poison was wanted, he suggested arsenic, and sold Mr. Odway no less than an ounce of the virulent stuff.

Mr. Odway's horse was not a fast one; and as the weather was very warm, he did not get back until three o'clock in the afternoon. Leland and I were at work at home, haying, that day; but between three and four o'clock little Georgie Flint came running home from school to tell us that the selectmen had come with the "pizen" and the potatoes.

We all dropped work and started for the schoolhouse. School had already been dismissed when we got there, but few had gone away. The horses of the three selectmen were hitched to the fence near by, along with a number of other teams, for sixty or seventy people had collected.

Mr. Odway had the arsenic in a pink paper, stuck at the ends with red sealing-wax; and I recollect that the sight of it gave me a very queer sensation. Everybody wanted to see it, and Mr. Odway opened it on the teacher's desk. It was a white powder, and Mr. Odway's hand shook so that he came near spilling it.

Mr. Stone placed the potatoes in a row on the schoolhouse door-step; and the only thing they now trusted poor Mr. Briggs to do was to cut pieces out of every potato with the little blade of his jackknife. For they were going to give the arsenic to the rhinoceros in a mess of potatoes. The druggist had directed Mr. Odway to put as much arsenic as he could take up on the point of a knife-blade into the hole in each potato, and then replace the round piece which had been cut out.

SOME of the younger school children began to cry, for the teacher had told them a great deal about the animal and its habits, and they now declared that they "didn't want Old Rhiney killed." We boys noticed, too, that the teacher herself looked very much dissatisfied.

But in the meantime a black cloud had risen in the west. It thundered. "There's coming a terrible shower," people began to say. And soon a fierce dash of hail swept across the country, and all the people crowded into the schoolhouse.

The squall passed quickly, but another speedily gathered, and still another. It rained so copiously for more than two hours that nothing could be done in the way of poisoning the rhinoceros. As dusk came on, the selectmen gave up using the poison that night.

Mr. Odway bade the schoolmistress lock up the paper containing the arsenic in the drawer of the desk, and she did so.

Mr. Stone buried the poisoned potatoes deep in the roadside ditch. "We will fetch more potatoes and fix him in the morning," he said, as they drove away.

The next morning more than two hundred persons were on hand when Mr. Odway and Mr. Stone arrived and proceeded to "doctor" more potatoes, putting most of the white powder into them.

The potatoes were then put in a large, open box, carried to the lane and placed close by the water tub. The crowd lined the lane walls to see the rhinoceros take his last breakfast.

The beast exhibited no unwillingness whatever to eat the potatoes, but shuffled up to the box and munched them with satisfaction, while the people on both sides drew long breaths of expectancy and commiseration.

"His earthly troubles will soon be over," said Mr. Odway, with a somewhat wild glance round.

"Yes, that'll fix him," said Stone, with a hard smile.

After eating the potatoes, the rhinoceros took a little walk down the lane, the spectators falling back respectfully from the wall as he advanced. He then returned, smelled of the box again as if hoping to find more potatoes, and took a drink of water.

"Pizen allus makes such critters dry," remarked Mr. Odway. "They die pretty quick after they get to water."

Old Rhiney then ate a bull-thistle and picked up what remained of the grass that we had thrown him the day before. He seemed to be well so far, and somebody now asked how much time the "pizen" would require to work.

Mr. Odway thought that ten minutes more would suffice to do the business. The beast walked about as if in quest of more breakfast.

"He begins to feel pretty oneasy," Mr. Odway observed.

Presently the animal lay down.

"It's coming on to him!" said Stone. "It's beginning to take holt!" And for a while everybody thought so, for the rhinoceros grunted a number of times.

"Better all of ye get away from that wall," said Mr. Stone. "He may tear round some when he begins his final struggles."

But after a few long, comfortable grunts, the rhinoceros went to sleep. At first some thought he was about to succumb without further ado; but it soon became apparent that he was dozing peacefully and naturally. Nevertheless, the crowd looked on, expectant, for half an hour longer.

Meanwhile Miss Everett had rung her bell to call her pupils into the schoolhouse. I had seen her looking from the window, and it seemed to me that her countenance was fairly mirthful. Her amusement occurred to me as being cold, since she had been so much dissatisfied the previous evening.

I did not reflect much about it, and did not even mention the circumstance to Leland; but, I thought of it afterward when the whole story came out. For the fact was that some one, after the poison was placed in the teacher's desk, had thrown it out and in its place put powdered chalk from the blackboard.

The slumbers of the rhinoceros seemed healthy and peaceful, and ere long certain of the harder spirits in the crowd began to laugh and ask questions.

"What kind of pizen was that?" one said.

"Perhaps it had lost its strength," another suggested.

"Maybe that kind of pizen doesn't work on rhinoceroses," a third remarked.

"WELL, I must go home and go to haying," said another.

"Me, too; I've got five ton o' wet hay in the field," still another added. "Send round and tell us, Stone, when his 'final struggles' begin."

"Guess that won't be today!" chimed in another. "He looks pretty middlin' peart to me."

A good many remained, however, until nearly noon, among whom were the three selectmen. But when at last Old Rhiney rose from his nap, yawned, stretched, and began eating turnips, they all gave it up as a failure and went home disgusted.

As Stone and Odway were getting into their wagon, Miss Everett came to the door of the schoolhouse.

"We'll make you a present of Old Rhiney!" called Mr. Stone, sarcastically. "Keep him for your scholars to play with."

The schoolmistress made no reply for a moment; but as the selectmen were about to drive away, she suddenly hailed them.

"I think I'll accept your gift!" she cried. "Do you both agree to let me have him?"

"You'd better believe we do!" replied Odway. "We're a majority, and we hereby resign to you all our claims in the beast, don't we, Stone?"

They drove on, laughing rather boisterously; but Miss Everett turned to her scholars and said:

"I want you larger boys to bear witness that they gave Old Rhiney to me. Don't forget, now."

Half a dozen of us promised, in some wonderment, for we did not understand her plan at all.

About a year before this a young man at Mapleton had bought out the old Mapleton News, and set to work to make a lively and readable local weekly of it. As one means of doing so, he had gone through the entire county, visiting the district schools, and had induced the schoolmistresses to contribute to his paper every event of interest which occurred in the particular district where each taught. In return for these literary services he gave to each a free subscription to the News.

It happened, therefore, that the next issue of the Mapleton News contained a very merry account from the pen of our schoolmistress of the capture of the rhinoceros at our schoolhouse. It was, indeed, very laughable, and concluded by saying that the owner could have his rhinoceros, in good condition so far, by "proving property and paying charges."

A daily paper in a neighboring city copied the story from the News, and within three days thereafter six of the leading Boston and New York newspapers printed the account.

The result was that in the course of a week between forty and fifty letters of inquiry came from all points of the compass; following these a few days later there arrived two well-dressed, smooth-faced men, who had driven to the schoolhouse in a buggy from Ireton, eight miles distant, where there was a railway station.

It had been wet weather for several days, and Leland and I were at school. The visitors knocked and were very polite when Miss Everett went to the door. They explained that they were the proprietors of the stranded menagerie, showed a number of letters and documents to prove their statement, and said that they had come to get their rhinoceros, if some one would kindly inform them where they could find the animal.

Miss Everett allowed us older boys to go with them to the lane, and soon followed us herself.

"We have a cage and four horses coming on behind us, from the railway," one of them said. "The animal, we understand from the papers, is in your charge. Are you willing that we should take him away?"

"Certainly," replied Miss Everett. "But there are charges."

"What charges?" they asked.

(To be continued.)



The Cheerful Plowman

NO OLD DAYS FOR ME!

THE olden days? Not on your life, no olden days for me! Talk as you will of modern strife and modern speed and spree, it's better than the olden stuff when every task was hard, when muscles were not strong enough. I'm laughing at the bard.

Before I had this telephone, that was the olden day; I couldn't talk to Mike Melone in this nice, easy way. Those days when I would talk with Mike I had to mount a horse and ride through muskegs and the like by dint of strength and force. It took all day to reach his shack, then much too tired to speak, I said hello and started back through slough and swamp and creek!

The olden days? No, thanks, my friend! Well do I mind the day when I went down to Cricket Bend for Doctor John McPhay! The hired man had been taken ill with thirteen kinds of pains, and every creek had drawn its fill from thirteen kinds of rains. I started out on Dappled Nig, a horse who knew his gait. He'd go through flood, and fire, and fig and neither halt nor wait! It took two days on such a horse to reach the doctor's place, while that hired man grew worse, of course, with pangs across his face! It took two days to journey back, that doctor man and I, while that hired man, alas, alack, was toying hard to die. Delay caused him, poor ailing soul, an illness of a year; all he could do was toss and toil for twelve long months I fear.

Now listen; had I had this phone, and had the Doc a car, that man would not have moaned alone while I went off so far; and he would not have lost a year of precious time, I vow. No sir, no olden days my dear—I'm glad I'm living now. J. E. T.

Each Month A Selected Value

Beginning in MAY

more

"SOLAR STRAWS"

will be worn than any other straw hat in America

THIS month, when men are buying their new straw hats, we invite *you* to try on a "Solar Straw." Over 500,000 hats of this make will be sold in the 1213 J. C. Penney stores. That represents more men than wear any other one straw hat.

Why, do you suppose, men all over the United States have chosen "Solar Straws?" We will gladly show you the reasons in the J. C. Penney store near you. "*Solar Straws*" *are made with the same details of quality that you usually find only in expensive hats.* Yet they sell for $1.98 and $2.98.

They are shower-proof. You don't get a properly weather-proofed straw for $1.98 in many stores, do you? . . . And "Solar Straws" are *comfortable*. They are easy on your head because they *conform* to it, right from the first wearing.

All the new style features are shown in "Solar Straws" at your local J. C. Penney store . . . Crowns are the least bit higher, brims a little narrower, bands a trifle more conservative in coloring than last year. These are genuinely fine hats, sold to you at $1.98 and $2.98 by the modern store-keeping methods and Golden Rule policies of J. C. Penney Company.

"Solar Straws" are not the cheap hats you sometimes see advertised at $1.98. They are selected from the leading makers in America. Instead of buying for one store and paying a high price for them, we buy for 1213 stores and get them at decidedly *low* prices. Our enormous purchases make a great difference in cost. And the efficiently run J. C. Penney store in your community does not add an unnecessary cent to the manufacturer's price. When you buy with 500,000 other men, you get a better hat and pay less.





Let us be your hatter. If we have no store in your town, write us and we will tell you where the nearest one is located. At the same time we will send you a free copy of our latest "Store News" in rotogravure. It tells you of many other remarkable values. Address J. C. Penney Company, Inc., 330 West 34th St., New York, N. Y.

(At the top) *For young men who like a hat with style in every line, here's our No. 2722 in Sand, Neptune Green or Pearl Grey, at $2.98! . . .*

(Above at right) *There's good straw in this sailor, "SENNIT," and the conservative lines give it real distinction, yet it costs only $1.98!*

(Above at left) *Sudden showers can't hurt this* LEGHORN, *for it has the genuine Rainshine finish. Diamond creased telescope crown and fancy band. In natural color or Silver Grey, $2.98.*

This smaller illustration shows the "AVENUE," a hat you'll be proud to wear any place you go. Patent Milan straw in Sand, Neptune Green or Silver Grey, with new ridged telescope crown, snap brim and fancy band . . . a remarkable value at $1.98.

There is a J. C. Penney Co. store near you in:

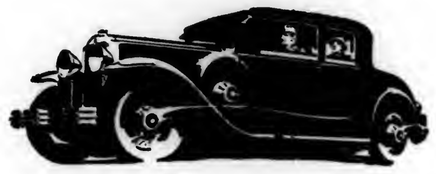
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Bloomsburg	Indiana	Punxsutawney
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Bradford	Lancaster	Sharon
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Coatesville	Meadville	Titusville
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J.C. PENNEY CO. INC. DEPT. STORES

The largest department store in the world . . . under more than a thousand roofs!

TIGHT BINDING TEXT CUT OFF

They got behind the wheel . . got the facts . . *and bought Buicks*



"My 1929 Buick is the greatest performing car that I have ever driven!"

Mr. J. D. B., Oklahoma City, Okla.
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Buick

This comment, from one of the 130,000 motorists who have accepted Buick's invitation to get behind the wheel and get the facts, explains why more than twice as many people buy Buicks as any other car priced above $1200. ◇ ◇ Come, drive this great car! Make the searching test which will lead you, too, to Buick!

Consider the delivered price as well as the list price when comparing automobile values.

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These prices f. o. b. Buick Factory, special equipment extra. *Buick delivered prices include only reasonable charges for delivery and financing.* Convenient terms can be arranged on the liberal G. M. A. C. Time Payment Plan.

BUICK MOTOR COMPANY, FLINT, MICHIGAN
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WHEN BETTER AUTOMOBILES ARE BUILT...BUICK WILL BUILD THEM

Quality Preferred

WHEN you go into town on Saturday for the week's buying, how do you go about it? The chances are that your mind is pretty well made-up—not only as to general description of the products you want, but as to the brand names. You'll mention familiar merchandise easily, naturally. Names of advertised goods.

You prefer advertised goods because you know you can depend on them. You save hours of shopping time in a year because you don't need to investigate or examine the things you want. You don't buy on suspicion—you buy with confidence—because you know goods that are consistently advertised must maintain consistent quality. It is ruinous for a manufacturer to turn the spotlight of advertising on an inferior product. And advertisers know it. Hence advertising is a guarantee of dependability.

Read the advertisements regularly. When you go to buy—be informed!

YOU CAN BE SURE THE QUALITY IS "AS REPRESENTED" WHEN YOU BUY ADVERTISED GOODS.

Farm Practice

By W. D. ZINN

A WEST VIRGINIA reader writes that he has about an acre completely taken with crab grass. Crab or quack grass is a persistent grower and it is hard to kill. The best way to rid the land of this pest is to cover it with some plant that will grow more rapidly than will this grass and thus choke it out. Buckwheat is a good crop for this purpose. If sown very thick it will cover the ground quickly and will smother the crab grass. If the first crop will not do the work sow the second crop the same year.

I have found that there is scarcely anything better than sweet clover with which to choke out weeds. I have had it not only kill weeds but smother red clover and kill it also. If sweet clover is to be grown the land must be sweet. Clean cultivation will kill any plant, but is too expensive for the reason that a crop is lost and a lot of labor is expended.

When to Turn to Grass

A PENNSYLVANIA reader writes: "I have been in the habit of keeping my stock in the barn until the 10th of May before turning to grass, but my seed will all be gone by the first of May this year. Will it pay me to pay $20 per ton for timothy hay rather than turn my stock on the pasture? I live in the southern part of the state."

I think all cattlemen will agree with me that it is better for the cattle to turn them to grass just as soon as they can get their living from the sod without working too many hours per day, but they will also agree with me when I say it is much better for the season's pasturing if the stock can be kept off the grass until it is four to six inches high. This is obvious when we think that all the plant food that the grass gets must be manufactured in the leaf. If we keep our grass gnawed to the ground all the time there is no slop room in which to make plant food.

A pasture from which the stock is kept off until the first of June will have a greater grazing capacity for the season than it would have if the stock is turned on before the first of June. This is especially true during a dry season. The covering of grass serves as a mulch to conserve the moisture.

I know a farmer who years ago carried three loads of cattle through the summer on his grass when he turned out the first of March or a little later. For the last ten years he has been turning his cattle out about the first of May and he now grares four loads of cattle on the same boundary.

A Fertilizer Question

Will you tell me if there is more plant food in a ton of 20 per cent superphosphate that carries three per cent moisture than in a ton of 20 per cent that carries 11 per cent moisture? In other words, is there eight per cent more filler in the grade that carries only three per cent? A. D. Col.

IN a 20 per cent superphosphate there are 400 pounds of phosphoric acid and 1,600 pounds of what is sometimes called filler. This filler has no plant food in it. It might consist of sand and would be free from moisture, in which event the sand would weigh 1,600 pounds.

Suppose I take out sand equivalent to three per cent of the ton and put in its stead the same number of pounds of water, have I reduced the plant food in the mixture? Certainly not. Suppose I take out sand equivalent to 11 per cent of the ton or 220 pounds, have I affected the plant food value of the fertilizer? Certainly not. I still have 400 pounds of plant food, no more and no less. So long as I have 400 pounds of plant food in the fertilizer I have a 20 per cent goods, and that would be true no matter how much moisture it would add or take out.

Engineering

A READER inquires about kerosene and distillate and fuel oil as fuel for his tractor, stating that the different oil firms do not agree on the names they give to their different fuels. This is because there is a wide variation as to the fractional distillation of crude petroleum from the different fields, and just as wide a difference in the names used. About the only satisfactory way to handle this is to write to the service department of your tractor firm and find out what gravity oil they recommend for summer and for winter operation, then buy the commercial fuel which comes closest to this gravity, irrespective of what it is called. I. W. D.

Sharp Disk Harrow

MOST farmers are careless about keeping their disk harrow sharp enough to do good work. Unless the disks have sharp knife like edges they cannot cut cornstalks or grass roots properly nor penetrate the ground so as to do good work. The newer types of special steel and extra hard disks hold a good cutting edge much longer than those formerly used, but even these should be gone over every spring to keep them in first-class condition.

Instead of taking their disks apart and taking them to the blacksmith to be sharpened, many farmers now sharpen them at home. One way is to sharpen them in the field by resting a lever over the disk shaft or axle and with the lever hold a hardened steel cutting edge or a rough grinding stone against the disk edge until it is sharp.

Another method is to clamp the disk to a heavy frame, by a binder or other large wheel on a shaft with a socket to fit over the end of the disk shaft, turn this with a belt from a small pulley on a gas engine, and then sharpen by holding the cutting steel or grinding stone against the disk edges.

Paint Over a Stain Finish

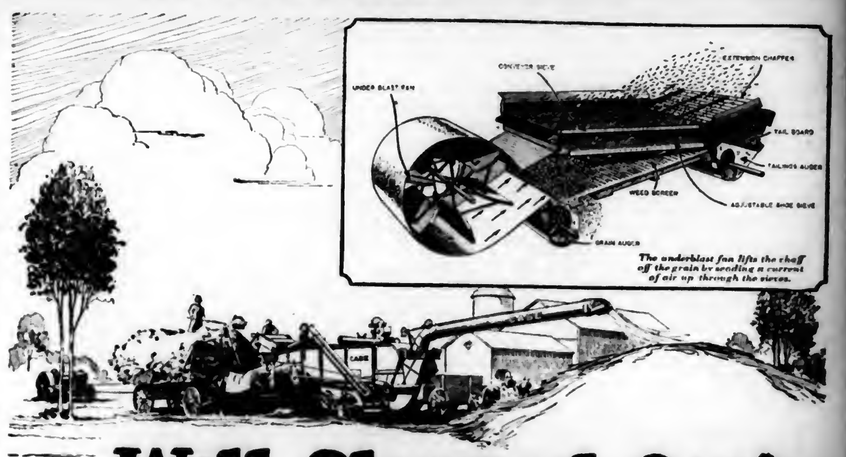
THE question often comes up as to one can use light-colored paint over woodwork or furniture which has been stained. Old stain, especially mahogany, will often "bleed" or show through light colored paints applied over it. This is because the oil and turpentine in the new paint begin to act on the old stain and thin it so it shows through in unsightly blotches.

The proper method in such cases is to seal over the stain with two coats of pure shellac, letting each one dry thoroughly. Then a coat of white lead and flatting oil is applied. If no bleeding occurs in two weeks the work can then be finished as desired. Where the stain is obstinate and works through these two coats of shellac and one of paint, the only thing to do is to put on two more coats of shellac and another of white lead and flatting oil. This may have to be repeated more than once. I. W. D.

Lightning Rods

I am planning on putting up lightning rods this spring and would like to know whether it is necessary to have the glass balls on, or are they just on only for appearance? Please let me know whether they have anything to do with the proper operation of the lightning rods. C. H.

NO, the glass balls just below the points have no value whatever in the proper operation of the lightning rod system and are used simply as ornaments. They are really a detriment and should never be used, since they catch the wind much more than the rod itself and are likely to cause the point braces to pull loose from the roof and let the point flap down and work loose so it does not operate properly. You can get excellent bulletins on the value and proper installation of lightning rods from the Department of Agriculture, Washington, D. C., and from the National Underwriters Laboratories, Chicago, Ill. I. W. D.



"In the 20 years of my threshing experience, I have never run a machine that has the capacity and cleans grain and seeds as well as my Case thresher." John J. Dobmeier, Lake Lillian, Minn.

Well Cleaned Grain *Sums up Your Profit*

AFTER all is said and done, the fact remains that you can make more money with a Case thresher. Exclusive features that no other machine can give you, make possible faster and better threshing.

The last of the four threshing operations—(1) feeding; (2) threshing; (3) separating; (4) cleaning—is particularly effective in a Case. Here the cleaning shoe and underblast fan sum up your profit by saving and cleaning all your grain, due to these advantages:

(1) Smooth, full length grain pan. Cleats or dividing strips, placed lengthwise in the pan, carry the grain evenly and prevent it from shifting to one side of the conveyor sieve. While in the pan, the chaff rises to the top and is easily blown off. An exclusive Case feature.

(2) Full length, adjustable conveyor sieve, with extension chaffer especially designed for recovering all unthreshed grain and heads. There is no waste here. Another Case feature.

(3) In the cleaning shoe, below the conveyor sieve, the top sieve is also adjustable. Thorough cleaning is provided by the full-width underblast fan which shoots an even blast of air up through the sieves. This lifts the chaff, while the grain is shaken down onto the grain auger. Still another Case feature.

Finally, a Case thresher is so simple that anyone can operate it—so durable that the average life is better than twenty years—so reasonably priced that any grain-growing farmer can afford one. That is why more Case threshers are in use than any other three makes combined.

You will want a Case this year, especially after you have read our free books, "Bigger Profits by Better Threshing" and the new Thresher Catalog. Send for both.

J. I. CASE T. M. CO., Inc., Dept. E-55, Racine, Wis.

Established 1842

The New Case Full Line Includes:
Threshers
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Mower Attachment cuts 5 ft. swath. Other sizes for hay, grain, corn, grass, etc.
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"It cost me only 3¢ a day to cut my bacteria count to almost nothing"

13611



Protect your milk from contamination and your cattle from infective disease

Tests conducted by health authorities of milk as produced at farms using the B-K way of sanitation show that B-K prevents contamination and **reduces the average bacteria to less than 5000 per cc.**

Leading dairy farmers everywhere testify to B-K efficiency in preventing spread of disease and keeping the herds in high production.

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Write for free bulletin No. 928-D, "Sterilizing Milk Utensils," and No. 15, "Cattle—Selection, Breeding, Sanitation." Tell us about your problems. **Our experts will advise you without charge.** All correspondence confidential.

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Use B-K according to directions (charts in every package). B-K charts and B-K are supervised by Federal Government. Beware of preparations not under government supervision.

B-K is sold everywhere by stores carrying dairy and poultry supplies, feeds, drugs and hardware.

Money back if not satisfied.

GENERAL LABORATORIES

221 Dickinson St., Madison, Wis.



This herd of ten cows, owned by Marvin Brubaker of Lancaster county, during March averaged 40.1 pounds of milk daily, or a total of 12,431 pounds for the month. Four cows out of Mr. Brubaker's herd were among the high ten for the month in the Garden Spot Cow-Testing Association.—Luke W. Martin.

Farm and Dairy

By L. W. LIGHTY

LAND speculation is at a low ebb if not dead, and so we may get at the real value of the land as agriculturally usable soil. We find it usually changes hands at forced sales now for about a third of its speculative value of ten years ago. Tracts of land with no buildings and no timber are hard to sell at all in many sections. This indicates that the building and home facilities make the land sell. In the last two years many tracts were sold at prices that would not replace the buildings.

At the same time we have sections in southeastern Pennsylvania where land for strictly farming purposes brings well up toward a hundred dollars an acre. These differences in price come largely from reputation. Reputation comes from a reasonable assurance of annual production. But this reputation of sure production applies to sections or localities where naturally favorable conditions prevail. But I have watched farmers buy the low priced land with a poor reputation and make it as productive as any soil. Still as a salable asset the price did not increase much. Probably this is as it should be, because with ordinary management this soil will soon be in its former class of production.

Unfavorable Seasons

A successful city business man remarked to me that unfavorable season's are greatly over-emphasized to cover up bad management of poor farmers. He cited the fact that he is in the habit of driving out frequently after business hours along different roads. When he drives west crops look good regardless of season, but when he drives north crops never look very good and when conditions are not all just right failure shows up generally. The people to the west are far more progressive than those to the north and that is the real cause of failure of the latter.

We have it on good authority that people have eyes and yet see not. That is the trouble with many city men when they try to size up farmers and farm conditions. Their observations may be all right, but their deductions are all wrong. This is a case in point. On his westward drive my friend passes through a section of deep, naturally fertile soil underlaid with clay and lime rock. Very retentive of moisture and yet well drained naturally, so the winter killing conditions have little effect, with the result that in poor seasons the crops make a fair showing even though they are light.

An Unfriendly Soil

But on his northward drive the reverse holds. The soil is light, thin and leachy over the hills and lacks drainage in the flats, so both lack of rains and winter-killing conditions may do their worst and often fields are denuded of vegetation as a consequence. The seeming progressiveness of the people in the former section is owing to their larger income, because I know it for a fact that those in the section of the unfavorable soil conditions have the better schools and in many ways display more general intelligence.

Had this successful manufacturing leader inquired diligently why he was paying 60c for potatoes this year compared with $2 a bushel the year before he would have learned what seasonal conditions and weather conditions mean to the farmers at large. This man's reasoning is on a par of the writers on mass production on a large scale in farming. Because weather and seasonal conditions have little effect on their line of production they are unable to realize that serious over-production and a crop shortage is due to these weather and seasonal conditions. We hear them talk about limited acreage to limit production, which on final analysis is sheer nonsense.

In our eastern country where I am very familiar with millions of acres of farming land we have several hundred acres of land very susceptible to seasonable or unfavorable conditions where there is one acre that is more lightly affected.

Titusville C. T. A.

THE Titusville Cow-Testing Association closed its 4th year, Dec. 31, 1928, with 16 whole year members. There were 394 cows in the association during all or part of the year. The result for the association for the four years is as follows:

Year	Lbs. Milk	Lbs. Butterfat	Av. No. Cows
1924-1925	7510	291.1	
1925-1926	7396	293.9	
1926-1927	7154	291.3	
1927-1928	7557	300.3	

Individual Herd Records

Eight herds with an average of 300 pounds of butterfat. A complete list follows:

Owner	Breed	Lbs. Milk	Lbs. Butterfat
A. K. Hummer			20.84
Merle W. Ongley			9.17
George Matteson			12.74
Clyde Vosburg			9.33
L. B. Carter			31.58
Will Hasbrouck			12.38
Wayne Langworthy			10.93
Albert Hasbrouck			10.35
P. N. Reber, Assistant.	R. & G. H.	10,660	393.2
C. D. Sprout, County Agent.	R. & G. H.	10,520	353.2
	R. & G. S., G. H.	8,605	333.2
	R. J.	6,346	293.3
	R. J.	5,709	293.3
	R. & G. H.	9,820	293.3
	R. & G. H.	9,977	293.3
	R. & G. H.	8,786	293.3

Forrest Haugh, Tester.
Compiled by I. O. Sidebotham.

SEVENTH ANNUAL

Virginia Consignment Sale

At PURCELLVILLE, in LOUDOUN CO.

MAY 23, 1929

FORTY-FIVE Blood-Tested REGISTERED **GUERNSEYS**

Including

The Outstanding Young Bulls

Langwater Francois (consigned by Langwater Farms, Mass.) Born, November 5, 1926. Sire, Langwater Pharoah, Dam, Langwater Fides (on test now) 140 days 6019 M-297 F.

and

Gayoo Royalist (consigned by Gayoo Farm, Horn Lake, Miss.). Born, December 10, 1928. Sire, Gayoo Roberts Actor (now leased by Va. State (College), Dam, Gayoo Royal Rose (14312 M-719.7 F. A. A.)

FORTY FEMALES—INCLUDING

Three high-class heifers by Langwater Shah. One exceptional daughter of Langwater Darnley. Two fine daughters of Langwater Virginian. One big fine daughter of Upland's Sentry. Five splendid daughters of Tuleries Chieftain. One real daughter of Omega of Pine Ridge.

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F. H. JAMES, Sales Manager

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THE SCOTCHMAN'S COW

274 Head to select from

Fully accredited for both tuberculosis and abortion. Two bulls ready for service, from dams with records over 15,000 lbs. 4.20%. Choice cows and calves at farmers' prices.

PENSHURST FARM. Narberth, Pa.

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Fritzlyn Guernseys

Superior young bulls, two to twelve months old. Rich in May Rose blood. Dams with records up to 700 lbs. fat. Also cows and heifers. Herd accredited and blood tested. Write for description and prices. Fritzlyn Farm, Pipersville, Pa.

REGISTERED GUERNSEY BULL FOR SALE. Three years old, name Approval's Monarch, 1-nearest, from accredited herd. Price reasonable. T. E. Gingrich, R. 1, Lancaster, Pa.

REGISTERED GUERNSEYS for sale, by owner. Entire herd of registered Guernseys, abortion tested and tuberculin accredited. Address **BOX 116, Penn's Farmer,** Pittsburgh, Pa.

REGISTERED GUERNSEY COWS, HEIFERS and bulls ready for service. Good breeding, good individuals, accredited herd. Jacob D. Shank, R. 6, Hanover, Pa.

For Sale Two young registered Guernsey cows, May Rose strain, accredited herd. W. C. Rippel, R. 1, Monongahela, Pa.

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Nearly a million homes have learned that Corona Wool Compound, because of its soothing and healing qualities, is one of the best preparations ever placed on the market. It is different from ordinary salves. It is made from oil extracted from sheep's wool and while it is very penetrating and reaches right down to the seat of trouble, it quickly heals but will not smart the most sensitive wound.

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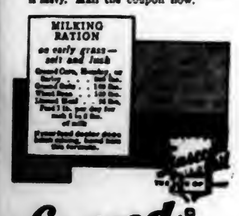
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Samples for Testing

When a small dairy buys milk from farmers for retail trade, and pays by butterfat test, what is the proper method of taking samples and how many milkings a week should be sampled? Is the person who weighs and takes samples required to have a license?

Is milk from the same herd of cows, without any change of feed, likely to vary as much as .5 per cent if the test work is properly done? W. E. C.

THE proper method of taking samples for a milk test is as follows:

1. Thoroughly mix each delivery of milk received from a farm.
2. Use a metal tube, commonly known as a milk thief, that will reach to the bottom of the bottle of milk, then place the finger tips on the upper end of the tube and transfer the sample to the sample bottle containing a preservative such as bichloride of mercury, commonly known as corrosive sublimate.
3. Add additional samples to the sample bottle after each delivery is made, gently agitating the sample bottle when the addition is made so as to keep the milk well mixed.
4. Test the sample for butterfat, weekly or every two weeks.
5. The tester must have a license. Write to the Department of Agriculture, Harrisburg, Pa., concerning this matter. In order to secure a license the tester must take an examination to demonstrate a fitness for weighing and sampling the milk and for testing it.

Milk from the same herd of cows without any change of feed is not likely to vary as much as five-tenths per cent in a week, but it is possible to have this great a variation. If you suspect that the testing is incorrect, report the situation to the Department of Agriculture at Harrisburg. The Department maintains two or three men whose business it is to make an investigation when any complaint is made concerning the Babcock testing by a milk-buying concern. The inspector will run check tests and determine whether the testing is being done correctly or not. A. A. Borland.

Bitter Milk

Can you tell me what the trouble is with our cow? The butter won't come and the milk is bitter, hardly fit to use. She seems to be all right, eats well and is looking good. She won't come fresh before July, but is falling off in her milk every day." B. T. W.

THE abnormal bitter condition of the milk from your cow is caused by an enzyme known as lipase. This abnormal condition is limited, with but few exceptions, to the cow that has been milked several months and is well advanced in pregnancy. The condition likely occurs when the cow is not receiving green feed. The milk is not unwholesome but the odor and taste are so objectionable that no one would care to use the milk. The cream from such milk is churned with great difficulty and sometimes cannot be churned by any method that can be devised.

Reducing the grain ration to the lowest amount that the cow actually needs and giving two or three doses of Epsom salts at intervals of three days may assist in removing the cause. According to C. H. Eckles, the only certain method of preventing the development of this condition in the milk is to heat the milk to the boiling point immediately after milking and then cooling as rapidly as convenient. The pasture grass season will soon be at hand and it is likely that this condition will disappear as soon as your cow gets out on fresh pasture.

A. A. Borland.

New Jersey stands first among all states in the average annual production of its dairy cattle. The average for 1928 was 8,000 pounds of milk.

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The "Utility" Series

The De Laval "Utility" Series Separators are identical with the "Golden" Series in construction and separating efficiency, but lack several non-essential equipment features. They are finished in all black "crinkle" japan. While their prices are less than the "Golden" Series, they are superior in every way to any others. Three sizes—350, 500 and 750 lbs. milk separating capacities per hour. Hand, belt or electric motor drive.



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UNADILLA SILOS

TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

THE top grades of cattle sold about steady this week on a good, firm market, but the plainer kinds showed losses of 25 to 40 cents. Receipts at 44,000 were moderate, about in line with recent weeks, though 10,000 less than a year ago this week.

Top cattle this week sold at $14.95, for yearlings, the same as last week, and the average price of steers at $13.75 was the same as last week and 70 cents higher than a year ago. The average price for the week for the past five years is $10.60. Best heifers sold this week at $14.85, for 643-pound weights, 680-pound heifers selling at the same price last week.

The stocker and feeder market weakened off some late in the week due to light demand. Offerings are meager. The feeling generally seems to be that they are too high compared to fat stock. The spread is very narrow, and has been for some time, though it is usually so at this season of the year. Bulk of feeder steers this week at $12 to $13 show a margin of $1 to $1.50 below fat cattle at $13 to $14.50. A year ago the margin was small—$1.75 to $2.35. For the corresponding week in 1927 bulk of feeders sold at $8.25 to $9.25, against a spread of $9.15 to $12.25 for bulk of fat steers. In 1926 it was a $7.75 to $8.35 market on bulk of feeders, compared with $8.65 to $10 for fat steers. For the corresponding weeks in 1925 to 1925, inclusive, the spread between feeders and fat cattle was around $2 to $3.60 generally, and in 1925 feeders sold largely at $9.50 to $7.40, compared with $9.10 to $10.75 for fat cattle.

The present narrow margin between plain and fat cattle is expected to widen, and the feeling in general is that there will be some movement in both directions—the good cattle higher, and the plain cattle lower. It is about time for grass to begin to show, and grassy beef is subject to some discount.

Good Hog Trade

It was a good week in the hog market, with the close up 15 to 25 cents compared with a week ago. And this with receipts rather liberal, 128,000 here compared to 121,000 last week, though eleven markets had only 510,000, against 512,000 last week, 527,000 the same week last year and 480,000 two years ago. The average weight of hogs is running strong, 242 lbs. this week. Shipping demand is good.

Average price of hogs this week at $11.50 showed a gain of a dime over last week, and compared with $10.15 the same week last year and $10.25 two years ago. If the present trend keeps up the market will soon be in the same notch as a year ago. Five weeks ago the average price here was $3.65 above a year ago at that time, while this week the average is only $1.35 higher. There has been a steady shrinkage in the spread compared with a year ago, because last year an advance set in during April that continued almost without interruption to the middle of October. There is no guaranty, of course, that the market will behave in the same manner this year, though receipts are expected to be lighter. It appears, however, that hogs will be good property, and will justify the best of care to insure good growth and prevent losses from disease and parasites.

The government figures on March meat exports have just been issued, and show some decrease for the month as compared to a year ago. The movement of meats and meat products (mostly pork) abroad during the month was 40 million pounds, against 43 million last year; and of animal fats and oils (mostly lard) 82 million pounds this March against 91 million last year. However, the totals for the first three months of the year show little change from the first quarter of last year. Evidently, there cannot be a large export movement of pork products this year. Supply and prices are against it.

Lambs Much Lower

Lambs lost a dollar, and sheep were off as much as 50 to 75 cents this week, compared to last week's close. Yet receipts were moderate. Chicago had only about 60,000 lambs, a reduction of more than 10,000 from the previous week, and the combined run at leading points was proportionately lighter. The only explanation in sight was packer complaint of poor demand for lamb. Perhaps lambs got too high last week, when tops sold at $18. This week the top was $17. There was a reduction of a cent a pound in the wholesale price of lamb. The average price of lambs for the week dropped to $16.40, the lowest since the latter part of February. This compared with $17.10 last week, $17.35 the same week last year and $15.55 two years ago.

The packers had 17,000 California springers direct this week. They weighed 70 lbs. or better. Outside of these few spring lambs are appearing as yet. Native springers sold here up to $18.50, with $19.40 paid for some far-western springers at markets west of here. There was no serious decline in the lamb market last year until the latter part of July.

Farm Livestock Coop

Canadian livestock interests were linked up in a single organization in Winnipeg when representatives of eight provincial livestock cooperative bodies formed the Canadian Cooperative Livestock Producers, with headquarters in Toronto.

W. D. McKay of Moose Jaw, president of the Saskatchewan Cooperative Livestock Producers, was elected president; D. B. Clemens, Toronto, manager of the United Farmers of Ontario, vice president and treasurer, and J. D. King, Moncton, N. B., manager of the Maritime Livestock Marketing Board, traveling secretary.

Grains and Feeds

It is the same old story in grain trade, weak to lower, with wheat taking the lead and carrying the other grains down in sympathy. Corn, wheat and oats all showed losses for the week. Wheat is now about a dime lower than it was a month ago. Surplus from the last crop is large and growing conditions continue promising for the new crop. Seldom has there been a better winter wheat condition than prevails in this country at this time. Those engaged in speculative trade have tried hard to interest the market, one way or the other, in farm relief legislation, but without material result.

Feeds are generally quite a little cheaper than a year ago, which is to the advantage of those who need to buy. Alfalfa hay is quoted about the same as last year, but little is moving; oil meal is about $2 higher than last year, but cottonseed meal is $16 cheaper; bran and middlings are $15 to $18 cheaper, and hominy sells for about $10 a ton less than last year.

Farm work over wide sections is behind time, due to wet weather, and unless there is plenty of sunshine during the next two weeks corn planting will be late.

Test Poultry for T. B.

Testing poultry for tuberculosis on a number of farms in a southern Illinois county about 12 per cent were found to be reactors. Demonstrations are given to impress dairymen with the importance of keeping clean flocks if they hope to keep their dairy herds free of the disease. It apparently will be a big undertaking to clean up the poultry flocks with sparrows and pigeons free to transport the disease.

Income Tax in Illinois

The Illinois Agricultural Association farm bureau has won the first big set of its fight for a state income tax as a relief for the farmer. The bill has passed the upper house and the state legislature. It provides for a tax of 1 per cent on all incomes of not more than $5,000 a tax of 2 per cent on incomes between $5,000 and $10,000, and a tax of 3 per cent on incomes in excess of $10,000. It allows an exemption of $1,000 for a single person and $2,000 for a married taxpayer or couple and a $500 exemption for each dependant. The proceeds of insurance policies, income from federal, state or municipal bonds, property acquired by gift, devise or descent and salaries from the federal government are exempt. If the taxpayer pays general property taxes he may deduct them total from the amount of his income tax.

Chicago, April 27, 1929. Watson.

Produce Market Review

POTATO markets held firm during the week with both new and old stock meeting a good demand. Prices were from 10c to 25c per hundred pounds higher than two weeks ago. The higher prices encouraged shippers and the movement of old potatoes increased. Dealers report that the Pennsylvania crop, especially in the counties nearby to Philadelphia, is pretty well cleaned up and that it is difficult to get any good stock. Prices of Pennsylvania potatoes on this market ranged from $1.25 to $1.40 per 120-pound sack. The bulk of the supply in the Eastern markets is coming from Maine and prices at Maine shipping points ranged from $1 to $1.05 per 100-pound sack f. o. b.

Shipments of new potatoes from Florida were heavier but the city markets held firm with the best Spaulding Rose bringing $7 per barrel in most markets. A few points reported sales at $7.25. The combined plantings of early potatoes on a commercial basis in nine southern states are about one-third lighter than a year ago. Growers in the second-early group of eight states plan to reduce their acreage by 18 per cent. This would make a total of 293,130 acres in the early and second-early states, compared with 400,420 acres in the 1928 season.

Receipts of asparagus from New Jersey, Maryland and Delaware increased during the week even though the weather was not overly warm. Conditions were more favorable than last week and the quality of the asparagus showed improvement. There were, however, large quantities of white grass offered and this sold rather slowly at prices considerably lower than those received for good green stock. The shipments from Georgia and South Carolina are falling off but in Philadelphia this was more than overcome by the increase in truck receipts.

Prices were lower on all grades and, at the close of the week, New Jersey large green stock sold at $3.50 to $4.50 per dozen bunches with exceptionally fancy lots as high as $6. Medium and small green stock sold at $2.50@3.50 while white of all sizes ranged from $1.25@3.50.

Fancy apples held firm and met an improved demand, on the Philadelphia wholesale market. Maryland 3-inch fancy Paragon sold at $2.15 per bushel, Delaware 2¼-inch Starks at $1.90 and Stayman at $2.15. New Jersey Delicious of fair quality sold at $1.50 to $2. Stayman $1.50@2.25 and Romes at $1.50@2. The Jewish holidays held up trading on the New York market but there was no material change in prices. Apple growers in the Glassboro district report a good demand and large quantities of fruit are being moved from cold storage. Chain stores and buyers from distant cities have been purchasing more heavily than is usual at this time of the year and it appears that supplies in the storages will be cleaned up earlier than normally. Prices as high as $2.25 per bushel for extra fancy repacked fruit have been reported.

Sweet potatoes continued to move very slowly and there was very little interest in this product. New Jersey yellows sold at $1 to $1.25 per ½ basket in Philadelphia while Maryland and Delaware stock brought $1.25 to $1.60 per bushel. The demand was slow in New York and the best New Jersey offerings sold at $1.50 to $2.65 per bushel with extra fancy wrapped stock selling at $2.75 to $2.85.

The movement of strawberries from North Carolina by motor truck increased with an equivalent of about 45 carloads being handled in this way. Heavier receipts in Philadelphia caused prices to drop to 8¾@6 per 32-quart crate. Spinach showed a wide range in quality but the best stock was steady. Prices ranged from 20c to 90c per bushel. Scallions were weak and sold around 50c to 75c per 100 bunches. Rhubarb was in fair request and bought 2c to 3½c. Radishes were more plentiful and dropped to 75c to $1.25 per bushel.

The butter markets were generally steady during the week but trading was rather slow. Arrivals of butter showed an increase over the previous week and were somewhat higher than during the same period a year ago. It appears as though production is increasing due to improving pasture conditions in the South and Southwest. The price of ninety-two score butter at the close of the week in Philadelphia was 46½c per pound.

The New York egg market was firm during the week. There was a shortage of Pacific Coast white eggs and this helped the demand for nearby white stock. The best fresh nearby white eggs sold at 28c to 37c per dozen. Brown eggs were quoted at 28c to 35c. The market in Philadelphia was firm at the close with extra firsts quoted at 31c, firsts in new cases at 29½c and seconds at 28c to 27c.

The live poultry market was fairly satisfactory. Colored fowl were quoted at 35c to 36c, Leghorn fowl at 27c to 31c, broilers at 25c to 45c and old roosters at 16c to 17c. Fresh receipts of dressed poultry were light during the later part of the week. Fowl held steady while roosters were very draggy. Nearby hot house broilers were in light supply and sold at 40c to 55c.

W. R. W.

Farm Conditions

Lackawanna Co., N. E. Pa.

April 22. Have had summer weather in March, and April up until the middle of the month, when a winter snow storm struck us. Snow piled as high as four feet in some sections. Fruit trees that were leafed out and in blossom are damaged. Some plowing done. Roads are being worked and are heavy with mud.

A. A. K.

Centre Co., Central Pa.

April 17. April had a hot wave starting on the 5th and lasting several days when mercury reached 90 degrees, then rain. We have had several days of rain and snow this week. Fishermen returning from trout streams report four inches of snow on the mountains. The ground is far too wet for farming.

A.

Tioga Co., Northern Pa.

April 17. Have had some unusual weather the past month. Much warmer than usual until a day or two ago. The past two days it has snowed and at present some roads are blocked. Grass much further along than common. Sugar season short and poor.

Mrs. P. W. Lawton.

Franklin Co., Southern Pa.

April 24. April came in with hot weather. Rain and cool recently. Some oats are in. Majority of plowing done. Nearly all small grains well advanced in growth, so are the hay fields and the pastures are growing nicely. Fruit trees nearly all done blossoming and the woods are becoming green. Few potatoes planted. No further injury comes to the fruit the prospects are favorable for a crop.

John B. Shank.

Lancaster Co., S. E. Pa.

April 23. A white frost this morning. Rain often for last ten days and very cool. Trees that were in bloom are open yet. Many may have suffered damage by storm and rain. Apple trees are about to open. Wheat and grass looking good. Plowing began early. A few potatoes planted.

C. R. E.

Centre Co., Central Pa.

April 19. Trout season came in this week. Unfavorable weather conditions of Monday and Tuesday more or less protected the fish. However more trout were caught on the first two days than were reported last year at the same time. This is due largely to the great number of trout in the streams as the result of extensive stocking by state fish authorities. But fishing predominated, the streams being too swollen and muddy to permit of fly fishing.

A. I. Alexander.

WEEKLY WOOL MARKET REVIEW

Boston, April 26. The wool market has been reported unusually slow during the past week, says the U. S. Department of Agriculture Market News Service. Most of the sales were very moderate in volume as the mills are buying only from hand to mouth. Prices were somewhat irregular with a few lines quoted lower. Weakness in prices was more pronounced on medium qualities, especially on woolen wools.

A number of moderate quantities of fleece wools were reported sold with prices on the active lines declined slightly lower. Ohio 64s and finer Delaine wool sold at 44c, in the grease. Ohio 58s, 60s, strictly combing, sold at on the low order of the range 43½@47c, in the grease. Fleeces of 56s quality were steady with sales of Ohio strictly combing wool of this grade at 46c in the grease. Clothing 36s brought 44@45c, grease basis, on a few small transactions. Ohio 48s, 50s had a further decline. Strictly combing staple of this grade sold at 46@47c, in the grease, with heavy wools going at a cent less. Low fleece wools were quiet.

Some buying is reported in the West, some California wool going at a range of 21@34c, while medium wools in Idaho have moved at 31@32c. In the bright-wool class the movement is still small. A little medium wool is reported sold at 35@40c, while fine wools in Ohio have sold at 36@38c.

Domestic Wool Quotations
Grease Basis, Ohio and Similar

64s, 70s, 80s, (fine) strictly combing 52@53c
64s 70s 80s, (fine) French combing 50@51c
64, 70s, 80s, (fine) clothing 48@49c
58s, 60, (¼-blood) strictly combing 48@49c
58s, 60s, (¼-blood) French combing 46@47c
58s, 60s, (½-blood) clothing 46@47c
56, (⅜-blood) strictly combing 46@47c
56, (⅜-blood) clothing 44@45c
48s, 50s, (¼-blood) strictly combing 46@47c
48s, 50s, (¼-blood) clothing 44@45c
46s, (low ⅜-blood) strictly combing 46@47c
44s, 46s, 44s, (commom and braid) 43@44c

LIVESTOCK

PITTSBURGH
Cattle

MONDAY'S receipts were around 26 carloads. Steers went at about the same price range as last week but buyers got a little better cattle for the money than then. Best weights steers brought $14.35 to $14.85, being well finished. Good fat steers handy or weights went at 13@14.25, some light steers going at $14. No choice light steers were here, bulk of these offers selling at $13.25@13.75 and looking ten dost as compared with better grade. Nothing doing in stockers or feeders. A few light and inferior steers appeared, largely of dairy blood, and sold at $11@12. No choice heifers were on sale and what a carload of good ones would command remains a mystery. A few good heifers brought $12.50@13.25. The bull market is hard to quote. A few choice handy weight butcher bulls brought $12 per cwt, a few heavier bulls $10.50@11 and good stocker bulls largely $10@10.50 with ordinary bologna $9@9.50. Fat cows were firm, a few of choice quality up to $11 and canners $6@7. Not much business in fresh cows at $50@150 per head.

Choice grain-fed steers 1,200 lbs. or over $14.35@14.60
Good to choice 14 @14.25
Fair to good, do 13.50@14.00
Plain heavy steers 13.00@13.50
Choice handyweight steers 14.25@14.50
Good butcher steers, 1,000 to 1,150 lbs. 13.75@14.00
Fair to good, do 13.50@13.75
Ordinary to fair, do 13.00@13.50
Common, do 12.25@12.75
Good light butcher steers 13.50@13.75
Fair to good light steers 13.00@13.50
Common to medium, do 12.50@13.00
Inferior light steers 10.00@12.00
Feeders Nominal
Stockers Nominal
Choice heavy bulls 10.50@11.00
Choice handy butcher bulls 11.00@11.50
Good handy bulls 10.50@11.00
Fair to good bulls 9.75@10.50
Common to fair bulls 9.00@ 9.75
Inferior bulls 8.00@ 9.00
Choice fat heifers 13.25@13.50
Good to choice heifers 12.50@13.25
Fair to good heifers 10.50@12.00
Common to fair heifers 9.00@10.00
Choice fat cows 10.50@11.00
Good to choice fat cows 10.00@10.50
Fair to good cows 9.00@10.00
Common to fair cows 7.50@ 8.50
Canners and cutters 6.00@ 7.00
Fresh cows, calf or sale 50.00@150.00

Monday's Representative Sales

Steers

No.	Wt	Pr	No.	Wt	Pr
20	1331	14.35	14	[illegible]	14.35
21	1220	14.25	20	1007	14.25
9	1252	14.15	8	1254	14.00
20	1177	14.00	5	1116	13.90
9	1075	14.00	19	1008	13.90
6	1260	13.75	6	1160	13.90
22	1119	13.75	14	1018	13.75
13	1185	13.90	6	1160	13.90
14	1071	13.50	8	975	13.50
11	1033	13.40	7	1011	13.40
14	914	13.25	4	880	13.25
12	1156	13.00	5	950	13.00

Cows and Heifers

1	970	13.25	1	1050	12.50
1	950	11.75	2	1175	11.00
1	1220	10.00	1	1170	10.00
1	1030	10.00	3	1033	9.75
4	1092	9.50	4	1080	9.50
1	1070	9.00	2	1015	9.00
3	1110	8.75			

Bulls

1	1220	12.00	1	1060	12.00
1	1430	10.50	6	1416	10.50
1	1230	10.00	2	1170	10.00
1	1200	9.65	1	1180	9.50
1	920	9.25	1	1100	9.00
1	920	9.00	1	1100	8.25

Hogs

Monday's supply here and elsewhere was rather liberal, 37 carloads in the pens here. Prices were lower all around, but light stuff suffered least. Heavy hogs are not numerous but few are wanted, ranging from $11.75 down as to weight, the heavier the cheaper. Good mixed lots, with not too much weight in the mixture, brought around $12 a few $12.25 and some down to $11.50. Sorted handy weights went at $12.05@12.40 largely. Light Yorkers ranged downward from $11.75. Bulk of pigs sold at $11, a few with weight a little more. Trade was fairly active at the decline of 20@25c.

Heavy wts., 250 lbs. or over $11.50@11.75
Heavy mixed 11.50@12.05
Medium wts., 180@200 lbs. 12.05@12.40
Heavy Yorkers, 165@180 lbs. 12.00@12.10
Light Yorkers, 125@150 lbs. 11.50@11.75
Pigs, 90@100 lbs. 10.50@11.25
Roughs 10.25@10.75
Stags 9.00@ 9.00

Sheep and Lambs

Last week brought a reaction in the market for sheep and lambs. Distributors in eastern centers declare that high cost prevented movement and they forced a decline. Monday's supply was about 17 carloads and included a liberal proportion of sheep. These sold lower strictly good fat wethers going at $10@10.25, not many above $10. No choice handy weight ewes were offered. A few thin weeded ewes brought $6 per cwt. Lambs were lower. One doubledeck carload of choice lambs brought $16.25, and a few other lots went at the same prices closely sorted. The market topping load consisted of all native lambs, treated twice and fed to a finish. They cost $10@10.50 last fall and showed an average of 8 lbs. of wool, so they made money at $16.25. Cull lambs ranged from $8 to $12 according to kind. Early lambs were not numerous. One bunch of 45 head sold straight at $20 per cwt and some better ones at $21.

Good to best wethers $ 9.75@10.25
Fair to good wethers 9.00@ 9.75
Good mixed 9.25@ 9.75
Fair to good, do 7.50@ 9.00
Common to fair 6.00@ 7.50
Inferior sheep 4.00@ 6.00
Good to best lambs 16.00@16.25
Medium lambs 13.00@15.00
Culls and common 8.00@12.00
Early lambs 17.00@21.50

Calves

Receipts were liberal, 1,450 head, and the market was weak and lower. Good veal calves brought $16 per cwt., seconds $12@13.50 and inferior $8@11.

CHICAGO
Cattle

Chicago, April 29.—Today's receipts totaled about 17,000 head. Market steady with best steers here selling at $14.90. Common to fair yearlings $11.50@12.75. Fair to good yearlings 12.75@14.00. Good to choice yearlings 14.00@14.50. Choice to prime yearlings 14.50@15.00. Common to fair steers 11.50@12.75. Fair to good corn feds 12.75@13.75. Good to choice corn-feds 13.75@14.25. Choice to prime corn-feds 14.25@14.90. Common to good cows 8.00@ 9.75. Good to prime cows 9.75@11.50. Heifers, common to good 9.00@12.00. Heifers, good to prime 12.00@14.85. Canners and cutters 6.00@ 8.00. Inferior light bulls 8.50@ 9.00. Bologna bulls 9.00@10.25. Fair to choice butcher bulls 9.75@12.25. Stockers, common to fair 10.00@11.25. Stockers, good to choice 11.25@12.00. Fancy yearling stockers 12.00@12.75. Stockers and feeder heifers, common to choice 12.75@13.25. Stockers and feeder cows 8.75@11.00. Feeders, common to fair 7.75@ 9.00. Feeders, fair to good 10.25@11.25. Feeders, good to choice 11.25@12.25. Feeders, choice 12.25@13.00. Feeders, selected feeders 13.00@13.75. Milkers and springers 80.00@125.00. Common to best vealers 13.50@17.00.

Hogs

Static thousand hogs, including 30,000 direct to packers were in the yards today. Market 10@20c lower.

Heavy butchers 270 lbs. up $11.20@11.50
Medium 225 to 265 lbs. 11.30@11.65
Lights 190 to 225 lbs. 11.50@11.65
Selected, 100 to 190 lbs. 11.50@11.65
Mixed packing 270 to 350 lbs. 10.25@10.75
Heavy packing, 350 to 500 lbs. 10.25@10.50
Roughs, 300 to 500 lbs. 9.75@10.00
Stags, subject 70 lbs. dockage 9.50@10.25
Pigs, best grades 10.00@11.15

Sheep

About 18,000 sheep and lambs were on sale. Market steady to a quarter lower.

Wethers, all ages $ 8.50@13.00
Yearlings 12.00@14.00
Western ewes 6.50@10.00
Native ewes 6.50@10.00
Fed western lambs 14.50@16.00
Native lambs 11.00@15.75
Feeding and shearing lambs 13.50@16.50
Spring lambs 15.50@20.00

Weaned stock $1 to $2 above foregoing quotations.

Stock Movement

	Cattle	Hogs	Sheep
Receipts for week	43,874	128,350	59,741
For previous week	44,589	121,408	71,722
Same week last year	53,085	118,981	65,205
Shipments for week	11,071	25,478	13,888
For previous week	13,568	28,982	17,675
Same week last year	16,880	34,173	18,450

LANCASTER
Cattle

Lancaster, April 29. The cattle market today was very dull. Beef steers and yearlings sold at about steady prices, or 25@40c lower than a week ago. Stockers and feeders nominal. Calves firm with top at $18. Hogs slow at steady prices.

Good steers $12.75@13.75
Medium to good 11.75@12.75
Common to medium 8.75@11.75
Good to choice heifers 10.50@12.00
Medium and common 7.75@10.50
Good to choice cows 8.25@ 9.75
Common to medium 6.50@ 8.00
Low cutter and cutter 4.00@ 6.75
Good to choice beef bulls 10.50@11.75
Cutter, common and medium 7.75@10.50
Feeder and stocker cattle 7.50@12.00
Good to choice calves 15.50@18.00
Medium 13.50@15.50
Culls and common 7.50@13.00

Hogs

Heavy weights, 250-350 lbs. $11.75@13.00
Medium weights, 200-250 lbs. 12.25@13.00
Light weights, 160-200 lbs. 12.25@13.00
Packing sows (rough and smooth) 8.25@11.75

Miscellaneous Produce

Philadelphia

Eggs.—Firsts 30c; seconds 28@27½c.

Butter.—Creamery tubs, 92 score, 46½c; 90 score, 45½c.

Poultry.—Fowls, 30@32c; chickens, 36@43c; broilers, 38@48c; roosters, 21@27c; capons, 36@38c; pigeons, per pr., 50@55c.

Apples.—E. S. No. 1, per bu., nearby, Staymans, $1.50@1.75; Romes and Winesaps, $1.50@1.75.

Strawberries.—N. C., 32-qt. crate Klondikes, choice, 25@30, small, $3.00.

Asparagus.—N. J. & Md., doz. bunch crates, green, large to very large, $3.50@6; small, $2.50.

Beans, snap, Fla., ½ bu. hmps., green, $2.50@3.

Cabbage.—S. C., ½ bbl hpr., 75@90c.

Cucumbers.—Fla., ½ bu., $2.50@3.25.

Kale.—Nearby bushels, 25@30c.

Mushrooms.—Nearby, 3-lb. bskt., 75@$1.00.

Lettuce.—Arizona Iceberg, crates, 4 to 5 doz., $3.50@5.25; Calif. crates, $4.50.

Onions.—Texas crates, yellow U. S. No. 1, $1.40@1.75, yellow boilers, $1@1.25.

Potatoes.—Pa. round whites, per 120 lbs. $1.40@1.50; Fla., new stock, per bbl., Spaulding Rose, U. S. 1, $6.75@7.

Sweet potatoes.—N. J. ½ bskt., yellow, $1@1.25; Md. and Delaware, No. 1, $1.50@1.60.

Tomatoes.—Fla., choice to fancy, $2@4.50.

Radishes.—Nearby, bu., 75c@$1.25.

Rhubarb.—Nearby bunches, 2@2½c.

Lancaster

Butter.—Country butter, 52@56c; creamery, 58@65c.

Poultry.—Chickens, dressed, $1.25@2.50 each; springers, 75c@$1.25 each; ducks, $1.50@2.50 each; squabs, 25@50c each.

Eggs.—Fresh eggs, 30@35c.

Vegetables.—Asparagus 15 & 25c per bunch; beets, 10@15c per bunch; egg plants, 15@30c each; string beans, 35@40c per ½ pk; beans, Lima, 35@40c per pt. box; cabbage, 10@20c per head; carrots, 8@15c per bunch; Brussel sprouts, 25@30c per qt. box; cauliflower, 25@40c per head; celery 15@25c per bunch; cucumbers, 80@15c each; endive, 10@15c per head; lettuce, 10@20c per head; radishes, 5@10c per bunch; mushrooms, 25@30c per pt. box; peas, 25@30c per ½ pk; onions, 20@25c per ½ pk., green onions, 8@10c per bunch.

Potatoes.—Old, per bu., 65@75c; new, 30@35c per ½ pk.

Sweet potatoes. 20@25c per ½ pk

York

Butter, Country 45@50c; separator, 55@60c.

Eggs. Fresh, per doz., 25@28c.

Poultry.—Hens, per lb., 27@31c; Leghorns, dressed $1.25@1.50 each; heavy, $1.50@2 each.

Vegetables. Potatoes, 60@70c per bu.; cabbage, 5@20c per head; lettuce, 10@20c, bd.; spinach, 10@15c ½ pk.; celery, 8@15c stalk; onions green 5@8c bunch, asparagus, 15@18c per bunch; rhubarb, 5@8c bunch.

Apples. Per bushel, $1.25@2.25.

Baltimore

Butter. Creamery, fancy, 47½@48c; rolls and dairy prints, 34@35c; packing stock, 33c; butterfat, lb., 45½@46c.

Eggs.—Md.-Pa. nearby firsts close off), 27½c; western firsts, 27½c; southern, 26½c, over, 25@25c; small to medium, 22@23c; Leghorns 28@29c; current receipts, 27½@28c; Guineas, young 1¾ lbs. or over, each, 75c@$1.10; roosters, 18@20c; ducks, 30@32c; pigeons, pair, 25@30c; squabs, 50@55c.

Potatoes. Old, 150-lb. sack, $2@2.25 new, No. 1 bbl. $6.50@7.25.

Apples. Fancy jack bu., $1.50@2.

Asparagus. Per crate, choice to fancy, $2@3.50.

Onions. 100-lb. bag, $2@2.50.

New York

Butter.—Creamery, higher than extras, 46@46½c; extras, 45½c; firsts, 41½@43½c.

Eggs.—White, eggs, current receipts, average extras, 34@35c; extra firsts, 31@33c; mediums, 28@31c.

Poultry.—Live, by express, fowls, 28@30c; broilers, 25@33c; ducks, 17@32c; turkeys, 30@40c.

Apples.—Eastern and Southern, bu. bskts., $1@1.50; barreled stock, $3@11.

Apples. U. S. No. 1, per bu., nearby, Staymans, $1.50@1.75; Romes and Winesaps, $1.50@1.75.

Strawberries. N. C., 32-qt. crate Klondikes, choice, 25@30, small, $3.00.

Asparagus. N. J. & Md., doz. bunch crates, green, large to very large, $3.50@6; small, $2.50.

Beans, snap, Fla., ½ bu. hmps., green, $2.50@3.

Cabbage. S. C., ½ bbl hpr., 75@90c.

Cucumbers. Fla., ½ bu., $2.50@3.25.

Kale. Nearby bushels, 25@30c.

Mushrooms. Nearby, 3-lb. bskt., 75@$1.00.

Lettuce. Arizona Iceberg, crates, 4 to 5 doz., $3.50@5.25; Calif. crates, $4.50.

Onions.—Texas crates, yellow U. S. No. 1, $1.40@1.75, yellow boilers, $1@1.25.

Potatoes. Pa. round whites, per 120 lbs. $1.40@1.50; Fla., new stock, per bbl., Spaulding Rose, U. S. 1, $6.75@7.

Sweet potatoes.—N. J. ½ bskt., yellow, $1@1.25; Md. and Delaware, No. 1, $1.50@1.60.

Tomatoes.—Fla., choice to fancy, $2@4.50.

Radishes.—Nearby, bu., 75c@$1.25.

Rhubarb.—Nearby bunches, 2@2½c.

Lancaster

Butter.—Country butter, 52@56c; creamery, 58@65c.

Poultry.—Chickens, dressed, $1.25@2.50 each; springers, 75c@$1.25 each; ducks, $1.50@2.50 each; squabs, 25@50c each.

Eggs.—Fresh eggs, 30@35c.

Vegetables.—Asparagus 15 & 25c per bunch; beets, 10@15c per bunch; egg plants, 15@30c each; string beans, 35@40c per ½ pk; beans, Lima, 35@40c per pt. box; cabbage, 10@20c per head; carrots, 8@15c per bunch; Brussel sprouts, 25@30c per qt. box; cauliflower, 25@40c per head; celery 15@25c per bunch; cucumbers, 80@15c each; endive, 10@15c per head; lettuce, 10@20c per head; radishes, 5@10c per bunch; mushrooms, 25@30c per pt. box; peas, 25@30c per ½ pk; onions, 20@25c per ½ pk., green onions, 8@10c per bunch.

Potatoes.—Old, per bu., 65@75c; new, 30@35c per ½ pk.

Sweet potatoes. 20@25c per ½ pk

York

Butter, Country 45@50c; separator, 55@60c.

Eggs. Fresh, per doz., 25@28c.

Poultry.—Hens, per lb., 27@31c; Leghorns, dressed $1.25@1.50 each; heavy, $1.50@2 each.

Vegetables. Potatoes, 60@70c per bu.; cabbage, 5@20c per head; lettuce, 10@20c, bd.; spinach, 10@15c ½ pk.; celery, 8@15c stalk; onions green 5@8c bunch, asparagus, 15@18c per bunch; rhubarb, 5@8c bunch.

Apples. Per bushel, $1.25@2.25.

Baltimore

Butter. Creamery, fancy, 47½@48c; rolls and dairy prints, 34@35c; packing stock, 33c; butterfat, lb., 45½@46c.

Eggs.—Md.-Pa. nearby firsts close off), 27½c; western firsts, 27½c; southern, 26½c, over, 25@25c; small to medium, 22@23c; Leghorns 28@29c; current receipts, 27½@28c; Guineas, young 1¾ lbs. or over, each, 75c@$1.10; roosters, 18@20c; ducks, 30@32c; pigeons, pair, 25@30c; squabs, 50@55c.

Potatoes. Old, 150-lb. sack, $2@2.25 new, No. 1 bbl. $6.50@7.25.

Apples. Fancy jack bu., $1.50@2.

Asparagus. Per crate, choice to fancy, $2@3.50.

Onions. 100-lb. bag, $2@2.50.

New York

Butter.—Creamery, higher than extras, 46@46½c; extras, 45½c; firsts, 41½@43½c.

Eggs.—White, eggs, current receipts, average extras, 34@35c; extra firsts, 31@33c; mediums, 28@31c.

Poultry.—Live, by express, fowls, 28@30c; broilers, 25@33c; ducks, 17@32c; turkeys, 30@40c.

Apples.—Eastern and Southern, bu. bskts., $1@1.50; barreled stock, $3@11.

Potatoes.—L. I., 150-lb. sack, old, $2.75@3; Maine, $2.35@2.60; new, Fla., Spaulding Rose, No. 1, per bskt., $6.75@7.25; Bermuda, No. 1, per bbl., $7@8.

Pittsburgh

Butter.—Creamery prints, 92 score, 52@52½c; tubs, 51@51½c; local tubs, 48@49c.

Eggs.—Fresh, select white, 31@33c; brown, 29@32c; current receipts, 27½@29c.

Poultry. Heavy hens, 32@34c; Leghorns 30@32c; broilers, 45@48c; roasters, 18@20c; ducks, 30@32c; geese, 20@22c; pigeons, 40@50c per pair.

Potatoes.—Per 150-lb. sack, U. S. No. 1 Mich. Rurals, $1.65@1.75; 2 bu. sack, Maine Green Mts., $2@2.10.

Apples.—Bu. bsk. N. Y. Baldwin, $1.75@2; W. Va., unclassified 2½-inch, Willowtwig, $1.25@1.35; bbl. U. S. No. 1 N. Y. Balwin, $4.50@5.

Lettuce.—Ohio hothouse, 10-lb. basket, $2.25@2.35.

Mushrooms.—Pa. 3-lb. basket, $1@1.25.

Cucumbers.—Ohio hothouse chip basket, $2.50@2.65.

Spinach.—Virginia, bu., $1.15@1.25.

Kale.—Va., bu. bskt., 75@80c.

CASH GRAIN

Chicago, April 29.—The following cash prices ruled here today: No. 2 hard wheat $1.13@1.14; No. 2 yellow corn, 91½@92c; No. 2 mixed corn, 88c; No. 2 white oats, 48c; No. 1 rye, 186½c.

A New Blizzard
Ensilage Cutter and Hammer-Mill in One



Cuts ensilage and fills silos with Blizzard economy and thoroughness. Changed in less than ½ hour into wonderful hammer-mill. As mill it requires less power and speed than others; it cuts roughage into 3-16-in. lengths before grinding. Grinds and mixes roughage and grain (see picture). Write for circular describing this marvelous machine which has much greater capacity than other hammer-mills, due to larger screen area.

We continue to make the standard *Blizzard Ensilage Cutter*. Light tractor gives ample power. Gears run in oil. Self-feeding saves one man. Feeds as fast as 2 can unload. No choking or clogging. Unlimited elevating capacity. Outlet adjustable.

Write for Catalog.

THE JOS. DICK MFG. CO., Dept. 15 Canton, O.

12 Cows average $343



Figuring All Costs, that's the Average extra profit earned by a good silo, properly handled, in Dairy Big Facts. 25% saved on 100 lbs. milk. 150 gals. more milk per cow; 50 lbs. more butter per 1 year, etc.

Rib-Stone Concrete Stave "The Best Silo Ever Built" "GLOBE" Wood Stave

Rib Stone Concrete Staves. Silos seen pay their cost. No Hoops Ever. Air and water-tight, fire and acid proof. Rib plan adds all strength, a continuous door, permanent ladder all around. Erected complete by us and guaranteed unconditionally.

Globe Wood Silos, with 13 years tested results are now a Rib Stone product. Permit loose construction, heavy metal fastenings. Exclusive features. Send for booklet "Silos and Silage" by F. R. Fricke. It's free, tells you how to get silo.

618 STONE CONCRETE CORPORATION
Ce Roy, N. Y.

TIGHT BINDING TEXT CUT OFF MUTILATED PAGE



You Might As Well Have The Best

SOME people "shop around" for tires under the impression that they are saving money. Others buy Kelly-Springfields—and don't have to pay any more for them.

Contrary to general belief, Kelly-Springfield tires are *not* high-priced. Their reputation has given many people the idea that because Kellys are so good they must cost more.

If you'll drop in and see the nearest Kelly dealer, we believe you'll be surprised to learn how Kelly prices run.

"Kelly dealers everywhere—there must be one in your town"

KELLY-SPRINGFIELD TIRE COMPANY
GENERAL MOTORS BUILDING NEW YORK, N. Y.

KELLY SPRINGFIELD BALLOON TIRES

NEIGHBOR DAVE SAYS-



I can recollect when th' cows used t' roam on th' sidewalks in Town. But times has changed an' you never see a cow there no more, but Bill says you can see plenty calves there most any day, an' most o' 'em twins. An' th' highway fences used t' be just lines o' rust, but they's more Leadclad fences bein' used now, an' th' fences in our neighborhood is lookin' better. Th' life of a fence is in th' coatin' thats put on th' wire t' keep th' weather out, an' Leadclad wire has a thick coat of pure lead — seven times as much as th' coatin' on th' ordinary fence. Suppose you write t' me, an' I'll tell you about it. {Address NEIGHBOR DAVE, of th' LEADCLAD WIRE CO., MOUNDSVILLE, W.Va.

P.S. We got Leadclad Mesh Fence for poultry, too. Write.

SHORTHORN DISPERSION SALE
RAVENNA, OHIO FRIDAY, MAY 10

21 Lots. 10 Cows with calves by side and rebred. 2 Yearling heifers. Yearling bull a grandson of Wyndcliffe Emperor and out of a Gloster Maide dam. 2-Year-old bull sired by Queens Guard out of a Gypsy Maide dam. This is a real producing herd of cattle. There has never been a case of abortion or a reactor in this herd. A clean bill of health furnished with each animal on sale day. Breeding guarantee and 60-day retest. Farm located midway between Kent and Ravenna on State Route 56. For Catalogues address,

S. SWARTZ, Ravenna, Ohio. Auctioneers: Burritt B. Allen, Ravenna, Ohio and C. M. Hess, Akron, Ohio

SILOS Special Direct from Factory Prices
FAMOUS AUTOMATIC-TAKE-UP-HOOPS
Buy the Best and Pay Less. Order Now and Save Money.
INTERNATIONAL SILO CO., Box H, LINESVILLE, PA.

Farm Relief

THE whole country seems to admit that the farmer is not having a square deal in the way of financial advantages and that some legislation is justly due him that will enable him to compete with other industries, but so far about all that has been handed to him is some political soothing syrup.

The farmers are not a class of people who need special advantages in order to enable them to subsist, neither are they willing to be put to disadvantage in order to enrich other classes. All they need is an equal chance instead of being discriminated against.

Most of our legislators have pledged themselves to do something that will tend toward better financial conditions for the farmer, and he has especial reasons to expect some relief legislation from this administration. The people who make their living tilling the soil ought to tell the legislators what they need. Their needs are not identical, but there are a few things that would benefit nearly all of the "dirt farmers." I will mention a few of them.

The first and greatest obstacle to overcome is the great natural provision of almost unlimited variety and amount of soil and climatic wealth found in the North American continent and adjacent islands. Certain economists are pretending to be afraid the time may soon arrive when this country will not be able to feed her population. I firmly believe that if agriculture was as well paid for its products as are other industries North America and the adjacent islands could feed one-half of the present population of the world. The only fear our economists need have is that town people may some time be obliged to pay as dearly for their food as they now pay for other necessities and may not have so much to spend for luxuries. The year 1919 was the most difficult time in the history of this country for the farmer to secure help and still the farmers produced more products than were ever before produced in this country.

Reclamation Projects

There are a few things I would recommend in the way of governmental regulations to benefit the farmer.

First, stop taxing the people to bring more land under cultivation. Uncle Sam should not finance irrigation and drainage projects which are so loudly boosted by orators proclaiming that they will add such a large increase to the agricultural production. There is no need of increasing production when we already have a burdensome surplus.

The chief object of most of our government projects is to enrich the projectors such as contractors, grafters, political heelers and power companies who are enriched chiefly at the farmer's expense.

It might be a good plan to store up some of our rich natural resources and save them for a time of real need. For instance, some military experts are becoming alarmed about the rate at which our petroleum supply is being consumed, fearing there might be a shortage by the time we have another war and stating that gasoline is indispensable in the present mode of warfare. Uncle Sam should have corked up the Tea Pot Dome instead of enriching some political grafters with it. It would also be a good plan to save the money that is spent for sham investigations and mock trials. It would do to pay our war debt.

The Tax Problem

Second, relieve us of some of the burdens of taxation. Taxes are surely and rapidly increasing and now look like rents to the small holders of real estate. Public affairs cannot be managed as economically as private business, but there is too great a difference between them now. Public improvements are too expensive compared with private enterprises and some are unnecessary and of little benefit to the people in general.

Salaries of most public servants [illegible] are too high. There is no room where a person in office should receive as much compensation as a clerk works as a person of average ability can earn in a lifetime and then be pensioned after a certain time of service and also sometimes their families after them. Some widows manage to raise families by working at the washtubs and make better citizens of their children than the recipients of large salaries or [illegible] sions.

We cannot expect a set of public servants without paying living wages and I will admit we most likely have some underpaid public servants but the greater part are over paid. The high salaries and opportunities of graft are prizes for unscrupulous persons to gamble for. These conditions are conducive to political trickery and we get more tricksters into office than real honest patriotic public servants.

Third, we need cheaper labor. The price of labor is far out of proportion to the price of farm products. When common labor is worth thirty to fifty cents per hour and skilled labor somewhere from one to two dollars per hour it takes a quarter to three quarters of an acre of grain to pay for a day's labor, and in case of crop failure it soon takes the farm. The real cause of the present high prices of labor is the world war and government interference is instrumental in maintaining them.

World Markets

Trusts and syndicates are regulated by acts of Congress and commerce commissions in order that they may not unduly influence prices of commodities on the market, but the politicians have decreed that labor is not a commodity. I contend that anything that is contracted for on the open market is a commodity. The labor organizations are the most powerful combinations, but no politician has the courage to admit it because they are strong factors in politics.

Fourth, we need equal advantages in the markets of the world. The prices of staple agricultural products are largely fixed by [illegible] countries are able to [illegible]. We are receiving no benefit from a tariff on [illegible] of which we have a surplus for export. Most if not all of the manufacturing countries have the benefit of a protective tariff which gives them [illegible] prices above the world's [illegible].

I wish some one would explain why foreigners can bring their agricultural products [illegible] high tariff wall to [illegible] manufactured goods to sell us while the foreigners are [illegible] manufactured goods at prices at which they are prostrated here. Or tell us how to secure foreign commerce with our commodity prices three times as high as the rest of the world.

W. F. Wagner.

This picture says, *change spark plugs every* 10,000 *miles*



THIS is what happens in time to the spark plugs in your engine. Plugs like this mean hard starting, slow pick-up, poor idling, loss of power.

All spark plugs deteriorate in use and need to be changed. After a season's driving, or 10,000 miles, put in a new set of AC's.

Because of their patented one-piece, gas-tight construction and welded side-electrode, AC Spark Plugs insure easy starting, fast pick-up, increased power, brilliant performance. Sold by the best dealers everywhere.

THE STANDARD SPARK PLUG OF THE WORLD

AC Spark Plug Company
Flint, *Michigan*

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"He's a successful farmer?"
"Yes, he's sold his farm to a golf club!"

• • •

Definition of a town: A congested spot between two parking places.

• • •

"What is the first thing that turns green in the spring?"
"Christmas jewelry."

• • •

Usher (to cold, dignified lady): Are you a friend of the groom?
The Lady: Indeed no. I am the bride's mother.

• • •

"Rather a sharp thunder storm last night?"
"I hadn't noticed; I was talking with my wife all evening."

EXCLUSIVE VALUES *that* YOU *can check!*

NO OTHER SIX AT THE PRICE HAS ALL THESE FEATURES



WHIPPET SIX SEDAN
with 7-bearing crankshaft
$760

Coach $695; Coupe $695; Coupe (with rumble seat) $725; De Luxe Sedan $850; Sport De Luxe Roadster $850 (including rumble seat and extra).

WHIPPET FOUR COACH
$550

Coupe $550; 4-pass. Coupe $580; Sedan $625; De Luxe Sedan $695; Roadster $500, 4-pass. Roadster $530; Collegiate Roadster $595; Touring $495; Commercial Chassis $350. All Willys-Overland prices, f. o. b. Toledo, Ohio, and specifications subject to change without notice.

THE new Superior Whippet is the only low-priced Six with ALL these important advantages: Seven-bearing crankshaft, full force-feed lubrication, "Finger-Tip Control," silent timing chain, extra long wheelbase, oversize balloon tires, shock absorbers, adjustable Timken bearings throughout pinion and differential, extra long connecting rods and Nelson-type aluminum alloy invar-strut pistons. The new Superior Whippet Six also has more frame cross members and a greater braking area than any of its competitors.

NEW SUPERIOR FOURS *Whippet* SIXES

PRODUCT OF WILLYS-OVERLAND, INC., TOLEDO, OHIO

SWINE

GREENFIELD FARMS The place to buy REAL Poland-Chinas. Now offering big, growthy fall gilts bred and ready to breed for early fall farrow. Also spring boars, sows and gilts. Prices right.
GREENFIELD FARMS, Tiffin, Ohio

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On a Mountain Farm

FOR six years we have been living in town. The middle of March found us back on the farm. This farm consists of thirty odd acres of fertile land. The house is old-fashioned with two rooms upstairs and four below. The house has never been painted inside or out. It used to stand beside the public road, but like many another old house the road has left it and now runs back of the house several hundred yards.

After being used to painted walls, bath, hot and cold water, electric helps, etc., the bare walls and oil lamps seem a little bit dreary, but we plan on improving the old place as fast as we are able. We cannot do it all at once, so must be patient. We did buy a much advertised lamp which burns ninety per cent air—I believe this is the chief of the company. It is satisfactory all right. We have paint for the walls of the living room. As this room is dark we are adding an extra window and the overhead will be painted cream, the side walls of greenish gray. This will make the room lighter. The posts in this house are exposed and we shall leave them so. There is an old time fireplace which will have to be remodeled with concrete, as the stones of which it is built are crumbling. We shall also build a concrete hearth. The one now in use is of large flat stones.

No Landlord

There are four cows to freshen soon. A condensary thirty miles away is running a truck past our farm daily. They pay twenty-four cents per gallon for the whole milk. Whether it will pay better to sell to them or buy a separator and have the skimmed milk for hogs and calves is a question I can hardly decide. It seems to us it would pay better to use the separator where one already owns one. However many are leaving the separators and selling to the condensary. A creamery in a town twelve miles away is anxious to buy all the cream they can get.

At this writing (April 12) the apple blossoms are drifting in at the open window and the mocking birds, the wrens, the tom tits, the sparrows and dozens of other birds are busy building summer homes and the wondrous melody of the early morning chorus fills one with rapture. What does it matter if the house is old-fashioned and bare? It is home. And it is restful and quiet, and there's no landlord coming after the rent every month, and there's no water bills, or light bills falling due; there are no grocery bills for eggs, and the onions, radishes, beets, cabbages, beans and peas give promise of a still greater reduction soon.

A great bank of storm clouds is piling up in the west and the setting sun is gilding them with crimson and gold. Many of my town friends tell me they envy me the peace and quiet and plenty of the farm. Really we are lucky to have a garden, a pasture, a field for corn, potatoes, tobacco and other crops, and a flock of hens to furnish the eggs which my city friends are so eager to buy.

I'll be running in occasionally to let you know how I get along.

Adda C. Hall

Glimpses of Farming in Europe

(Continued from page 5)

Not only are the fields small, but the land belonging to an individual farmer usually consists of several tracts of a few acres each. Some effort has been made to induce the peasants to consolidate these small holdings, but they are greatly attached to the land which in most cases has been in their families for many generations. Aside from sentiment, each peasant also thinks his land is better than that of his neighbors—an idea not uncommon among American farmers. There is also a sales tax of 27 per cent on land, which practically prohibits its sale except in emergencies.

Now I must not leave France without telling a little about how the farmers live. Just imagine Pennsylvania with a small village every mile or two in every direction and no houses on the farms. The house and barn are almost invariably built together and usually around a small open courtyard. The manure pile is in the street in front of the house, and I might say that it doesn't add much to the beauty of the scene. Convenience and long-established custom seem to be the only reason for the practice. I didn't see a single house in Europe built all of wood except in Switzerland; they are either brick, stone or stucco with tile roofs and many of them have been lived in for several hundred years.

I was much interested in learning the exact meaning of the word "peasant" as it is used in Europe, and the best definition I could get was "a farmer who does a part or all of his own work." He may be prosperous—even rich—but as long as he works with his hands he is classed as a peasant.

We stopped just long enough at Strasburg to see the famous Cathedral with its wonderful clock, some houses which have been lived in continuously for 600 to 700 years, a bridge and portions of a wall built by the Romans more than 1,500 years ago, and the storks which come to Strasburg and Vienna every summer just as the robins come to Pennsylvania.

Our next stop was at Mulhouse in southern France, the center of the French potash industry which supplies about one-third of the potash that goes into American fertilizer. Here we visited a mine 2,000 feet below the surface and saw every stage involved in the mining and refining of the crude salts. We were convinced that if it were not for cheap labor and efficient operation of the mines in France and Germany American farmers would pay a much higher price for their potash.

Plow under Corn Stalks

A NUMBER of people cut the corn stalks just because they think that they cannot plow them under. I have plowed them under for a number of years but with more or less trouble till last year when I got a special three inch two-bottom corn borer plow. The plow has a great clearance and it is a pleasure to turn under the heaviest stand of corn stalks. It turns all trash under perfectly. It is a general-purpose plow and we like it very much for fall plowing. For potatoes the corn stalks are wonderful. I do not cut a single stalk except what goes into the silo.

Berks County, Pa. C. R. Bashore

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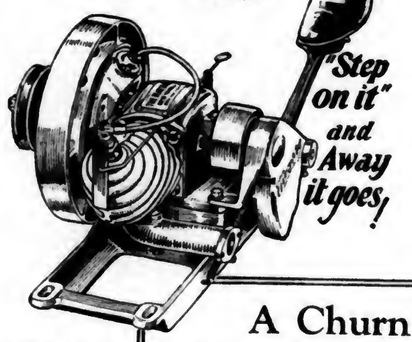
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By ALVA AGEE

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"Reliable Relief"

The Wisconsin Extension Director entitles his annual report "Reliable Relief for Agriculture." It is a report of services rendered the state's agriculture and rural life and the progress made by individuals and associations. The title leaves the impression that some forms of "relief" is not to be reliable, and we know that is so.

The first sentence of the report reads "Whatever may be done, and doubtless something will be done, through legislation for the relief of agriculture in general, the stubborn fact remains that each individual farmer, himself, must work out his own destiny."

The only safe course for the individual is to do the very best for himself, putting his dependence in himself, and then cherish the hope that added benefits through government action will be spread over all farming.

A Discovery

I have been studying a man whom necessarily I meet now and then, and who finds much more to condemn than to praise in the people he knows. It I say that a certain man seems to me a great secretary of the treasury, he sees only selfishness in his course. If I show him a neat lawn, he sees only a few dandelions in it.

Now, I may be wrong about the public official, and maybe a dandelion isn't as pretty as I think it is; but all the world isn't out of joint. My discovery is that this man suffers from a consciousness of unfitness in himself, and tries to hide his tears from himself and others by seeing little that is worthy in the world around him. The cure may be not in defending others, but in making him think better of himself. It is worth trying.

Dandelions

If dandelions cost a dollar per plant we should see a few in the lawns of rich people. The yellow blossom with the green background afforded by the grass, gives the artistic effect that people pay money for.

Dandelions have two drawbacks. The first is that anybody can have them and so there isn't anything distinctive about them or indicative of wealth in the owner of the lawn. Some of us buy better cars than we can afford, and wear better clothes, because when we go from home we like to be thought prosperous. The dandelion does not lend itself to such a scheme of life.

The other drawback is that it is aggressive and imposes on one who tolerates it. That creates prejudice.

The Debenture Plan

One wonders why the debenture plan of farm relief was [illegible] on the new Congress by the farm organization leaders. They could [illegible] help knowing that it was out of [illegible] with the President's program for [illegible] it had campaign promises and had [illegible] of education at this time. [illegible] reasons the proposal may be [illegible] gauge of "scheme a sort of [illegible] position [illegible] rallying point later [illegible] "relief" [illegible] come through the [illegible] relief [illegible] will be enacted [illegible] next session.

Many years ago when Greenback [illegible] had considerable following I had [illegible] a discussion [illegible] claiming one of its [illegible] unusual reputation. We [illegible] while he expounded [illegible] convinced, because [illegible] conditions was needed.

Recently I was insistent to know [illegible] meaning the word "[illegible] could [illegible] a measure of value [illegible] had [illegible] to the value of [illegible] of some commodity [illegible] what not. My [illegible] ally [illegible] he was not entirely [illegible] point but he saw an [illegible]

I recall that incident when the [illegible] urged. I find [illegible] matter has been [illegible] to reasonable [illegible] that would make matters [illegible]

Grain Speculation

The U. S. Department of Agriculture has made three studies of [illegible] trading on the Chicago Board of Trade. There is a pretty general feeling [illegible] wheat farmers that this speculation [illegible] vents demand and supply from [illegible] prices from day to day. Those [illegible] it should be the other way round [illegible] cause there could hardly be free [illegible] demand and supply except in [illegible] open market. Practically, as [illegible] appear from these studies, large [illegible] trading by a few speculators [illegible] prices up or down more rapidly [illegible] market news seemed to justify.

I should think it would be [illegible] to determine how much these [illegible] cessful speculators pushed the [illegible] or down and how much they only [illegible] saw the trend and traveled with [illegible] the heavy weight of immense [illegible] es of sales in a day, and a [illegible] of these must have had a big [illegible] We don't like that influence. [illegible] ing the working of the law of [illegible] demand and supply, when the [illegible] downward. The investigators [illegible] ment that a limitation be placed [illegible] market activities of the heavier [illegible] ulators, preferably by the [illegible] changes themselves, and believe [illegible] a greater degree of price stability [illegible] result.

Baby Trout

IF YOU have ever whipped [illegible] the mountain streams for [illegible] may have wondered where all [illegible] came from and how the supply [illegible] up. The state fish hatcheries, [illegible] Centre county, Pa., has one near [illegible] Gap, are maintained for [illegible] purpose clear this. Here millions [illegible] trout are hatched every year and [illegible] ped to various parts of the [illegible] stock streams and lakes.

A trout hatchery is well worth [illegible] ing. The baby trout are [illegible] these [illegible] the open start. It is [illegible] esting to walk along the edges [illegible] pools and watch them follow [illegible] evident, expecting something [illegible]

The state fish hatcheries are [illegible] interested in supplying fish to [illegible] state but are endeavoring to [illegible] people with the value of fish as a [illegible] and to regulate angling in such [illegible] that there will be enough for all [illegible]

Close care of the fish [illegible] if we are to have an abundance [illegible] in the state.

A. I. Alge

Farm Practice

By W. D. ZINN

A WEST VIRGINIA reader writes: "I grew soy beans on my field five years ago and they were thoroughly inoculated. I want to sow the entire ground to soy beans this season again. Will it be necessary to inoculate the seed?"

No, it will not be necessary to inoculate the seed. It has been proved by a test that the bacteria found on the roots of soy beans will live in the ground for seventeen years, and we know not how much longer, for no test has ever been made so far as I know. When those new legumes such as soy beans, sweet clover, alfalfa and hairy vetch have been grown in this country as long as red clover there will be no need to inoculate the seed to grow any of them, for all soils will contain the bacteria as they contain the bacteria of red clover.

• • •

A Boost for Sweet Clover

Our soil here in Jefferson county, W. Va., is limestone, as you know. We have plowed down a heavy sod that was manured last fall for corn this spring. We have been using 150 pounds of fertilizer per acre, 200 pounds broadcast with the drill and 150 pounds in the row with the planter. We have been using 0-12-5 mixture. Do you think that we get enough benefit with the 200 pounds broadcast to justify the additional expense? Of the above formula which one do you think best suited to our needs or do you have any special mixture to suggest? The soil on our farm is deep, dark loam with some clay on the hills.

We fine cut corn fields each year as they come in in the rotation of corn, wheat, grass two years. Have had no trouble getting all kinds of clover and have had wonderful results with sweet clover. Grazed 87 cattle and 200 sheep last year from the 15th of July to frost on thirty acres of sweet clover, timothy and redtop mixed and an adjoining field of twenty acres of blue grass. Chas. H. Studer

TO publish this letter may sound a little like "I told you so," but I have been called a sweet clover crank so much that I cannot refrain from quoting occasionally what other farmers are finding out about it.

No plant in Ohio has come into prominence so rapidly as sweet clover. If it will pay farmers to grow it for pasture on land that is worth $150 per acre it will certainly pay to grow it on thin land in West Virginia and Pennsylvania where the land is worth about one-fifth that price. The only unfortunate thing about the matter is that it will not grow on sour land, but hundreds of farmers on these states can double the grazing capacity by growing a few acres of sweet clover and they can afford to lime a few acres.

Sweet clover unlike most farm crops does not require rich land. It can be grown on thin land, but the land will not long remain thin if sweet clover is kept growing on it.

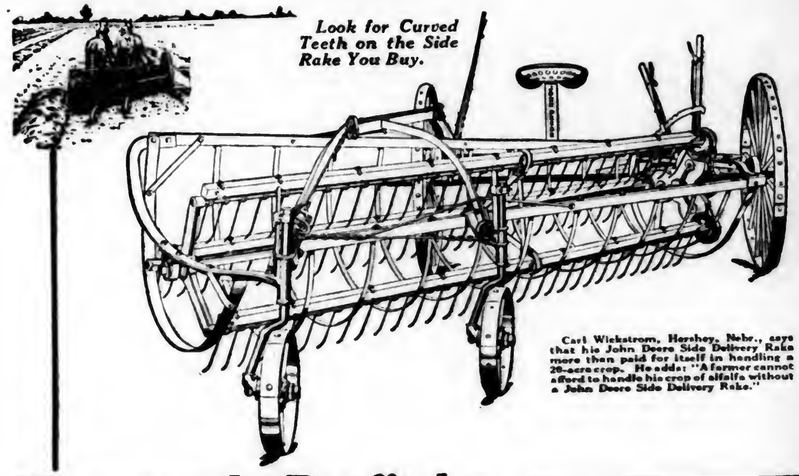
• • •

Alfalfa

Will you please tell me when is the best time to sow alfalfa this spring and how to prepare the soil? How much lime, etc. I am thinking of sowing northwestern strain.

Joseph Goodell

THERE is really no best time to sow alfalfa. Some farmers are successful when they sow it in their wheat in the spring like they sow their red clover. Some sow it with oats or barley and are successful. Still others cultivate the land until the first of August and sow it alone on a carefully prepared seed bed. Alfalfa will not do well on a sour soil. The seed should be inoculated. The northern-grown seed is to be preferred. Sow about 12 pounds of seed per acre. It will pay to make a heavy application of commercial fertilizer when sowing the alfalfa.



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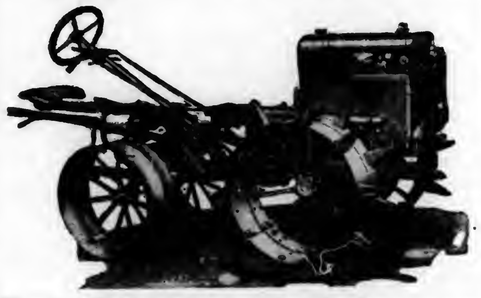
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NESHAMINY GARDENS

By R. P. KESTER

FOR the last three years I have done a good bit of complaining about the weather. It doesn't, as a rule, do not have any other way of saying how I have seen it, as I see it. I think to-day, I shall not venture on any prophecy tests, at least not in this column. It seems that a great deal of our early gardening is done in the spirit of "anything to get something started" and we'd better not be in a hurry. I have come to the conclusion that there must have been some good purpose intended in loading truck-crops on mankind. Probably it is for the same reason that Josh Billings said that some fleas were good for a dog.



• • •

Our peach buds were not full when the week of cold clouds and weather began. History suggests that they will not produce fruit. But I examined some the other day and the little bulb at the bottom of the blossom seems to be swelling. Whether it will continue to grow, or whether the "set" will fall off later remains to be seen. No matter how much effort we make to understand what we call natural law, we find every once in a while that we don't know much about it.

• • •

Our first sales this spring are of asparagus and rhubarb. We have been wondering throughout the past winter,—in which there were more fresh vegetables on our markets than ever before—whether people would pay profitable prices for home-grown stuff when it came. But it seems that there is a tang and a flavor to early fruit and vegetables which does not remain long after they have been gathered and shipped a long distance.

• • •

I attended a farmers' meeting the other evening at which the lecturer referred the question to all present: "What single thing about farming do you like best?"

The answers were most interesting, especially in these days of supposed farm discontent. One young, lusty farmer said he liked sawing wood with a buck saw on a rainy day. The women applauded that statement indicating that there were other men who did not have the same liking. Another honestly confessed that he liked the noise of the dinner bell better than anything else about farming. But the majority, some actual, everyday, work was chosen as the best liked thing, including picking fruit, harvesting grain, picking rows, etc. The women voiced similar likes. Planting the garden, raising flowers, attending the chickens, churning butter, etc. The responses were so hearty that I have no reason to believe they were not expressions of genuine feeling.

I mention this meeting and the spirit of it because it was so much at variance with a great deal that is printed about the attitude of present-day farm people toward their work. It indicates that the glamor of the cities and the pull of the jazz age has not seriously affected the large class of homestead-goodness farm people. But it must be admitted that many modern influences, among them the educational institutions, are creating sentiment which tends to lessen the natural impulses of men and women to make farming a life business.

A woman reader, states that she is thinking of starting a roadside stand this season, and wants to know what she should sell, if anything, in addition to home-grown fruits, vegetables and eggs.

Of course that depends on circumstances and her business ability. Ordinarily, I would advise sticking to those things—at least to start with. It is surprising what a variety of home products can be got for a roadside stand if one is so minded and has proper self and good help in production. The tendency of so many people to add pop, hot-dogs, tobacco and a long list of commercial stuff is great, and I notice that such a course often ends in a complete neglect of home production and what was a good business circle in nothing but a filling station and a "doggie" stand.

But after all the final decision must depend on location and the kind of people who travel that road. Nobody has been given out by the state authorities that a special investigation of roadside stands will be made this year with a view to making all such dealers sell food products live up to the health laws and regulations. It is a good move, and it is to be hoped that some of the sloppy, disreputable places one sees along the highways will be put out of business.

Friendly Talks

By Edgar L. Vincent

IN the operation of ships and cars, boats in certain parts of the country, it is sometimes necessary to provide means of getting up considerable heights. For this purpose locks have been devised. The crafts of the waters run into snug locks and then Water is then let in to lift them to higher level and soon they float at a much higher than they were at first. In the case of ships and small boats of all to get over height will be accomplished in the first place quickly and in more natural.

The most striking part of this feat of engineering is the small stream of water that lifts the ship in the lock. Little by little it pours in, lifting the craft higher and higher, until the surface of the high land is reached. The little stream does it all.

In many communities are farmers who are day by day doing their part in the effort of raising higher. They may not realize that they are doing this in fact, they may look on themselves as only students in the great school of agriculture, but every good farmer, every farm, every tree they set out for the purpose of beautifying their home surroundings, every drop of paint they put on their buildings and every row of seed tener they build has its influence in inspiring their neighbors to higher and better living. The good crops we grow arouse the ambitions of our fellows to do still better. So the world is made a better place in which to live.

The best of this is that any of us may do something toward improving the community spirit. We may start on our homes as very ordinary in appearance and value. But if they are the very best we can make them—efficient, well kept—somebody's life is surely going to be lifted to a higher level and you and I may never know just how much we really have done to help other lives over hard places, places that might otherwise seem quite beyond their reach.

If we can do this our reward will be sure in God's own time.

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Vol. 100 Pittsburgh, Pa., May 11, 1929 No. 19

Briefly

MASTER FARMER AWARDS are given by the Pennsylvania Farmer to recognize outstanding success in farming and rural citizenship." The Score Card on Page 22 of this issue is the measure by which candidates for the Awards are judged.

To nominate a farmer for one of the Master Farmer Awards simply send in his name by letter or by using the blank on this page.

Any one may make nominations. Any farmer living in Pennsylvania, New Jersey, West Virginia, Delaware or Maryland may be nominated.

All names should be sent before June 17, 1929, to

The Master Farmer Editor
Pennsylvania Farmer,
7301 Penn Avenue,
Pittsburgh, Penna.

AGAIN Pennsylvania Farmer invites the co-operation of its readers and of the general public in the project of selecting and honoring a group of outstanding farmers whose accomplishments as farmers and citizens make them truly worthy of the title "Master Farmer."

Each reader is asked to send in the name of the man he considers the finest type of American farmer citizen among his acquaintances. Men thus named will be considered candidates for the Master Farmer Awards for 1929. Information about these candidates will be collected and laid before the Boards of Master Farmer Judges who will select those to receive the title of Master Farmer and the Master Farmer Gold Medal given by Pennsylvania Farmer. The Awards will be presented at public meetings the plans for which will be made public later.

The Judges who will make the final selection of the men to receive the Master Farmer Awards for 1929 are:

Pennsylvania

R. L. Watts, Dean of the School of Agriculture and Director of the Experiment Station, Pennsylvania State College.
C. G. Jordan, Pennsylvania State Secretary of Agriculture.
John Light, Secretary of the Pennsylvania State Grange.
R. G. Bressler, Deputy Secretary, Pennsylvania Department of Agriculture.

New Jersey

J. G. Lipman, Dean of the New Jersey State College of Agriculture and Director of the Experiment Station.
William B. Duryee, New Jersey State Secretary of Agriculture.
H. E. Taylor, Secretary of the New Jersey Federation of County Boards of Agriculture.

Delaware and Maryland

T. B. Symons, Director of Agricultural Extension, University of Maryland.
C. A. McCue, Dean and Director, Agricultural Experiment Station, University of Delaware.
O. K. Quivey, Agricultural Agent, Baltimore and Ohio Railroad.

West Virginia

John W. Smith, Commissioner of Agriculture, State of West Virginia.

The acceptances of the other men who have been asked to serve as judges in West Virginia have not been received as this issue goes to press.

The Master Farmer project is sponsored by Pennsylvania Farmer as part of a nation-wide movement whose object is "to dignity agriculture by recognizing and dramatizing its successes; to encourage farmers to take pride in their calling; to inspire farm boys and girls by showing them that outstanding success is possible in agriculture as in other occupations—not only the success that is measured in money, but what is more important, the success that comes from an upright and useful life in family and community."

Do You Know a Master Farmer?

"Not how much but how well," might be termed the slogan of the Master Farmer movement. Men are selected for the Award not because they have larger farms or are better known than their neighbors. The successful candidate may operate a one-man farm or he may hire a hundred hands, he may head a state or a national farm organization or he may be unknown outside his home community. There is only one essential: he must be a good farmer, a good husband and father, a good citizen.

The sponsors of the project make no pretense of selecting the "best" farmer in a community. Nor do they say that one farmer is "better" than another. They merely try to choose a group of men who do honor to the profession of farming, being guided by the well-rounded standard of achievement set forth in the Master Farmer Score Card.

The Master Farmer movement was originated in Illinois in 1925 by the Prairie Farmer, and was started in the East by the Pennsylvania Farmer in 1927. The project is now nation-wide in its scope, having selected in practically every important agricultural state by other members of the Standard Farm Paper group.

Honored by Agricultural Leaders

Pennsylvania Farmer sponsored the selection of twenty Master Farmers in Pennsylvania, New Jersey, Delaware and Maryland in 1927. Fourteen were chosen from the same territory in 1928, besides two more selected in New Jersey in cooperation with the American Agriculturist. For each year's group a dinner was given in Harrisburg during the week of the State Farm Products Show. There, in the presence of a notable gathering of men and women prominent in agricultural and business affairs, the Master Farmer medal was presented to each of the 20 men.

The Pennsylvania Farmer's Master Farmer Awards for the year 1929 will be distributed as follows:

10 in Pennsylvania
4 in New Jersey*
3 in West Virginia
1 in Maryland
1 in Delaware

This is no change from last year, except that West Virginia has been added with an allotment of three Awards. The Awards are allotted roughly in proportion to the number of farms in each state. Of course, the right is reserved to give fewer awards in any state should candidates fail to come up to the Master Farmer standard in the opinion of the judges.

Any one who lives on a farm in Pennsylvania, New Jersey, West Virginia, Delaware or Maryland and secures the major part of his profits through his farming operations is eligible to become a candidate for one of the Master Farmer Awards.

Nominations may be made by any one—friends and neighbors, county agents, extension specialists, bankers, business men; officers of Granges, rural clubs, Chambers of Commerce, service clubs, or other farmers' or business men's organizations may nominate candidates simply by sending in their names.

Nominations may be made by use of the blank printed on Page 22, or by letter. Additional nomination blanks will be mailed on request. All nominations must be mailed on or before June 17th to the Master Farmer Editor, Pennsylvania Farmer, 7301 Penn Avenue, Pittsburgh, Penna.

How the Master Farmers Are Chosen

When all the nominations are in, each candidate will be notified of his nomination and will be asked to fill out and return to the editors the Master Farmer Work Sheet, which is a complete questionnaire touching on all of the points covered in the Master Farmer Score Card.

The Work Sheets will be studied carefully and any candidates whose reports make it plain that they cannot qualify will be eliminated from further consideration. The farms of the remaining nominees will be visited by one or more members of the Pennsylvania Farmer editorial staff who will collect additional information for the Judges.

After the Judges have gone over the Work Sheets and the editors' reports they will visit as many as possible of the outstanding candidates, then make their final selection of the men to be awarded the Master Farmer Medal.

As in the past, all information about the nominees will be held in strictest confidence by the Judges and by the editors. No names will be made public in any way, except those of the men chosen Master Farmers. This applies to persons making nominations and to nominees themselves.

The following men received the Master Farmer Awards for 1927 and 1928.

Master Farmers of 1927

Frank C. Bancroft, Kent county, Delaware.
Robert F. Brinton, Chester county, Pennsylvania.
J. Clayton Brubaker, Lancaster county, Penn'a.

(Continued on page 22.)

* The Master Farmer project in New Jersey is sponsored jointly by the Pennsylvania Farmer and the American Agriculturist, one board of judges passing on all candidates. Thus, in effect, two awards will be made by each publication.

Nomination Blank

NO FARMER can be considered a candidate for the Master Farmer Award for 1929 until some one sends his name to the Master Farmer Editor. We are printing this blank for your convenience so that every farmer may easily be nominated. All nominations should be mailed on or before June 17, 1929, to the MASTER FARMER EDITOR, PENNSYLVANIA FARMER, 7301 Penn Avenue, Pittsburgh, Penna.

To the Master Farmer Editor:
I wish to nominate the following as a candidate for the Master Farmer Award:

Nominee's Name .....

Address ..... R. D. No. .....

County ..... State .....

Name .....

Address .....

County .....

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W. D. Zinn — Gilbert S. Watts
F. L. Bentley

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MAINE AHEAD

LAST week the Bureau of Animal Industry officially declared the state of Maine to be free of bovine tuberculosis. This is the second state to clean up the disease, the first being North Carolina. No important cattle state is yet on the clean list but many are on the way. The result of eradication in all areas thus far is an increased demand for cattle and a reduction in losses of cattle and other livestock subject to the disease.

W. W. REYNOLDS

BY the death of W. W. Reynolds we lose another old friend and contributor. For many years he has been a leading advocate of pure-wool fabrics and the legislation essential to same. His last public service was an address, which he could not be present to deliver, at the Tri-State Sheep and Wool Growers' Association's annual meeting at Washington, Pa., March 7-8. Mr. Reynolds was a competent farmer and sheep breeder, a keen observer and an interesting speaker, particularly on agricultural and livestock subjects. He was never happier than when advocating honesty in fabrics for the sake of the user of wool as well as the producer of it. He was seventy-eight years old.

WHAT IS A FRESH EGG?

LEGISLATION to regulate trade in eggs is difficult. New York has tackled the problem and is still working at it. Other states are watching New York's experiments and experiences in hope of learning some way whereby the egg business may be properly regulated for the advantage of all concerned. At a public hearing this week new grades and regulations for New York are under discussion. The tentative regulations provide that the term "fresh" may be applied only to Grade A or "Nearby Fancy" eggs which are not over 30 days old. That is an interesting definition of a fresh egg, and if it stands the test of experience may be a valuable one in commerce. Has anybody a better definition of a fresh egg? What about "strictly fresh" that is so much used? Over in England we saw one producer who offered "recent" eggs. His modesty appealed to us and apparently to the public.

THREE EVENTS

THREE events of interest to farmers are scheduled for the week of June 17-21 at the Pennsylvania State College. A training school for young men will be conducted to inspire and instruct them in rural leadership. The annual Young Farmers' Week will be held June 18-21, when some 650 club members and vocational students will visit the College to engage in judging contests, recreation and educational programs. The annual Farmers' Field Day will start with a program on the evening of June 20th, while the following day the thousands of farm folks who are expected to attend this event will find the College, the Experiment Station and the faculty at their disposal to show and tell them what the institution is doing to help solve farm problems in this state.

CASH AND OTHER THINGS

WAGE comparisons usually picture the farm laborer at a great disadvantage. The amount of money he gets looks small when compared with what the worker in other industries gets. However, when we take into account all the things which are commonly included in paying farm help, but for which the city worker must pay cash out of his wages, the condition of the farm wage earner is not so bad. In order to get some information on this subject the United States Department of Agriculture made a survey covering various sections of the country, and found that the perquisites of the farm hand —food, shelter, special privileges, etc — amount to nearly as much as the money he receives. The average cash farm wage is estimated at $45.76 per month and the perquisites at $31.99, or a total of $77.77. When we remember that the $31.99 would not begin to buy the same perquisites at city prices we can see that the country worker is not at a disadvantge. He has as a part of his pay the things for which the town worker must spend all or a large proportion of his wages, and he may save, if so inclined, an appreciable part of his cash income.

A COOPERATIVE PROTEST

THE farther the farm relief legislation goes the less it seems to appeal to those who were expected to support it. Before us is the protest of the National Cooperative Milk Producers' Federation, an organization composed of forty-two cooperatives with a total membership of 316,287 producers and annual sales of $332,824,026. The Federation fears several things in this legislation First and worst of its fears is that the old thing "won't work" and if it fails the cooperatives will be blamed for the failure. The Federation expresses this fear especially as to the stabilization corporation and the clearing-house features of the bill. Incidentally it shows that these institutions are not likely to succeed and why. The Federation fears also the "unwise and dangerous" policy of making loans for "educational" purposes, which means for the purpose of campaigns for membership of cooperatives. It fears the authority to transfer existing bureaus from government departments to the federal farm board. It fears the "vast powers" of this board. And finally it fears that Congress will give too much of this sort of "relief" and not enough of the tariff kind.

We doubt whether this or any other protest will amount to much, since the majority in Congress is committed to this fanciful scheme. But the scheme itself isn't likely to amount to much when it comes into operation, and this reflection may be of some consolation to the Federation as well as to others. And the less it amounts to the better for those who are now supporting and promoting it.

A NATURAL CONSEQUENCE

WE have a long letter from a man who served his country in the great war and who is determined to be a farmer. He has saved $6,000, but the farm he wants and considers a great bargain can be had only for $7,500 cash. Then he will need several thousand dollars for equipment. In presenting his financial problem this man says: "My father and two brothers could well lend me the money and would do so if I wanted it for anything else than a farm. But they are not interested in farming and can't see why I am."

Probably there is a reason why these men don't want to become financially interested in farming and want to keep son and brother out of it. For years they have seen and heard nothing but tales of farm distress and appeals for farm relief. In the press, on the platform, in Congress and everywhere the greatest industry of America has been depicted as bankrupt and those engaged in it as on the way to the poor-house. No wonder men who don't know anything about farming "can't see" why anybody should be interested in it. The agitation for farm relief has done agriculture more harm than all that kind of legislation can ever do good. For it has destroyed the confidence of the public in the value of land and the business of operating it. We know of no other industry the leaders of which are engaged in diminishing the value of its properties; but that is what our so-called leaders have been doing ever since 1920. Isn't it time to quit hurting ourselves?

THE MARGINAL FARMER

THE marginal farmer gets scant consideration. He is frowned on in theory and buffeted in practice. He is accused of creating the "surplus", and also of not producing enough to make a profit. We are told that his land should be acquired by the government, planted in forests, turned to grass or game preserves. He is called a slave to poor soil, a drug on the market—in short the "goat."

But what is a marginal farmer? Most of the demand for farm relief comes from sections which have the richest soil in the country. Farmers there can hardly be slaves to poor soil. Stony, hill farms which have starved out one generation are brought into profitable production under new management, good roads open new markets; improved methods cheapen production; many factors enter to change conditions and make marginal or sub-marginal land and farmers self-supporting and prosperous. It is true that some land should not be farmed and some men should not farm, but who is wise enough to draw the line? And how under a free government can any one have the authority to draw it?

STABILIZER OR DISTURBER?

THE other evening we heard a Congressman tell how the stabilization corporation plan is going to work and it looked all right from the near side. Such things always do. But he failed to consider the other side, the fact that it might become a disturber rather than a stabilizer of prices. The mere existence of a corporation with financial power and authority to buy, hold and sell practically unlimited quantities of any commodity must inject into any market situation a serious element of uncertainty. When, at what price and how much is the corporation going to buy? When, how much, where and at what price is the corporation going to sell? Will consumers tolerate any agency the purpose of which is to enhance the price of any necessity? Will producers welcome the release of the corporation's holdings when prices advance? These are only part of the vital questions that arise, but they are sufficient to indicate the uncertainties incident to the actual operations of such a corporation. We are not afraid to predict the early end of any such stabilization plan if tried, and farmers will be among those who demand its abolition.

Pennsylvania Farm Comment

By MILES HORST

THIS striking contrast of the past and the present in potato growing comes to us in a statement issued by potato specialists at State College. They estimate that 70,000 acres of potatoes grown in Pennsylvania last year were sprayed and dusted according to the better recognized methods in practice to-day. They estimate that the average yield of this acreage was 300 bushels per acre. If this be true, then the average yield on the remaining 146,000 acres grown in the state last year was 75 bushels per acre, which is about equal to the average state yield during the period of 1875 to 1900.

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KEYSTONE growers of fruits and vegetables are valuing official inspection of their products at shipping point more highly than ever before. The Bureau of Markets informs us that last year their inspectors passed on 1,764 carloads of produce, or twice the quantity inspected the year before. The inspections included 55 per cent of all the grape shipments made in the state, also 41 per cent of the peach shipments and 28 per cent of the apple shipments.

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THERE is a high moral standard running through the membership of our cow-testing associations. An example of it is brought out in the state report for March which says that 252 cows in association herds were found to be unprofitable and were directly sent to the butchers. They might have been unloaded on unsuspecting dairymen. But they were not.

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THAT quack grass is gaining a stronger foothold each year on the good farms of southeastern Pennsylvania is evident even to a casual observer passing along the highways. Unless drastic measures are taken when first it appears it will keep on spreading, for the ordinary methods of cultivation help it greatly. No other weed holds on with a more tenacious grip than this pest.

It can be overcome—at a sacrifice to be sure. If the patch is small it pays to dig it up and destroy every rootlet. If the infestation is widespread plowing the field shallow late in the fall and again very deep in the spring, following this with frequent cultivations with a disk or a spring-tooth harrow throughout the following season will check it. But thereafter cultivated crops must be planted in the field and an eye kept on every spear that makes its appearance. Unless this action is taken the weed will spread and sooner or later the value of the farm will be affected.

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TWO boys and two girls will represent the Keystone State in the National 4-H Club Camp to be held at Washington, D. C., June 19th to 25th. The girls are Elizabeth Jones of Columbia Cross Roads, Bradford county, and Mary Brubaker of Lititz, Lancaster county. George L. Luse of Center Hall, Center county, and Ray Strickler of Vanderbilt, Fayette county, are the two boys in the representation.

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RIGHT here in Pennsylvania are hundreds of farms that can be bought for $25 an acre or less, farms which with a little attention would grow good grass. They have shelter enough to house breeding and growing livestick comfortably. Many of them are equipped with silos, have good running water and enough acres adapted to the growing of grain and silage corn to provide winter feed for carrying over breeding animals. With feeder cattle high, with horses increasing in value and with sheep a profitable branch of the livestock industry, is it not possible for capital properly utilized to make good returns on investments in such acres?

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IN Lancaster county a short-cut system of keeping cow-testing records is being tried out. It was started 18 months ago with 31 herds. This year 71 herds with 952 cows are enrolled in it.

The system as carried on in this county is a simple one. Each farmer in the association has a kit containing as many small bottles as the farmer has cows. This kit also contains regular record sheets used by cow-testing associations.

On the first two days of each month the farmer weighs the milk of each cow, both night and morning, and places the weights on his record sheet. On this sheet he also places the amount of feed each cow consumes. A sample of each cow's milk is put in one of the small bottles in the kit. This done the kit is closed, given the following morning to the milk truck driver who takes it to the central receiving station. A day later County Agent Bucher makes the round of the milk stations to which these kits are sent, bringing them to the central testing station where two farm boys devote as much time as is necessary, usually about two days, to the testing of each sample of milk, determining the butterfat test of each cow in the association. They also figure out the feed costs of each cow according to the records appearing on the sheets turned in by the dairymen. These are brought to the county agent's office once a month where they are all checked and the profits of each cow estimated and recorded. Each man's kit with its bottles and its record sheets is then returned to the dairyman for the next month's reports.

It will be seen that this system is economical in that the cost per cow tested is lower than in the regular cow-testing associations operating in the state. It gives each man in the association a knowledge of just what each cow in his herd is doing. On the other hand, records of this type which are not supervised directly by an impartial person will not carry the weight when cows are sold that records in cow-testing associations carry. It also requires considerable time on the part of the county agent to see that each man keeps in line, for without this supervision many of these associations tried in other states have fallen short of expectations. Whether these records are honest depends entirely on the farmer himself. However, if the records are falsified he cheats himself rather than anybody else.

This system of keeping cow-testing association records seems to be working satisfactorily in Lancaster county. However, more time will be needed to prove it a success. In the meantime dairymen in other counties will be watching its operation close.

COMING EVENTS

May 30—Jersey Field Day, Erdenheim Farm, Montgomery county, Pa.
June 18-21—Young Farmers' Week, State College, Pa.
June 4-5—Holstein-Friesian Ass'n, Philadelphia.
June 12—Ayrshire Breeders' Ass'n, Commodore Hotel, New York City.
June 21—Farmers' Field Day, State College, Pa.
June 19-20—Lancaster fat cattle show, Lancaster Stockyards.
July 29-Aug. 3—International Baby Chick Convention, Minneapolis, Minn.
Aug. 20-22—Potato convention, State College, Pa.

M. F. SHRUM of Jeannette, Pa., for many years a leading breeder of Jersey cattle and president of the State Jersey Cattle Club, died of heart disease at his home May 2. Mr. Shrum was well known throughout the East as a breeder of Jerseys. He was a fine citizen and his death is a loss to his community as well as to the dairy cattle industry.

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A THUNDER storm passing over southeastern Pennsylvania one night last week struck two barns and both burned to the ground. The loss of the two barns was estimated at $16,000. One had no lightning rods and on the other the lightning rods were improperly attached. Summer is coming and electric storms are bound to come with it. It is just as dangerous, and probably more so, to have lightning rods improperly connected as not to have any at all.

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AT the coming November elections the citizens of McKean county will vote on whether they want a county library system. The county commissioners of this county already have the legal right to appropriate funds to support such a system, but like commissioners in most other counties, they want first a mandate from the voters that such appropriations be made.

Grangers in the county, also members of the Parent-Teachers' Association, teachers, pupils and interested parties are starting a campaign in order to get a favorable vote. Their cause is a just one and one which should not be difficult to put over, for the 5,500 school children of this county deserve access to good books and a sufficient number of them. They are entitled to this privilege as much as any other group of school children anywhere in the state or the country.

The investment in a library of this kind need not be large at the beginning; it will accumulate as time goes on. Nor will the current expenses be a burden.

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I SPENT an hour with C. E. Cassel, well-known Chester White hog breeder of Dauphin county, Pa., several days ago. Together we went through his pens and lots holding some 200 head of pure-bred Chester Whites. In his modern hog house we saw his 20 brood sows with 140 pigs. In a three-acre lot outside he had 35 gilts being bred for fall farrowing. His herd sire is Giant Pride son of Giant Prince, a well-known show boar at central western swine shows.

Mr. Cassel has been a breeder of Chester Whites for 20 years. Certainly the individuals in the large herd he now has show the results of a long experience and a thorough understanding of hog nature and hog wants. Many of his hogs are sold for breeding purposes. He tells me the demand for breeding hogs this spring is better than it has been in four years, which to him indicates an up-turn in hog prices.

Mr. Cassel is not only proud of his hogs, as he well may be, but he is enthusiastic about them. Why shouldn't he be? The returns from them, he tells me, have elevated him from a hired boy to the proud possessor of a good farm, a well-equipped farmstead and a comfortable and an attractive home.

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JUDGING by the number of colt clubs already organized and about to be organized in this state, the breeding of good horses must be on the increase. We already have Gold Medal Clubs in Franklin, Indiana, Beaver, Fayette and Westmoreland counties, C. A. Burge, the extension horse specialist, announces that clubs will be organized this summer in Clarion, Dauphin, Lawrence, Clinton and Sullivan.

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ONE of the latest additions to the equipment used by potato growers is a seed potato treating machine. It is light and inexpensive, consists of a tank holding from 10 to 25 gallons of liquid into which potatoes to be treated are dumped. An endless chain raises these potatoes from the liquid, drains off the excess liquid and drops the potatoes on a chute which carries them to crates. The machine makes it possible to treat a large quantity of seed potatoes in a short time.

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GEORGE WEBER, county agent of York county, tells me that he tested approximately 300 soil samples coming from as many farms in that county during 1928. The average lime requirement for these farms as shown by the analyses made indicates that they need from 1,500 to 1,800 pounds of ground raw limestone, or 1,000 pounds of burned lime per acre, to correct their acidity.

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SOME four-hundred farmers and their wives attended the annual meeting of the Tioga County Extension Association held at Wellsboro last week. These farmers are mostly interested in dairying and naturally so, for the dairy cow—and there are 46,000 of her kind in the county—through her products furnishes the chief source of revenue to these farmers.

The chief speaker of the day was Prof. E. F. Savage of Cornell University. His subject was, "The Feeding of the Dairy Cow." He told of a two-year experiment now being conducted at the New York Experiment Station in which three groups of 12 cows each are fed feeds of different protein contents. One receives a 16 per cent protein feed, the second a 20 per cent protein feed and the third a 24 per cent protein feed. At the end of the first year just closing all cows show a slight gain in weight and their production is apparently the same. Going on in his discussion Prof. Savage stressed the importance of producing more high protein feeds on the farm. He said that if all the dairy cows in the country today were fed proper dairy rations the total amount of commercial protein feed available would not be sufficient to rear cattle population.

The occasion was used to honor 33 men in the county whose herds last year averaged better than 300 pounds of butterfat. Special honors were bestowed on Roy Bowen whose herd of ten pure-bred Holsteins not only led all herds in this county in production last year but set a state-wide record for cow-testing association herds with an average production for the year of slightly more than 20,000 pounds of milk and 656.6 pounds of butterfat.

The possibilities of sheep growing in the county were well pictured by Horace B. Packer, who felt that the county could well afford to keep more flocks.

While the men were discussing proper rations for cattle the women in a separate meeting were discussing how to feed a family properly. The discussion was led by Miss Ethel Jefferds of State College, who described the part that vitamins play in the human diet and the sources of food from which they are derived.

Paul Edinger, assistant director of agricultural extension work in the state, outlined the field of extension work as it is now being carried on and described the methods which make it most effective.

At the election of officers for the new year W. N. Smith of Millerton was elected president; Hawlsey Benson of Mansfield, vice-president; James Blair of Covington, secretary; and Jos. Irwin of Crooked Creek, treasurer.

TIGHT BINDING TEXT CUT OFF



Hay-Making Scene in Switzerland. They Mow It Down with Scythes and Rake It by Hand.

Glimpses of Farming in Europe

Belgium - Switzerland - Holland

By H. R. SMALLEY

IN many respects Belgium is very similar to France. The majority of the people speak French, the cities and villages look very much like those of France, and the farming is very similar though perhaps somewhat more intensive.

It is, of course, impossible to travel through Belgium without being reminded of the late war, but, insofar as I was able to observe, the devastated regions have been almost completely restored. That the land has been brought back to its former high state of cultivation is evidenced by the high average yields obtained in 1927,—wheat 37 bushels, rye 35 bushels, oats 67 bushels and potatoes 208 bushels per acre.

For centuries the Belgians have been engaged in manufacturing and in world trade. They are an industrious, hard-working people, being very skillful in all of the trades and handicrafts.

As is the case in France, the Belgian farmers do a great deal of their work by hand, although some modern machinery was in evidence on the larger farms. They use more fertilizer per acre than any other farmers in the world, excepting only the Dutch.

In the neighborhood of Brussels the growing of grapes in greenhouses has become quite an industry. These grapes are of European varieties, something like those grown in California, except that under this artificial culture they grow much larger, --single bunches often weighing several pounds each. The vines cover the walls and roof of the greenhouse completely and when a planting is once established the vines will produce profitable crops for 40 to 50 years. This is a practice that would probably not pay in America, but it is very profitable in Belgium since the climate of northern Europe is not generally favorable to the production of grapes out of doors.



Potatoes without Fertilizer at Gembloux, Belgium

We stopped for a short visit at Gembloux where the main agricultural college of Belgium is located. It was established in 1860 and occupies the buildings of an old monastery which was first built in 911 A. D. The school has well equipped laboratories and class rooms and about 200 students. We also visited the experiment station where we saw many variety tests and fertilizer experiments. The oats on these plots was fully six feet tall and was well filled, and other crops—wheat, beets and potatoes—were excellent.

From Gembloux we took a motor trip to the southern part of Belgium, some of which lies in the Ardenne Mountains. I didn't know before that they had mountains in Belgium. They are not high mountains but about like some of the lower ridges of the Alleghenies. Most of the land is wooded and known as the Forest of Ardenne. There is, however, a considerable acreage in crops and most of this land has been farmed only about 50 years. It is naturally poor but has been made productive by the intelligent use of fertilizers.

After visiting the potash mine in Alsace we went by motor bus to Bale, which is just over the Swiss border or "frontier", as all of the national boundary lines are called in Europe. We spent the first night in an old but elegant hotel where we got our first view of the beautiful Rhine River. From Bale we traveled by train through Berne and on to Interlaken.

Small wonder that Switzerland is a mecca for tourists. It is one grand picture all over—beautiful lakes, mountainsides dotted with neat little farms, taller mountains covered with snow, everything in perfect order.

More than 90 per cent of the agricultural land is in pasture and hay crops and needless to say it is almost entirely a dairy country. Even so, the Swiss farmers are beginning to use considerable fertilizer on their grassland, principally phosphoric acid and potash. We visited an Alpine pasture experiment 6,000 feet above the sea level. In this test the yield of grass was almost doubled by the use of fertilizer.

Switzerland is the oldest republic in the world, having been an independent country for over 600 years. There are three official languages: German, French and Italian and in the hotels and stores English is also spoken. The people are a sturdy race, and in addition to mountain climbing which is "all in the day's work", they engage in many athletic sports both in winter and in summer.

They were holding a national athletic tournament in Lucerne when we were there, and I believe that every village in Switzerland must have sent a team. There were 20,000 athletes marching in a parade and we missed our train because they would not permit us to break through.

Everywhere in Switzerland we saw evidences of a high standard of living both in the country and in the towns. Many of the houses are built all of wood and magnificent but I was told that they would last many years and they are most attractive, for they are artistically planned and many of them are decorated with hand carved designs. We Americans whittle a lot but the Swiss are a nation of wood carvers.

I must say a word about the cheese industry before we leave Switzerland since that is one of the most characteristic things about the country. Practically all of the milk that is not used in the homes or sold as whole milk is made into cheese.

Perhaps the most interesting thing about dairy farming in Switzerland is the fact that much of the pasture land is high in the mountains and is pastured only two or three months in the middle of the summer. In early spring and fall the cattle are pastured in the lowlands. Then as summer comes on the herds are driven up to the mountain pastures where barns and living quarters are maintained. The milk is made into cheese and carried down at the end of the short pasture season. Many of the pastures are owned by the villages or communities, and each farmer inherits the privilege of pasturing a certain number of cows.

Holland is, in some respects at least, the most interesting of the six countries visited, due partially to the fact that much of the land is below sea level and to the picturesqueness produced by its canals and windmills, but its agriculture is also unique and very intensive.

Most folks think of Holland as a land of windmills and wooden shoes. This is the truth but only a very small part of the truth, for Holland has a progressive up-to-date agriculture, and her cities carry on a foreign trade which in the aggregate is very large. The seven million people of Holland belong to a vigorous, sturdy, capable race. That they are industrious and clever traders is shown by the fact that they have large colonial possessions in the East Indies where 50 million people are living under Dutch rule.

We visited Val-meer, a center for the production of cut flowers, potted flowers and bulbs. Here as in many other communities in Holland, the producers own a cooperative auction where flowers are sold in large quantities several times a week by means of an intricate electric auction apparatus. This electric auction is worthy of a word of explanation, since it is different from anything we have in this country. It makes possible the sale of large numbers of small lots of flowers, fruits or vegetables in a very short time. In fact, we were told that 500 sales per hour can be made.

The seats for the buyers are on one side of the room and each buyer has an electric button in front of him. Opposite the buyers is a huge clock-like dial with numbers from 1 to 100 around the circumference. The auctioneer flashes on a light to show that the sale is on and starts a large hand spinning from the high toward the low numbers. As the hand moves rapidly around each buyer registers his bid by pressing the button in front of him. The number corresponding to the highest bid is flashed on the board, the sale is automatically recorded, and the next lot is on the space of five or six seconds.

In the case of fruits and vegetables, the auction leans is 5000 across a canal. The buyers sit on one side of the auction apparatus is on the other, and the fruits and vegetables to be sold are brought to on small boats stopping just long enough for the sale to be completed. The products are shipped by canal boat or by truck except that many cut flowers are sent by aeroplane to London, Paris, Berlin and other large cities.

Glasshouses are heavily fertilized, receiving 1,500 to 2,000 lbs. of nitrate per acre and a ton of fertilizer of about 4-8-8 analysis.

In Westland we visited several greenhouse farms, one of which has ten acres under glass. Here we saw grapes, peaches and vegetables being produced in greenhouses and under cold frames. Needless to say, such crops also receive very heavy fertilization.

Potatoes and cabbage receive about 2,500 pounds per acre of fertilizing materials equivalent to a 6-5-10 analysis and other vegetables receive 3,000 pounds per acre or 7-8-10. Such quantities will appear very large to Pennsylvania farmers, but they are not uncommon on the Atlantic seaboard.

We visited Alkmaar a center of cheese production, and had an opportunity to see the intensive dairying of that section. We were told that the average farmer supplies from 500 to 700 pounds of sulphate of ammonia or nitrate of lime per acre and that the pastures carry one to one and one-half cows per acre. Even the most intensive grazing the fertilizer application consists of 100 pounds actual nitrogen, 100 pounds of phosphoric acid (P2O5), and 300 pounds of potash (K2O), equal to one ton of 5-5-10 per acre. About one-half of the pastures produce one cutting of hay early in the season.

Since 1913 Holland has more than doubled her consumption of nitrogen and potash and increased her consumption of phosphoric acid about 25 per cent. Dutch farmers are now using an average of practically 100 pounds of actual plant food per acre of crop and pasture land, more than any other country in the world. This is equal to 500 to 600 pounds of ordinary mixed fertilizer per acre. Germany uses 50 pounds of plant food, France 20 pounds, England 16 pounds and the United States only five or six pounds per acre.



Potatoes with Complete Fertilizer, Gembloux

The Farm Home

Help Our Birds

By HEPSY NEFF

If current reports are dependable our insect pests are increasing too rapidly. First it was the gypsy moth that must be met with government appropriations, the corn borer is another and the last the Mediterranean fruit fly the advance of which can be checked only by dollars. More winged moths and her more eggs to hatch more worms and beetles. And all the time if we had more purple martins, more chimney swifts, more barn swallows and dozens others they would clean out the whole pesty tribes.

In 1921 the U. S. had, at a fair estimate, 1 bird on its territory, an average of two birds to the acre. At the same time large estates which have given over to bird protection have made a record of 50 birds to the acre. If such results can be gained in one section, why not in another? One need not be an electrician ugly old to have seen orchards bear ing high grade fruit without the use of an ounce of spray. In those days the eaves of barns were trimmed with the mud nests of barn swallows and mist-winged birds fed their young from the air. When rice began to be grown here instead of in China our bobolinks, robins and other migratory birds seeking winter feeding grounds took more or less toll from southern crops and these birds began to fill sportsmen's bags for southern markets. The summer feeding grounds also had their losses and a noticeable decrease began to show in our bird population. Europe has had a like experience and as far back as 1909 an International Congress gathered in Belgium to study the problem of increasing insect pests.

What Can You Do?

Not until last year did our country have such a gathering and it was held in Ithaca, N. Y. At this meeting our senior leader in "bug-ology", Dr. L. O. Howard, said: "Few people realize the critical situation which exists at the present time... There is a war between all humanity and certain forces arrayed against it... Let all the departments of biology in all our universities and colleges begin a concerted movement to train the men needed for an offensive and defensive campaign." But the greatest hope and help is in our farm homes.

Naturally, the first question that comes to our lips is, "What can we do to help in this campaign?" Again the bulletins sent out free from our Department of Agriculture are our best and most dependable source of information. Write for a list of free bulletins and make your own selections. But a page from actual experience continues to be of special value. If I could have but one means of attracting birds I would choose some kind of a basin for drinking and bathing. Even this must conform to bird habits, if it is to be used. It must not rattle to the touch of feet or bill; it must be set low enough to be easy to keep clean and refilled and yet high enough to be safe from cats and squirrels. Even an old dishpan can be nailed to a post three or four feet high, leaving a few spikes to come onto the concrete lining which should be three inches thick and carried over the edge so as to give a silent and rough footing.

If the colleges are asked to help by united action in this war against insect pests and for the benefit of our birds, why should we not ask for united action? Three hundred words should be enough to tell what you have actually done which the birds accepted and used. What you have done others can do. For the best stories covering this ground a prize of one dollar will be given during the next three months. The only condition is that it must be the actual experience of the writer.

And What Have You?

By GERTRUDE S. STEWART

THE letters from our farm women this past year have been tremendously interesting from the standpoint of special work they are doing. Several have told of their income from canned goods, many of handy cash from jellies, a great many are making hooked and rag rugs for sale, some are sewing in special lines—aprons, smocks, children's rompers or knitted sacks for babies.

Perhaps the greatest number have written about the great success of their roadside stands. And what an ideal project that is! Here the children can work with mother to really get a worth while income from garden, flowers, and any special article your environment may suggest. With many it is eggs or cottage cheese; with others freshly baked goodies or tasty sandwiches might be wiser.

The accompanying photograph will show you an inviting country market in the foothills, where the clear spring water is an added attraction. Last week in north Jersey we were much attracted to a rural country market where the farmer had cleared the banks of a cool rippling stream, making on both sides of the highway (and the stream, too) a beautiful picnic spot. While the space was not large, four good sized parties could rest and eat in entire privacy.

The youngsters could frolic in the green or wade in the rill while the elders would relax perfectly in such peaceful surroundings. This family's good sense in capitalizing such an ideal spot is very apparent. To be sure these picnic folks enjoying the freedom of a real country spot will need many things and buy from the handy attractive market just a few steps away.

> For the best experience letters received within the next five days, we will send prizes very handy and useful on the counter of a roadside stand: a good-sized shears, sharp and shining. Perhaps you have a picture of your stand.

Are you thinking of your particular farm and its surroundings in a sane way, or do you spend more time complaining about hard times? Let us look about us—for a water lily pond might as well beautify the swamp now idle, and there's many a florist would drive miles and miles to get fresh flowers for his trade.

No doubt many of our women would like to know more about these very things. They are timid about starting a venture so new in thought and work. Let us help them by sharing our own experiences with them. Did you have a stand or market last season. What did you sell? What were your best paying wares? What did you learn about doing a better job on it this year? Have you some very special features that you recommend for others?

Write us a description of your plans, send a picture if you can to Household Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa. Our library books—101 New Ways for Women to Make Money, is very helpful along this same line of thought. You may borrow this volume by paying the postage, which is fourteen cents. Send requests to same address as above.

Housecleaning

By ELLEN S. BRINTON

IN our household we have always selected crisp sunshiny days for housecleaning. The bright light helped us to see the dirt easier and probably the dry atmosphere served to stimulate us to activity.

But I have another view now—and this was given me by a professional cleaner for a big office building. The day was wretched and dreary. A heavy fog hung outside, and the air was laden with moisture even inside the building. Every footstep on the stairs left a mark.

A colored porter and his crew of assistants were busy washing walls and painted woodwork, and scrubbing stairs. It all seemed so hopeless with the dirt and wet everyplace that I could not help but say sympathetically as I stepped around the brushes and pails:

"What a pity you haven't a better day!"

"Finest kind of a day for this work, Ma'am," he replied cheerfully.

I stopped short.

"But you ought to have nice clean weather for housecleaning," I protested.

"No indeed. The dirt sticks too tight on dry days. We want wet, muggy weather for scrubbing. Then the dirt is loose and comes off easily. Look at this." And that colored porter proceeded to give me a lesson on cleaning—me a housekeeper! He took a wet cloth and with a stroke of his hand made a clean path down the side of a grimy wall.

Then he told me that on clear days the dirt sticks as if glued. Several washings are needed and invariably the walls and paints are streaked and the work is very much slower and harder. As head of a crew of cleaners he plans his work as far as possible according to weather conditions. Wet cleaning on walls, paints and windows is done on rainy days. Vacuum cleaning and jobs involving dusting were planned for clear days when air was dry and dust lying loose.

This is certainly a worth-while suggestion for those of us with painted walls to clean; and especially for those old stone houses where walls "sweat" at certain changes of weather and temperature both in winter and summer. Take advantage of the dripping condition, for one stroke at that time will remove more dirt than a dozen another day.

Cabbage and Pineapple Salad

Use one large can of crushed pineapple. Chop fine enough cabbage to make one cupful more cabbage than pineapple. Combine these two ingredients with one-half pound chopped marshmallows. Serve on lettuce leaf with boiled dressing, oil or fruit salad dressing. Twelve portions. M. C. B.



Cool and Clean and Most Inviting Is This Country Market.

TIGHT BINDING TEXT CUT OFF



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Box 318, Grampian, Pa.

Old Rhiney

By CHARLES ADAMS

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(Continued from last week)

THEREUPON Leland and I described the several runaway accidents, and told them of the bull that had been killed, the fences, corn and gardens that had been destroyed. The men consulted, and at last asked if two hundred dollars would, in Miss Everett's opinion, adjust all damages. They remarked that they were in a hurry, and did not want to detain long.

We boys were somewhat astonished to hear them name so large a sum, for we did not know that such a rhinoceros was in reality worth from fifteen hundred to two thousand dollars.

I think that Miss Everett was surprised, too, but she remained very quiet, and after some reflection replied that she did not think she could agree to satisfy all the claims for less than three hundred dollars.

The men demurred for a time, but finally agreed to pay two hundred and sixty dollars if Miss Everett would give them a written receipt and guarantee. She gave them such a paper, and they paid the money.

While these negotiations were going on the cage and team with four men arrived. They cleared away the barricade from the end of the lane next to the road, backed the cage in, and laid a kind of bridge from the ground up to the door. These fellows appeared to be not much afraid of the rhinoceros; they cut the rope off his leg and put it about his snout, just back of his nose-horn, and then, by pulling and prodding, contrived in the course of a few minutes to drive him into the cage. Within an hour they were on their way back to the railroad.

This occurred during the forenoon, but the news spread, and just as school was dismissed at four o'clock that afternoon Mr. Stone and Mr. Oldway drove up and asked what had become of the rhinoceros.

Miss Everett informed them, and also told th what she had received.

"Very well," said Mr. Stone. "We are the selectmen. We will take the money."

"But as I have given my receipt for the money I think that I ought to keep it until the claims for damages are made out," replied the schoolmistress, quietly. You resigned to me all claims in the animal. My pupils are witnesses to that."

But Mr. Stone insisted that she should give up the money. Miss Everett declined to do so. Both Stone and Oldway grew angry and used harsh language.

"If you don't give us that money you will lose your school!" Stone at last exclaimed.

"Very well," replied the teacher.

The two selectmen behaved strangely. Mr. Stone even searched the teacher's desk, thinking that the money might be in it; but it was in her pocket—and remained there.

That evening the selectmen went to see Miss Everett's father, who lived in an adjoining town, and who, as it chanced, was also a selectman. Without making them any direct reply, Mr. Everett waited till they were gone, then harnessed his own horse and drove to his daughter's boarding-place. It Friday evening. She returned with him. The next day they went Mapleton and deposited the money the savings bank there in Miss E erett's name.

Then began an animated and what acrimonious local contro which continued from August t a lawyer, with a design to compel schoolmistress to deliver the money them, but found that the result of suit at law to effect this would dubious.

They then actually attempted t her dismissed from her school on ground that she had disobeyed the lectmen of the town. The school matter and the district agent, Mr. were summoned, and on the follo Saturday afternoon there was held the schoolhouse the most unprec district school meeting that was recorded in the annals of that town, for by this time every woman and child in town had t sides for or against the schoolmis

The three members of the board were inclined to favor the lectmen, but did not quite dare t to the length of dismissing Miss E erett, who was acknowledged to b excellent teacher. The public was ly with her. People were much ed to laugh at Mr. Stone and M way, as having tried to take an a tage of the schoolmistress and been worsted. The two had so beaten Mr. Briggs that he did not pear at all.

It was a very democratic Everybody present freed his mind said what he pleased. The sentiment was pretty well expres the school agent, Zenas Frost, finally rose and spoke to the as follows:

"You had both of ye better go and let the schoolmiss'am alone! a good gal and all right. Ya your turn and tried your hand on rhinoceros. You tried to drown an' you tried to stifle him and you to pizen him, and didn't make out ing. Then the gal, she took and make a success of it. If it been for her there wouldn't ha a dollar for anybody. She got th and I guess if you let her alone will do about what's right with it."

In the end better sentiments ed, and three disinterested were agreed on to rate the damage each sufferer from the rhinoceros. malcontents at last thought be make their claims reasonable, and these were paid by Miss Everett.

There remained a hundred and dollars. Unfortunately to the surprise land and myself, the schoolmistress ided what was left into three parts, giving us each a share and taining one share herself. A bank from the Mapleton Savings Bank thirty-seven dollars to our credit sent to each of us the day before Thanksgiving. That was the money in the bank which Leland ever possessed.

THE END.



Costly Shelter for Farm Implements

Oven-Browned Sweets

Scrub six potatoes. Boil until tender. Remove jackets and slice in quarter inch slices lengthwise. Place them in thickly buttered drip pan and sprinkle lightly with brown sugar. Bake them on upper shelf of a moderate oven for about forty minutes or until brown. It may be necessary to turn the slices over with a spatula to allow the under slices to brown. Serve on a hot chop plate or platter, garnished with parsley. These are a particularly tasty accompaniment to baked ham or sausages.

Dixies with Mushrooms

Scrub eight sweet potatoes in their jackets. When tender, peel them and place them in hot serving dish. Pour over them a creamy mushroom sauce made from four tablespoonfuls butter, four of flour, one pint of milk, seasoning and one cupful of cooked mushrooms. Put a dash of paprika on top and serve piping hot, as the main dish.

• • •

Sewing Hint

Wear a smock over the slip when making a dress. It is so easy to slip on and off when fitting, and does not disarrange the hair. The pockets hold a thimble and spool of thread which is a way of rolling out of reach when set where they can be tipped over.

Attractive Flower Holders

Paste paper, any color or style desired, over the stiff cardboard containers in which your oatmeal comes. Cut to the right height the tin can be used as a flower pot. Give a coat of clear varnish. If the can is lifted out to water the plant, they will prove very pretty and serviceable.

S. M. A.



No. 527—Dignified—smart. Designed in sizes 16, 18, 20 years, 36, 38, 40 and 42-inch bust measure. Size 36 requires 3½ yards of 39-inch material with ⅝ yard of 35-inch contrasting.

No. 506—Novel junior dress. Designed in sizes 6, 8, 10, 12 and 14 years. Size 8 requires 1⅞ yards of 32-inch material with ⅛ yard of 35-inch contrasting.

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Write your name and address clearly. State number and size of each pattern. Price 15c each, two for 25c. Our Fashion Magazine will help in preparing your wardrobe. Copy alone 15c; with a pattern only 10c. Address Pattern Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.



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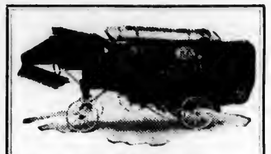
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KINKADE GARDEN TRACTOR
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Catalog Free

Garden and Truck Crops

By GILBERT S. WATTS

THERE is reason to believe that the possibilities for roadside marketing of farm, orchard and garden products have scarcely been touched. Unquestionably the coming summer and fall will witness further increases in the use of this method of selling. The Michigan State College, East Lansing, Michigan, has published Special Bulletin No. 185 which presents a wealth of material worthy of careful study by every roadside market operator. Of special interest is an illustration of a busy market that has run up a daily record of as much as $10,000!



• • •

DATA obtained from 80 markets near a large Michigan city indicate that the best location is on the side of the road to the right of motorists who are returning to the city. Inbound motorists make larger purchases than those leaving the city and more are inclined to stop when they can pull to the right instead of crossing through traffic.

• • •

ANOTHER important point. A record of 1,700 sales showed that 42 per cent of the customers made purchases without getting out of their cars. As soon as a car stops it is essential that a sales person step up and ascertain what is wanted, then bring samples for the motorist's inspection.

• • •

The Strawberry Patch

I would like advice on raising strawberries. I have a patch which I will pick this year for the first time. Which do you think the more profitable for me to do, set a new patch this year or try to hold the old one over for another year? I have been told that the berries the second year are not as nice as the first. If you advise holding the old patch over what should I do after the berries are picked? L. S.

Almost invariably the finest berries are harvested the spring after the plants have been set. As a rule the second crop is more or less inferior in size and yield, although this may not always be the case if sufficient work is put into maintaining the patch between the first and second crop. In point of profit the problem resolves itself into a question of whether it is less expensive to keep the old patch in first-class condition or to plant a new one. Just how much of a job it will turn out to be to carry the old patch over will depend on the natural weediness of the land and on the amount of rainfall.

My present custom is to plant a new patch each spring. Then, if after picking the first crop, the patch looks as though it might have a tendency to grow weedy it usually is plowed up at once and planted to late cabbage (Copenhagen Market or Enkhuizen Glory—not enough time left for Danish) or snap beans, spinach or a green manure crop. On the other hand if the patch is very clean I usually top-dress at once with about 200 pounds per acre of nitrate of soda or sulphate of ammonia, pull the big weeds after a heavy rain and harvest a second crop the next spring. If you are inclined to fruit your plantation more than once it will pay to be particularly careful to secure straw for mulching purposes that is unusually free from weed seeds or from timothy.

• • •

Wild Garlic

I would like to know the best way to get rid of wild garlic. It has started in my garden. It is the kind that multiplies in the ground. Has a seed about the size of a grain of corn and forms balls about the size of a hen's egg. Last summer I tended the garden and kept it clean, but this spring it has come up and looks like a field of grass. Davis A. Palmer.

GARLIC can be killed out only by persistence in thorough cultivation. Although you kept your garden clean last summer the underground bulbs retained sufficient strength to make a quick growth this spring. If you will cultivate and plow so regularly and thoroughly that this pest never gets a chance to make any growth above ground you will eventually starve out the underground parts. One plan is to plow thoroughly late in the fall, disk or plow early in the spring and then keep down all growth throughout the summer. Probably two years of this will be required.

• • •

A Small Hothouse

I am thinking of making a small hothouse, 25x20 feet or so. Can you tell me where I can buy the steel frame parts for the top and sides, or do you think I can make wood frames and put in glass myself? Do you think I can heat it right by having hot water heat piped from the house 35 feet away? W. W. C.

NO steel frame will be required for a plant house of the size which you have in mind, although pipe purlins and posts may be worth your consideration. You could make frames of wood, or you could buy sash, or sash bars. If you have had no experience in making a structure of this kind I would suggest that you write to the New Jersey Agricultural Experiment Station, New Brunswick, New Jersey, and ask for Extension Bulletin No. 51, Plant Growing Structures.

If the hot water heater in your house stands several feet lower than the grade of your proposed plant house, has some reserve capacity and is not more than about 35 feet away it may be possible to use it to supply heat. The bulletin also contains suggestions on heating.

Pear Blight

I have a Kieffer hybrid pear tree about thirty-five years old. When I bought it I was informed that the Kieffer is blight proof, but in the course of time the blight struck this tree and it has been blighting for more than fifteen years. For a while it looked as if the blight would kill this tree, but it would sprout up again. I noticed blight on the tree every year until last year when there was not a sign of blight except on the stubs of dead branches that had been previously killed. Three other Kieffer trees near this one have been affected by blight heretofore but they did not have any blight last year. A. J. Legg.

THE Kieffer is somewhat less susceptible to fire blight than most varieties of the European group, such as the Bartlett and Clapp's Favorite, but it certainly is not blight proof. The fact that the disease was not active on these trees last season is no assurance that they are becoming immune; any year that conditions of growth and of infection are favorable, there will be a recurrence of blight.

Some progress is being made in breeding "blight proof" varieties of pears by Professor E. C. Reimer at the Southern Oregon Experiment Station. Two years ago I saw hundreds of seedlings in his experiment plots which had been inoculated repeatedly, by hand, with the active blight organism, but the disease did not "take". In the same rows were many thousands of the seedlings, similarly treated, which blighted to death. These seedlings were mostly crosses of Old Home, a variety of the European type, which is practically blight proof but almost worthless in quality. I have no doubt that in the course of years Professor Reimer will secure blight resistant varieties of good quality. S. W. F.

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Green Mountains, Irish Cobblers, Smooth Rurals, Russet Rurals. Listings requested. Satisfaction or arrival guaranteed. Write for prices. Buyers Guide.
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For Sale All kinds of fruit trees, evergreens, berry plants, privet, etc. Improve your Property. Stock shipped prepaid.
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BOOKLETS that are offered through advertisements usually without cost to you. Understand the advertiser anxious to where from ten cents to a dollar apiece. He is willing to send them to you free because he believes that you are really interested in the goods or the service he has to sell.

Read the advertisements in this paper. When booklets are offered on subjects in which you are interested, write for them, mentioning this publication. Advertised goods of known quality are safer to buy than unadvertised goods of unknown or doubtful quality. Read the advertisements.

The MARKET PLACE
By W. R. WHITACRE

Wide radio can be of great aid to the farmer if he will take advantage of it. In nearly every section of the country market reports are broadcast daily, giving the prices at which farm products are selling on the large city markets. The radio is quicker than any other agency in giving out this information and the value of market quotations depends chiefly on its timeliness.

The grower who must ship to a distant market can benefit by these reports and learn when prices are rising or falling. The producer who markets his crops in a nearby town or city will find these prices a guide on which to base his own prices.

Occasionally we hear of farmers who have saved large sums of money through the information brought to them by radio. In many nearby sections country buyers purchase direct from the farmer and in this case the radio reports will keep the grower informed as to what is a fair price for his produce.

Buyer Loses

One Philadelphia merchant who buys extensively through nearby country districts told me that a radio report cost him several hundred dollars. He explained that he was buying sweet potatoes in South Jersey and the market advanced sharply. The market report was broadcast at 10:15 a. m. and it contained the information that sweet potato prices had gained. Before 10 o'clock he was able to buy several lots of growers at his own price but on calling at the next farm he learned that the farmer had been "listening in" on the radio and would not accept his offer. He drove on and all through that section he found that farmers were accurately posted on the market. This is an actual case and it demonstrates the practical value of radio and market reports.

It is easy to see that the prices that are broadcast must be reliable and in practically all cases they are furnished by the federal government or the various state departments of agriculture.

Letters Welcomed

There are numerous other instances where radio reports have saved the growers money and I know that there are many more of which we never hear. Operation of radio stations is very expensive and they donate their services for this cause. The farmer says it is good advertising and builds good will, but that is intangible and is hard to estimate in cash.

I have been closely associated with the broadcasting of market news for five years and I know that the radio stations welcome letters of criticism or suggestion. In fact, that is the only way they learn that what they are doing is worth while. I know of stations that have curtailed valuable radio service to the farmer because they had no indication that it was appreciated. Other stations would increase or alter their agricultural broadcasting to suit the needs of the growers if they knew what they wanted.

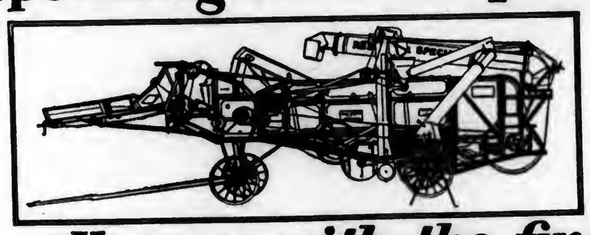
In addition to market news and prices there are agricultural talks by leaders in the various lines of agriculture. The talks cover all phases of production and marketing and contain valuable information.

A Pullman porter was thrown from his car when the train was derailed, and flew ten feet through the air before he hit head first up against a concrete post. He lay in a daze rubbing his head, when the conductor came running up.

"Great Scott, man," cried the conductor, "aren't you killed?"

"No," said the porter getting to his feet, "that concrete post musta broke ma fall."

Savings in time, grain, in operating cost, in upkeep—



all come with the finest, fastest, cleanest thresher

The Red River Special Line for 1929

Threshers
22 x 36
28 x 46
30 x 52
32 x 56

Combines
5 Sizes

Tractors
4 Sizes

N & S Corn Picker-Husker

When you buy the Finest, Fastest, Cleanest Thresher, you get that and more. You get:

Savings in Time When a crop is ready to thresh, you want to thresh, to cash in profits and avoid loss by rain and weather—with the Red River Special, you thresh faster. The many improvements keep the whole machine running at the pace set by the Big Cylinder, you thresh up to machine capacity all day long and save the grain.

Savings in Grain When you thresh grain, you want it all. The famous 4 Threshermen — the Big Cylinder, the Man Behind the Gun, the Steel Winged Beater and the Beating Shakers are the greatest combination ever devised to get the grain from the straw.

Savings in Operating Cost Double Belts running on perfectly balanced Rockwood Weatherproof Fibre Pulleys, driving shafts that run in Hyatt Roller Bearings, Alemite-Zerk Lubricated, make a smoother running machine, send more of the power to the point where the machinery meets the grain—cut down the power needed, lowering operating cost.

Savings in Upkeep The bearings, pulleys and lubrication make a machine that lasts longer. They cut down on vibration and wear. Added also are the features of rust resisting Armco Ingot Iron, Bridge Truss Construction, French & Hecht Wheels, each selected because it adds definitely to the life of the machine. It will require fewer repairs and will last. It will do its job. It will stand up on the belt and on the road.

The Finest, Fastest, Cleanest Thresher saves you money, in the extra grain that you save, in the power and repair cost you do not spend. That means more profit each season, and it will pile up these profits season after season.

You'll find more about this in our new book: "More Than Ever The Finest, Fastest, Cleanest Thresher." Send the coupon for your copy.

NICHOLS & SHEPARD COMPANY
In Continuous Business Since 1848 305 Marshall St., Battle Creek, Mich.

THE NICHOLS & SHEPARD COMPANY, 305 Marshall St., Battle Creek, Mich.
Please send me the Book—"More Than Ever The Finest, Fastest, Cleanest Thresher."
Name..... R. F. D..... City..... State.....
I have..... acres of grain. My tractor is a..... H. P..... If you have a thresher, make, state size and make.....

The RED RIVER SPECIAL Line

Certified Seed Potatoes
SPECIAL CLOSING OUT PRICES
MICHIGAN AND NEW YORK RUSSETS
Car lots or bag lots. Prompt delivery assured. Write or wire today.
H. C. LIVERMORE, BOX F, HONEOYE FALLS, N. Y.

Quicker Frost Proof

BERRY BASKETS



Save Money on Berry Baskets and Crates. Buy at factory prices and WINTER DISCOUNTS. Write for free catalog NOW.
The Garlic Guard
The BERLIN FRUIT BOX CO.
Berlin Heights, Ohio

Quality Preferred

WHEN you go into town on Saturday for the week's buying, how do you go about it? The chances are that your mind is pretty well made-up—not only as to general description of the products you want, but as to the brand names. You'll mention familiar merchandise easily, naturally. Names of advertised goods.

You prefer advertised goods because you know you can depend on them. You save hours of shopping time in a year because you don't need to investigate or examine the things you want. You don't buy on suspicion, you buy with confidence—because you know goods that are consistently advertised must maintain consistent quality. It is ruinous for a manufacturer to turn the spotlight of advertising on an inferior product. And advertisers know it. Hence advertising is a guarantee of dependability.

Read the advertisements regularly. When you go to buy—be informed!

YOU CAN BE SURE THE QUALITY IS "AS REPRESENTED" WHEN YOU BUY ADVERTISED GOODS.

TIGHT BINDING TEXT CUT OFF

For Profit's Sake

Give Your Poultry

PEARL GRIT!

Keep your springers growing, your layers producing. Provide PEARL GRIT to give them the lime they need. They can't get enough on range. Give them access to PEARL GRIT constantly. They will eat what they require. That may be only a little, but it's vital to their health and productivity.

Get PEARL GRIT from your feed dealer. If he doesn't have it, we'll ship direct. And be sure to ask for the PEARL GRIT book if you haven't read it.

Mail the coupon today

FREE • • MAIL COUPON



Pearl Grit Corp.;
3325 Wayne St., Piqua, Ohio
Send me your free book, "The Poultry Raiser's Pay Envelope," and give me the names of dealers who handle PEARL GRIT.

Name.....
Address.....
P.O.....State.....



Just Paint it on the Roosts!

—Before the chickens perch. Only a small paint brush and a can of "Black Leaf 40" are needed. While chickens roost, fumes are slowly released and penetrate the feathers; killing lice. Eliminates individual handling of birds. Ask your dealer or write us.

Tobacco By-Products & Chemical Corp., Inc., Louisville, Ky.

"Black Leaf 40" Kills Poultry Lice

Save Baby Chicks



by giving them daily a few drops of Bourbon Poultry Remedy in drink or feed. For treatment and prevention of Diarrhoea and as tonic and conditioner to keep chicks strong and vigorous it has no equal. Money back if it fails to cure any disease of chickens, or to keep them healthy. Hundreds say they can't raise chicks without it. Also cures and prevents Gleet-head, Roup and other ills of turkeys. Half-pint $1, pint $1.50. At druggists, or sent by mail postpaid. BOURBON REMEDY CO., Box 8, Lexington Ky.

CHIX from large breeders

SUMMER PRICES	100	500	1000
Ferris Strain W. Leg.	$10	$47.50	$ 90
Everlay Brown Leghorns	10	47.50	90
Basom's Barred Rocks	12	57.50	110
Owens' R. I. Reds	12	57.50	110
Mixed Chicks	8	37.50	70

Our breeders are selected for size, type and egg production. The kind that lay and pay. Send for literature. It is free. Tells all about our great egg machines.

CHIX **JUNIATA POULTRY FARM** Box P, Richfield, Pa.

RAISE YOUR CHICKS



One dram Weeker's Chick Tablets in the water, from the start, keeps White Diarrhoea, Roup and other chick diseases. Makes your chicks grow fast weeks.

STOP THAT ROUP

Weekers Roup Tablets positively stop roup just done in drinking water

Either tablets 60c, $1.20—1000, $2.00—state which. C.O.D. Orders Postage Extra FREE Booklet on Diseases of Poultry

Weeker Remedy Co., BOX 197-41 CAMDEN, N. J.

Be Sure It's WEEKER'S of Camden, N. J.

BROILER—RAISERS

SHIPPING CRATES LOANED FREE

SHIP YOUR LIVE BROILERS and other poultry to New York's Oldest Live Poultry House. Est. 1881. We are bonded commission merchants. Birds fed; returns made daily. Highest prices. Our outlet is unlimited. Inquire about us. Write for quotations, crates, tags, shipping instructions and Holiday Calendar. Dept. P-3. KRAKAUR POULTRY CO., Inc., West Washington Market, New York City.

BABY CHICKS

12 Leading Varieties—White Leghorns, Black Minorcas, Rocks, Reds, Wyandottes, Hamburgs, Specked Sussex, Buff Orpingtons.

$9.00 per hundred and up.

Free Catalog and Price List.

Lantz Hatchery, Tiffin, Ohio



Baby Chicks

from

High Egg Laying Flocks

31 years reliability. Satisfied Customers our guarantee. Prices Reasonable. Write for catalog and price list.

BUCYRUS HATCHERY CO., Box 615, Bucyrus, Ohio

BABY CHICKS C.O.D.

Send no money, just mail your order. We ship C. O. D. and guarantee live delivery of chicks. From purebred, inspected and culled flocks.

Prices on	25	50	100
S. C. Wh. and Br. Leghorns	$3.00	$5.50	$10.00
Bd. Rocks and R. I. Reds	3.50	6.50	12.00
Wh. Rocks and Wh. Wyandottes	4.00	7.50	14.00
Broiler Chicks	2.50	4.50	8.00

Bellefonte Poultry Farm, Box 909 Bellefonte, Pa.



An Egg Factory

THE building shown in the accompanying photograph is a veritable egg factory. It was constructed two years ago by Wm. D. Seidel of Montour county, Pa., a prominent poultryman and hatcher.

The building is 120 by 36 feet and has three stories, each 7½ feet high. Each floor has six compartments 20 feet by 36 feet, five of which are being used for layers and one for a feed room.

Mr. Seidel has equipped his feed rooms with electrically driven conveyors and mixing machinery and ample feed storage space.

Each floor has feed carriers that run on an overhead track from the feed room through the five pens on that floor. On this same track he runs his litter carriers. The manure is taken out of the house each day and dumped down a chute at the left side of the building into a manure pit.

Roosts, combination water fountains, mash hoppers and the heating and ventilating systems are all of a modern type, the ventilating system being under thermostatic control.

The building has a hot-water heating system which is used in cold spells to check the effects of sudden changes of temperatures. The windows are all of glass substitute, the frames sliding in metal grooves on the outside of the building.

Each of the fifteen pens in this building has 200 laying hens in it, making 3,000 hens in the building. Due to the convenient arrangement of the building, one man easily takes care of this large flock alone.

Pullets are kept on the second and third floors. These are put into their laying quarters in August and are kept there until the following June and July, when they are severely culled. The poor hens are sold. The good ones are taken out to Mr. Seidel's farm where they are kept on range and used for breeders.

On the first floor are kept breeders of the heavy poultry breeds. These have access to runs outside of the building.

Mr. Seidel keeps from 5,500 to 6,000 laying hens, all selected for their type and production qualities. From these hens he gets the eggs to run his incubators throughout the season. This year he plans to have 300,000 chicks for sale.

• • •

IT took seven Lackawanna county farm boys to sell folks in Carbondale on the desirability of capons for holiday roasters. These seven boys were organized into a club last summer by County Agent Zug, who assisted them in purchasing 140 eight-week-old Barred Rock cockerels. These were caponized and fed by the boys until the Christmas holidays at which time they weighed eight pounds and were good and fat.

These boys at the beginning tied up with the Carbondale Kiwanis Club, who acted as their sponsor and the members of which were largely the buyers of these capons. They became so enthusiastic about these roasters that the news spread and the demand grew far greater than the supply.

This year the club will be doubled and already the market for the capons produced is assured. News spread to Scranton and the Chamber of Commerce there asked to sponsor two capon clubs to be organized in the county this spring. M. H.

A Spring Molt

I have 140 White Leghorn chickens which laid well all winter. I got about 75 eggs daily. Suddenly they dropped to 30 or 40. Can you tell me the cause? The combs are full of feathers. Do you think they could be molting? They are one year old. Would you advise keeping them for laying next winter? Would you advise throwing them into a molt now and how can I do it?

Geo. Rhoads.

IT would seem to us that you would not have to force your birds into a molt. They have apparently already taken care of this themselves. The cause of this molt is unquestionably due to some abrupt change in management. Have you changed your ration abruptly by giving them some other kind of food or increasing or decreasing the amount of scratch grain. Did you use artificial light in the laying house during the winter months. Spring molting of fowls is often caused when artificial light has been used during the winter months and then discontinued abruptly in the spring. Have you made any radical change in the management of your fowls.

I think it would be well for you to retain only those birds which show no signs of molting. The others may be sold at the present time. Poultry meat is bringing a good price now and since the fowls which are molting will not lay for several weeks, no income can be expected from them. H. C. K.

Crazy Chicks

I have had trouble with some of my March-hatched Leghorns. They seem to be crazy. They stagger around and will not eat a thing for two or three days. After they get better so they can eat they walk stiff. Out of three I have lost one. I opened him and couldn't find anything wrong with him.

Forest Crown.

THE condition present in your flock has been described by the New Hampshire Poultry Department as "crazy chicks". The cause is not known. Usually the mortality is not great.

If your chicks have not been on the ground and have not been fed cod-liver oil, it is possible that the trouble can be laid to lack of Vitamin D. The use of cod-liver oil at the rate of one per cent of the mash will keep chicks on their feet even though they are compelled to remain indoors. Early-hatched chicks must be fed cod-liver oil or allowed in the direct rays of the sun. If you have not used cod-liver oil, I would suggest that you incorporate it in your ration. H. C. K.

Linesville Gold Medal Chicks still on top after winning 8 State Gold Medals; they are winning cash for others. You can win with Our Sturdy Chicks.

The Old Reliable LINESVILLE HATCHERY Linesville, Pa.

Write today for free booklet and price also free book on brooding

Chicks C. O. D.

Immediate delivery. Leghorns $11 per hundred. Hatched from healthy Range-Certain-Bred, 5 lb. tested, 8 and 9 pound breeders. Order quick, pay post man on delivery or if you prefer, have your own heavy-weight pullets bring it five months time. Our cost to do it. So can you. $65 for five months. Satisfaction guaranteed. A postal card will do.

FARM SERVICE
Route S10, Tyrone, Pa.

CHERRY HILL CHICKS

S. C. W. Leghorns—Wyckoff Strain ... $...
S. C. Everlay Brown Leghorns ...
Barred Rocks—Wm. Nace's Select ...
S. C. Rhode Island Reds ...
Mixed or Broiler Chicks ...

For less in 500 lots. 1c less in 1,000 lots. Add 2c for 50 chicks add 1c. Full delivery guaranteed. Parcel Post prepaid. Bank references, order direct from this or write for free circular.

CHERRY HILL POULTRY FARM
Wm. Nace, Prop., Dept. F, McAlisterville, Pa.

BABY CHICKS

	50	100	500
White Leghorns	$5.50	$10.00	$47.50
R. I. Reds	6.50	12.00	57.50
Buff Orpingtons	7.50	14.00	67.50
White Rocks	7.50	14.00	67.50
Heavy Mix	5.50	10.00	47.50

100% live delivery guaranteed. Send for order blank or C. O. D.

MONROE HATCHERY, Box 10, Richfield, Pa.

STRICKLER'S SUPER-QUALITY CHICKS

High Egg Producers Bred Healthy, Vigorous. Large Tancred Barron English S. C. White Leghorns. $7.50 per 100. Light Mixed $6.50 per 100. No flocks used, chicks are extra husky and vigorous. These quality pen chicks are guaranteed to live and grow. Shipped prepaid and insured. 100% live delivery guaranteed, saved or replaced free. Order direct from this ad. Prices per 50, $3.75; per 100, $7.00; per 500, $33.50; per 1000, $65.00. White Rocks, Barred Rocks, $10 per 100. Catalog free.

LEONARD F. STRICKLER, Box F, Shavertown, Pa.

STOP! LOOK! and take notice to the special low prices on Cockerels and baby chicks for May delivery.

Tancred strain White Leghorns	$3.00
Everlay Strain Brown Leghorns	3.00
Barred Rocks and R. I. Reds	3.50
Light mixed	2.75
Heavy mixed	3.00

100% live delivery guaranteed, saved and insured. Special prices on 500 and 1000 lots. Free circular.

COCOLAMUS POULTRY FARM, Cochranville, Pa.

ULSH'S Superior CHICKS

White Wyandottes	$12.00
Wh. & Buff. Rocks	12.00
Heavy Mixed	10.00

100% live delivery guaranteed. Postage Paid.

JAS. E. ULSH, Beaver Springs, Pa.

BABY CHICKS

Tancred Str. Wh. Leghorns	$9.00
White Leghorns	8.00
Barred Rocks	9.00
S. C. Reds	9.00
Heavy Mixed	7.00

500 lots 5c less—1,000 lots 1c less. 100% delivery guaranteed. Order from this ad or write for free circular.

C. F. LEISTER, Mallstown, Pa.

BIGGER CHICKS

HATCHED FROM TWO OUNCE EGGS OF BIG HENS

	50	100
White Leghorns	$4.50	$8.00
Barred Rocks	5.00	9.00
S. C. Reds	5.00	9.00
White Rocks	5.00	9.00
Black Giants	5.50	10.00
Heavy mixed	4.50	8.00

COVALLEN POULTRY FARM, R. No. 4
Duncannon, Pa. Member I. B. C. A.

BABY CHICKS

Prompt Delivery—Will Ship C. O. D.

	50	100	500
White & Bf. Rocks	$6.50	$12.00	$57.50
S. C. W. Leghorns	6.50	12.00	57.50
R. I. Reds	6.50	12.00	57.50
S. C. White Leghorns	5.50	10.00	47.50
Heavy Mixed	5.50	10.00	47.50

100% live delivery guaranteed. Send for free order blank or C. O. D. plan.

MONROE HATCHERY, Box 10, Richfield, Pa.

PINECREST POULTRY FARM & HATCHERY

Hechert Miller, Prop. Box 2, Richfield, Pa.

ValleyViewChicks

Tancred Strain Wh. Leghorns	$8.00
S. C. W. Leghorns	8.00
R. Rocks & R. I. Reds	8.50
Heavy Mixed	7.00
Light Mixed	6.00

500 lots 5c less; 1,000 lots 1c less. Prepaid. 100% live delivery guaranteed.

VALLEY VIEW POULTRY FARM
N. J. Ehrenseller, R. 5, Mallstown, Pa.

BARRON BIG TYPE LEGHORNS

300-egg line, heavy winter layers. 8 weeks old pullets, $25.00 per 100; 12 weeks old pullets, $35.00 per 100. Chicks, May 20 and 27 hatches, $14.00 per 100. Hatch every week. Free circular. 1,000 lots 1c less. Prepaid. 100% live delivery guaranteed. Order from this ad. Write for free circular.

MAPLE ACRES FARM, Box 1, Mallstown, Pa.

Wonderful Success

In Raising Baby Chicks

Mrs. Rhoades' letter will no doubt be of utmost interest to poultry raisers who have had serious losses in raising baby chicks. We will let Mrs. Rhodes tell her experience in her own words: "Dear Sir: I see reports of so many losing their little chicks, so thought I would tell my experience. My first investor chicks, when but a few days old, began to die by the dozens. I tried different remedies and was about discouraged with the chicken business. Finally I sent to the Walker Remedy Co., Waterloo, Iowa, for a box of their Walko Tablets to be used in the drinking water for baby chicks. It's just the only thing to keep the chicks free from disease. We raised 700 thrifty, healthy chicks and never lost a single chick after the first dose."—Mrs. Ethel Rhoades, Shenandoah, Iowa.

Danger of Infection Among Baby Chicks

Readers are warned to exercise every ordinary precaution and beware of contaminated drinking water. Baby chicks must have a generous supply of pure water. Drinking vessels harbour germs and ordinary drinking water often becomes contaminated and may spread disease through your entire flock and cause the loss of half or two-thirds of your hatch before you are aware. Don't wait until you lose your chicks. Take the "stitch in time that saves nine." Remember, that in every hatch there is the danger of some infected chicks. Don't let these few infect your entire flock. Give Walko Tablets in all drinking water for the first two weeks and you won't lose one chick where you lost dozens before. These letters prove it:

Never Lost One After First Dose

Mrs. C. M. Bradshaw writes: "I used to lose a great many of the little downy fellows, tried many remedies and was about discouraged. As a last resort I sent to the Walker Remedy Co., Dept. 502, Waterloo, Iowa, for their Walko Tablets for use in the drinking water of baby chicks. I used two 50c packages, raised 300 White Wyandottes and never lost one or had one sick after using the Tablets and my chickens are larger and healthier than ever before. I have found this Company thoroughly reliable and always get the remedy by return mail."—Mrs. C. M. Bradshaw, Beaconsfield, Iowa.

You Run No Risk

We will send Walko Tablets entirely at our risk—postage prepaid—so you can see for yourself what a wonderworking remedy it is when used in the drinking water for baby chicks. So you can prove—as thousands have proven—that it will stop your losses and double, treble, even quadruple your profits. Send 50c for a package of Walko Tablets (or $1.00 for extra large box)—give it in all drinking water and watch results. You'll find you won't lose one chick where you lost dozens before. It's a positive fact. You run no risk. We guarantee to refund your money promptly if you don't find it the greatest little chick saver you ever used. The Pioneer National Bank, the oldest and strongest bank in Waterloo, Iowa, stands back of our guarantee.

WALKER REMEDY CO., Dept. 502
Waterloo, Iowa

BARRED ROCK CHICKS

A Big modern Breeding Farm and Hatchery devoted exclusively to the production of BARRED PLYMOUTH ROCKS

MARVEL POULTRY FARM, GEORGETOWN, DEL.

Switched to Poultry for Profit

MARRIET FARM

Breeds and Hatches Pennsylvania Supervised and Blood-Tested Barred Plymouth Rocks.

Marcus A. McKnight, Carlisle, Pa.

FAIRMONT'S BETTER PURE FLAKE BUTTERMILK

EASTERN DISTRIBUTORS CARLOADS WEEKLY. ALWAYS FRESH. WE QUOTE DELIVERED NEWARK PRICE.

GREENCASTLE, PA

Poultry Rations

In the Pennsylvania Farmer is an article by you saying we should feed heavy laying birds a fattening mash at noon, composed of one part yellow corn meal, one part ground oats, one part milk. Can I use the oats, hulls and all, or must I use the oatmeal or steel-cut oats, and must this oatmeal or steel-cut oats be ground, or can it be fed in that form, flakes or cut grains, mixed with corn meal and the one part of milk? Can that be skim-milk and that just mixed with the other two ingredients? Won't one-third milk make the mash too sloppy? How long would you continue to feed this fattening mash, three pounds of mixture to the 100 birds at noon? We are getting from 70 to 80 per cent eggs now from pullets and yearlings. One pen from two to five years old runs 50 to 60 per cent production. I have about 900 laying birds now. I am getting 700 chicks soon. Can you tell me of some feed troughs, water founts, etc., to save work on these little fellows to make it easier? M. S. D.

IN using oats in the fattening mash recommended, ground or crushed oats will be satisfactory if they are of good quality and not all hulls. If you produce a good quality of oats, by all means use your own grain.

The "one-third milk" in the formula means dried buttermilk. If you have skimmilk use that to moisten the mash, making it fairly moist, but not sloppy. I feed the fattening mash during the fall, winter and spring, just as long as production is heavy.

I just received a letter from the Vineland Contest where this fleshing mash is used and the report stated that the birds were in very good condition as to body weight, and maintaining them in this condition will do a lot toward keeping them laying well during the summer and fall months, when hens which are thin are liable to molt.

I use a tray for the first feedings consisting of a section of board with plaster lath nailed around the ends and edges to form sides. Later, as the chicks develop, similar open hoppers are used, with higher sides.

For watering I like the stoneware one-gallon founts. These can be secured at almost every hardware store or supply house.

Whey for Chickens

Is milk whey good to mix in the mash? Is it any benefit to hang cut corn up, say about two and one half feet, in order that fowls will jump up to get it? A. B. J.

WHEY is of little value in the poultry ration. In a hundred pounds of whey there is 0.6 pounds of dry matter, 0.8 of a pound of which is crude protein, and 4.8 pounds of carbohydrates and .3 of a pound of fat.

Compare this for instance, with liquid skimmilk and we find that in a hundred pounds we have 9.9 pounds of dry matter of which 3.8 pounds are crude protein, 5.2 pounds carbohydrates and .2 of a pound of fat.

It would be a better plan, I think, for you to feed either liquid buttermilk or liquid skimmilk rather than whey.

Probably fowls need exercise, but I do not know whether one should go to the trouble of hanging an ear of corn two and one-half feet off the floor in order to give this exercise. It would be better to feed the corn in hoppers rather than in the manner suggested. H. C. K.

Black Leghorns

LAST year I bought 500 Black Leghorn chicks, raised 227 fine pullets and sold 235 cockerels for broilers. Never had a sick chick in the lot. They say diarrhoea and such chick diseases are unknown in Black Leghorns and I believe it.

These Black Leghorn pullets were laying 50 per cent at seven months old. In January and February they laid 60 per cent and at this time are laying 70 per cent, fine big white eggs, and are making me more real money than I ever made before with poultry. J. E. H.

NABOB JUST-RITE Baby Chicks

GREAT WINTER LAYERS

OFFICIAL TRAPNEST PEDIGREED R. O. P. Male Exhibition Quality Matings in the world's finest heavy-laying breeds. Great Winter Layers, from High Record Blood-lines. R. O. P. matings in S. C. White Leghorns, also Barron and Tancred strains; Pomplun, Owen, Mabeed, R. I. Reds; R. O. P. Thompson and Hoferman's Barred Rocks; Martin and Fishel White Wyandottes; Martin and Fishel White Rocks; Shepard's Anconas. 40 Other popular and rare breeds including Ducklings; Goslings, Baby Turkeys. Member International B. C. A. and American B. C. A. Postage paid.

100% live delivery guaranteed	25	50	100	500	1000
S. C. White, Buff, Brown, Blk. and R. C. Brown Leghorns	$3.00	$5.50	$10	$47.50	$ 95
S. C. White, Buff, Brown, Blk. and R. C. Brown Leghorns	3.75	6.50	12	57.50	110
Barred and White Rocks, R. I. Reds, S. C. Anconas	4.00	7.00	13	62.50	120
S. C. R. I. Minorcas, Wh. and Buff Wyandottes, Buff Orpingtons, R. I. Whites	4.00	7.50	14	67.50	130
R. C. Anconas, Cut Wyandottes, S. C. Wh. and Buff Minorcas, Blk. Langshans	5.00	8.50	16	80.00	155
Silver Sp. Hamburgs, Partridge Rocks, Blue Andalusians, Cut Rocks	5.00	8.50	16	80.00	155
Light Brahmas, Jersey Blk. Giants, White Faced Blk. Spanish	5.25	8.50	18	85.00	170
Mixed Assorted 14 per 100. Heavy Assorted 16 per 100.					

FREE Beautifully elaborate Color-plate Catalog. 36 pages, 70 Illustrations. Stamps appreciated. Don't fail to get this fine book and invest your money this season in the famous Nabob JUST-RITE strains. One of the most profitable investments you can make in the poultry field this year. References: PEOPLES BANK, Gambier, Ohio and BRADSTREET'S.

NABOB POULTRY FARMS, Dept. 42, GAMBIER, OHIO

WOLF SELECTED CHICKS

CHICKS C.O.D. Send only $1.00 and pay Postman the balance.



Special sex mated and extra high bred chicks at slightly higher prices. Ship-spend sex mated and time you wish.

	25	50	100	500	1000
S. C. Wh., Br. & Buff Leghorns, R. C. M. Anconas	$3.00	$5.50	$10	$46.00	$ 90
Bd. & Wh. Rocks, S. C. R. I. Reds, Bf. Min.	3.50	6.50	12	55.00	110
White Wyandottes, Buff Orpingtons	3.75	6.75	13	57.00	113
Black Minorcas	3.50	6.50	12	55.00	110
Jersey Black Giants	4.00	7.50	14	67.50	135
Assorted Odds and Ends (Broad chests, etc., to save work on these little fellows to make it easier)	2.75	4.50	8	35.00	65
Assorted Heavy Mixed Chicks	2.25	4.00	7	30.00	55

WOLF HATCHING & BREEDING COMPANY, Box 43, Gibsonburg, Ohio

IMMEDIATE DELIVERY

HERE: NEARLY EVERYONE RAISES Full Blooded "AMERICAN" Quality Chicks.

Write now for our new low prices. Your opportunity to get our special flock mating chicks at utility prices. Chicks shipped C. O. D. Catalogue and prices on request. 100% live arrival guaranteed. 15 breeds. Write now.

AMERICAN CHICKERIES, Box 318, GRAMPIAN, PA.

YOU NEED THIS CATALOG!



Big Poultry Manual Given Free to All Buyers of Chicks

Write for details. Every chick buyer should know about Hoytville Chicks. Our beautiful illustrated catalog tells all about them. Your copy sent on request.

Guaranteed chicks:
OHIO ACCREDITED CHICKS — ALSO BABY DUCKS

Every bird in our breeding flock is banded and a record kept. Our flocks are inspected by experts trained and authorized by Ohio Poultry Improvement Association. Find out about our guarantee plan. 40 breeds. We have Hundred Assembly Chicks from Ohio R. O. P. registered stock. Write today.

HOYTVILLE ACCREDITED HATCHERY, 107 MAIN ST., HOYTVILLE, OHIO

Buy C·M·L·Chicks

C. M. L. CHICKS cost no more than ordinary chicks from the average Hatchery, but our Quality Is Far Superior. For many years we have specialized in Barron English S. C. White Leghorns. We import direct from England. 100% Live Delivery Guaranteed, Postpaid.

	25	50	100	500	1000
BARRON S. C. WHITE LEGHORNS	$3.00	$5.00	$11.00	$52.50	$100.00
BARRED & WHITE ROCKS; WHITE WYANDOTTES	3.25	6.50	12.00	57.50	110.00

All above carefully selected for size and health. C. M. L. chicks mature early and are sure to please you. Baby chicks cannot be had at these low prices. Write for Free Catalog or order direct from this ad.

C. M. LONGENECKER, Box 45, ELIZABETHTOWN, PA.



BIG CHICKS FROM HIGH RECORD MATING—Prices Effective May 4

200 to 326 Egg S. C. White Leghorns. Our long experience in breeding will give a satisfaction to our customers at the following prices: Order direct from this ad.

	25	50	100	500	1000
White, Brown, Buff Leghorns and Heavy Mixed	$3.50	$6.50	$12.50	$57.50	$110
Black Minorcas, Barred and White Rocks, Orpingtons	4.00	7.50	15	72.50	135
S. C. Reds, White Wyandottes, Barron Leghorns	4.50	8.50	17	82.50	160
Giants	5.00	9.50	18	92.50	180
Light Mixed	4.00	7.50	14	67.50	130

SPECIAL TANCRED WHITE LEGHORNS

Your order will receive my special attention. Satisfaction guaranteed.

UHL PIONEER HATCHERY & EGG FARMS
Albert Stoner, Prop. Ref.: Farmers State Bank Box P, New Washington, O.

BUY EARLE CHICKS

and you have made the first step in "making poultry pay". These pure-bred quality chicks come to you from the best of parent stock, bred to lay and guaranteed to please. We offer the following popular breeds and best strains at the Lowest Prices.

	100	500	1,000
Leghorns and Anconas	$12.00	$52.00	$100.00
Barred and White Rocks	14.00	68.00	130.00
R. Reds (Owens and Tompkins)	16.00	78.00	150.00
Jersey Black Giants	20.00		

References: Richland Nat'l Bank. Book order on chicks that pay. You may order direct from this Ad. or will mail literature. We ship C.O.D. or upon receipt of 10% will send P. Post prepaid with 100% live delivery guarantee. EARLE F. LAYGER, Prop., Richland Poultry Farm & Hatchery, P. O. Box 1, Richland, Pa.

ERLAY CHICKS



Ohio Accredited Leghorns—Reds—Wyandottes—Rocks. Leghorns—Well bred selected females mated to early Pedigreed cockerels from official R. O. P. hens producing from 200 to 300 eggs. Rocks—Reds—Wyandottes Breeders mated with high record males. Wyandottes From stock used by Canada's best breeders. Reds—Heavy Layers—Excellent type and color. Every chick Ohio Accredited. Highest awards at Ohio State Chick Fair. Write for literature. Send for 1929 Chick Folder.

ERLAY POULTRY FARMS, Box 2, Delaware, Ohio
F. G. Reiser A. L. Ewrett

HUBER'S RELIABLE CHICKS



Make Extra Poultry Profits with Huber's Reliable Chicks

When we say RELIABLE we mean RELIABLE in every way. Breeding stock of highest quality of 10 years of careful development. Special attention paid to health of flocks and record of hens. CATALOG FREE—CHICKS SENT C. O. D. IF YOU WISH. Write for descriptive and illustrated catalog which tells all the story. Give prices reasonable. A book on raising chicks worth many dollars given free with each order of $10.00 or more. Reference: Bradford Trust Co.

HUBER'S RELIABLE HATCHERY, N. Main St., FOSTORIA, OHIO

CLIMB ABOARD OUR CHICK SPECIAL!



SATISFACTORY CHICKS

	25	50	100	500	1000
S. C. Wh., Br., Bf. and Bl. Leghorns, Sheppard's Anconas	$3.00	$5.00	$12	$57	$110
Barred, White and Buff Rocks, Buff Orps, Reds, Bf. Minorcas	4.50	8.00	15	70	135
Barron Wh. Leghorns, Wh. Wyandottes, Bf. Minorcas	4.75	8.50	16	75	145
Jersey Black Giants, Wh. Wyandottes, Buff Minorcas	5.00	9.50	18	85	160
Light Mixed, Wh. Wyd., Reds, Brt., Wyckoff Wh. Leg., Wh. Minn.	3.50	6.00	11	50	95
Heavy Mixed, all Chicks Not Sexed	3.00	5.00	9	45	85

Extra: 500, $12.50; 1,000, $23. Black Giants $20, $35. Wh. Pekin Ducklings 25c each. 100% Live Delivery Guaranteed. Bank Reference FREE

The NEW WASHINGTON HATCHERY CO. Postpaid to Canada
BOX D. NEW WASHINGTON, OHIO Member I. B. C. A.

Chicks (*Investigate before you Invest*)



GET OUR BIG POULTRY MANUAL. Get all the information before you buy. Save money. Buy chicks with special breeding and pedigreed males behind them. If you want real producers we have them. We can fill your requirements if you will let us know what you want. Catalog is Free It will help you make more money from your poultry plant. Write to us if you have a poultry problem and we will give our best advice and help.

Write Today—We Can't Tell the Whole Story Here.

COOPERATIVE BREEDING & HATCHING CO., Box 126, TIRO, OHIO

TIGHT BINDING TEXT CUT OFF



Big Chicks from Big Eggs

Good Luck Chicks

REDUCED PRICES and SPECIAL SALE on our FAMOUS GOOD LUCK CHICKS

from May 15th to Sept. 1st. You can't miss with our Big Chicks hatched from best strains in America and eggs that weigh 26 oz. to the dozen. Our June and July chicks will make December Layers. They are prize winners and Profit Makers. Hatches off every Monday and Thursday. Prompt shipment assured. 100% alive. Postpaid. $2.00 chart free with each order. Beautiful COLORED ART BOOK FREE. Write today. 10% cash will book your order. Balance C. O. D.

Breed	Number 25	50	100	500	1000
White, Brown, Buff Leghorns and Anconas	$3.00	$5.50	$10.00	$46	$ 90
Barred and White Rocks, R. C. and S. C. Reds	3.50	6.50	11.50	55	110
W. Wydts., Bf. & W. Orpingtons, Bl. Minorcas	3.75	7.00	12.50	62	120
Buff and White Minorcas, Partridge and Buff Rocks, Silver Wyandottes, Jersey Giants	4.50	8.50	15.00	72	140
Heavy Assorted $10.00 per 100 straight. Light Assorted $8.50 per 100.					

Also Choice PUREBRED COCKERELS and PULLETS to MATE with Your best year's flock. Write for prices.

NEUHAUSER HATCHERIES & POULTRY FARM, Dept. 46, NAPOLEON, O.

Schwegler's "THOR-O-BRED" BABY CHICKS

OUR breeders are bred for high egg production. White, Brown and Buff Leghorns, Barred and White Rocks, R. I. Reds, Anconas, Black Minorcas, Buff Orpingtons, White Wyandottes. 15c and up. 100% live delivery guaranteed. Write today for FREE CHICK BOOK.

SCHWEGLER'S HATCHERY
201 BROADWAY, BUFFALO, N. Y.

TAKE NOTICE 75,000 CHICKS for May Delivery

	25	50	100	500	1000
S. C. White Leghorns	$3.00	$5.50	$10.00	$47.50	$ 90
Barred Rocks	3.50	6.50	12.00	57.50	110
Rhode Island Reds	3.50	6.50	12.00	57.50	110
Silver Laced Wyandottes	4.00	7.50	14.00	65.00	
Light Mixed	2.50	4.50	8.00	37.50	70
Heavy Mixed	2.75	5.00	9.50	45.00	85

From carefully selected free range flocks. 100% arrival. Post paid. Write for Illustrated catalogue.

THE RICHFIELD HATCHERY, Bx. 170, Richfield, Pa.

GREEN FOREST HUSKY CHICKS
English and Tancred Strain

Ship C. O. D.	25	50	100
S. C. White Leghorns	$2.50	$4.75	$ 9.00
S. C. Barred Plymouth Rocks	2.75	5.25	10.00
Mixed Chicks	2.50	4.25	8.00

Leghorn chicks are out of hens with trapnest records of 201-300 eggs. We pay parcel post and guarantee 100% good, strong chicks on arrival. Free circular.

GREEN FOREST POULTRY FARM
J. W. Amig & Son, Props. Star Route Richfield, Pa.

BARRON LEGHORN CHICKS

From Large Type Barron English S. C. White Leghorns. Hens weigh up to 7 pounds. Extra quality chicks from free range selected stock at $13 per 100. $62.50 per 500. $120 per 1000. Hatches May 7-14-21-28. Chicks 100% Live Arrival Guaranteed. 10% books order. Catalog Free.

ROBERT L. CLAUSER, Box N, Kinzlsttorville, Pa.

Baby Chicks
From Free Range Selected Flocks

	25	50	100	500	1,000
White Leghorns	$2.75	$5.50	$10.00	$47.50	$90
R. Rocks & Reds	3.25	6.50	12.00	57.50	110
Light Mixed	2.50	4.50	8.00	37.50	75
Heavy Mixed	2.75	5.50	10.00	47.50	90

100% Prepaid Safe Delivery Guaranteed.
Fair View Poultry Farm, R. 3, Millerstown, Pa.

Quality Chicks at Low Prices
PRICES FOR JUNE AND LATER

Variety	100	500	1000
United Strain Leghorns	$7.50	$30.00	$70.00
Barron or Wyckoff Leghorns	8.00	37.50	75.00
Special Leghorn Wyckoff only	8.00	42.50	80.00
Barred Rocks	9.00	42.50	85.00
Mixed Chicks	7.00	34.00	65.00

L. E. STRAWSER, McAllisterville, Pa.

LIVABLE CHICKS sent C. O. D. from our own big healthy extra heavy strains, priced right for June delivery. "Big Indian" Rose Comb Reds dark color and Parks bred-to-lay Barred Rocks. (Reg. Permit) $12.00 per 100. Big type Tancred S. C. White Leghorns of 300 egg breeding $9.00-100. Discount on larger lots. Free circular.

WILSONS POULTRY FARM, Nottingham, Pa.

WHITE WYANDOTTES
Rose Comb Reds
Baby Chicks, Hatching Eggs, Stock, Winners, Ohio State Fair, Cleveland, Chicago. Big type, heavy layers of large eggs. A. P. A. Certified. Large catalogue free.

Sherman Bowden, Box 1958, Mansfield, O.

FERRIS STRAIN WHITE LEGHORN CHICKS
Our breeders are large birds; long, deep, rectangular bodies. Selected for size, type and egg production.
$10 per 100; $47.50, 500; $90, 1000
JUNIATA POULTRY FARM, Box P, Richfield, Pa.

ZELLER'S EXTRA QUALITY CHICKS
from Large Type S. C. White Leghorns. Trapnested, production bred matings 113—100; 163—500; 1126—1000. Also quality Rocks and Reds. 10% books order.

EDGAR A. ZELLER,
2014 Masada St., Harrisburg, Pa.

CHICKS
$8 up. Healthy, free range stock. Reds, Wyandottes, Leghorns, Mixed. Circular and price list. Delivery guaranteed.

LONG'S RELIABLE HATCHERY
Box 10, Millerstown, Pa.

BABY CHICKS
100% Arrival

	25	50	100	500
W. Leghorns and H. Mixed	$2.75	$5.25	$10.00	$47.50
Barred Rocks and Reds	3.25	6.25	12.00	57.50
Light Mixed	2.50	4.75	9.00	42.50

JOHN SHADEL HATCHERY, R. 2, McAllisterville, Pa.

TANCRED WHITE LEGHORNS 12c each; Wyckoff White Leghorns $9.00—100; Anconas $11.00—100; R. I. Reds $15.00—100; B. Rocks $12.00—100; Minorcas $12.00—100; Heavy Mixed $10.00—100; Light Mixed $8.00—100. Sixteenth season.

Eclipse Hatchery, Port Treverton, Pa.

PUREBRED BARRED ROCK CHICKS
$12 per 100; $100 per 1,000. Heavy mixed, $9 per 100. Prompt service. 100% live delivery guaranteed.

CHAS. F. EWING, R. 1, McClure, Pa.

Chicks from Blood-Tested Stock
Pennsylvania Supervised Flocks.
Shipped C. O. D. Free Circular.
Sunnybrook Poultry Farm, New Berlin, Pa.

FOR GREATER PROFITS Hatchery Chicks

CHICKS FROM JANUARY TO SEPTEMBER, 1929
Barred and White Rock, White Wyandotte, Rhode Island Reds, White Leghorns, Anconas and heavy mixed. Our flocks have been culled by Mr. Lloyd Baker a graduate of Pennsylvania State College, also having several years practical experience. Write us your wants.

Dept. G. L. R. WALCK HATCHERIES Grosscastle, Pa.

BABY CHICKS
FROM HEAVY LAYING FREE RANGE FLOCKS

	25	50	100	500	1,000
S.C.W. & Br. Leg.	$3.00	$5.50	$10.00	$47.50	$ 90
S.C. Rocks & Reds	3.50	6.50	12.00	57.50	110
S.C. Buff Orpingt'ns	3.50	6.50	12.00	57.50	110
Wh. Wyandottes	3.50	6.50	12.00	57.50	110
Assorted Chicks	2.75	4.50	8.00	37.50	70

100% prepaid safe delivery guaranteed. Order from this ad or write for circular.

J. N. NACE POULTRY FARM Richfield, Pa. Box 3.

HILL SIDE CHICKS
Will Ship C. O. D.
May Chicks as Low as 8c.

S. C. R. I. OWENS STRAIN REDS
S. C. ROCKS S. C. W. L. TANCRED and HEAVY MIXED—LIGHT MIXED WYCKOFF Strain
100% live delivery. P. O. Paid. All free range stock.

T. J. EHRENZELLER, Prop.,
United Phone Box 11, McAllisterville, Pa.

BABY CHICKS Order direct from this ad and save time.

Free Range bred	25	50	100	500	1000
White and Brown Leghorns	$2.75	$5.25	$10	$47.50	$ 90
Anconas & Black Leghorn	2.75	5.25	10	47.50	90
White and Barred Rocks	3.25	6.25	12	57.50	110
Columb. Wyan. & R. I. Reds	3.25	6.25	12	57.50	
Heavy mixed broilers	2.00	3.75	11	52.50	
Light mixed broilers	2.25	4.25	8	36.75	75

Full count and quality guaranteed. Catalog free.
For Greater Profit Hatchery Chicks — Ulsh Poultry Farm & Hatchery, Box F, Port Treverton, Penn'a

Penn'a State "Supervised" CHICKS

Flocks inspected by officials from the Penna. Dept. of Agri. Our 19th year—established 1910. Get our low prices on Reds, Rocks, Leghorns and Minorcas. Member I. B. C. A.

Catalogue free. THE KEYSTONE HATCHERY, (The Old Reliable Plant). Richfield, Pa.

BABY CHICKS
From Free Range Selected Flocks
Prices on 25 50 100
S. C. White Leghorns $2.50 $4.50 $ 8.00
Barred Plymouth Rocks 3.00 5.50 10.00
Send no money. Just mail your order. We ship C.O.D. and guarantee live delivery of chicks.

RINGTOWN POULTRY FARM, Box 306, Ringtown, Pa.

Best Quality Chicks

	25	50	100
Tancred Str. W. Leghorns	$3.00	$5.50	$10.00
S. C. Brown Leghorns	3.00	5.50	10.00
S. C. White Leghorns	2.75	5.00	9.00
S. C. Barred Rocks	3.50	6.50	12.00

Light Mixed $8.00; Heavy Mixed $10.00 per 100. 100% Arrival Postpaid. Special price on large lots.

Chester Valley Hatchery, R. 7, McAllisterville, Pa.

Chicks 7c Up Long's Large Type Barron Strain

S. C. W. Leghorns, 2 yr. old breeders, $10.00 per 100
Barred Rocks and Reds 10.00 per 100
Heavy mixed, 9c; Light mixed 7.00 per 100
Prepaid live arrival and satisfaction guar'd. Catalog

TURKEY RIDGE HATCHERY, Millerstown, Pa.

CHICKS Pure bred, Blood tested free range breeders. Leghorns, Anconas, 10c; Rocks, Reds, 12c; Wyandottes, Orpingtons, Minorcas, 13c; Black Giants, 18c. 100% live delivery. Valuable Chick Manual Free.

BEDIELTON FARMS, Washingtonville, Pa.

WYCKOFF STRAIN WHITE LEGHORNS CHIX
$10.00 per 100 $47.50, 500 $90.00, 1,000
100% prepaid safe delivery guaranteed.

J. N. Nace Poultry Farm, Box A, Richfield, Pa.

S. C. W. Leghorns, $9.00-100. Barred Rocks, $11.00-100. White Rocks and Reds, $12.00-100. Broilers, $8.00-100. Add 2c if less than 100 lots. My chix are all from good culled stock. I pay postage. Special prices on large orders. Circular free.

JACOB NEIMOND, Box 4, McAllisterville, Pa.

Chicks, Barron Eng. Wh. Leghorns 9c
White Leghorns 8c; Barred Rocks 10c; heavy mixed 8c; light 7c. Reduced on large orders. 100% guaranteed. "New Circular Free." May 30th and later delivery.

TWIN HATCHERY, McAllisterville, Pa.

Chick Prices for May deliveries, S.C. Legh'n, $9.00-100; Red, Rocks and Reds, $11.00-100; Heavy mixed, $10.00-100; Light mixed, $7.00-100. 100% live arrival guar. Cir. free.

Penn's Creek Hatchery, Selinsgrove, Pa.

TANCRED STRAIN **White Leghorn Chix**
$10.00 per 100; $47.50 per 500. Extra nice healthy chix, shipped cash on delivery. Write.

Brookside Poultry Farm, McAllisterville, Pa.

Poultry Problems

Enlarged Liver

Can you tell me what was wrong with these pullets? They seemed to be in the best of health. One cold morning I noticed that one did not want to eat. I looked her over and could not see anything wrong. I set her on the roost and at noon she was still there. When I went out about four o'clock she was dead. On examining her I found her egg organs were not developed and the intestines were all shriveled. The gizzard was no larger than a hulled walnut and her liver very pale in color, had filled the whole cavity of her body. She was in good condition. In about a week I noticed another one that stood in the same manner. I killed her, and on examining her I found her to be in the same condition, only her liver was spongy. You could almost crumble it. Her body was full of water and there was a sack of water around her heart.

I am feeding a commercial mash with wheat and corn, grit, oyster shell and fresh water before them at all times, green feed of some kind each day consisting of cabbage, carrots and a few potato skins. I have 22 pullets and they have been averaging 18 eggs a day, which I think is very good. C. C.

VERY often an enlarged liver is a symptom of a derangement of the digestive system, the cause of which is not thoroughly understood and for which no treatment can be suggested. Your method of feeding seems to be all right, and possibly your losses were caused by individual peculiarities of the birds which could neither be foreseen nor prevented. If you have no further losses I feel sure that your birds could be used with safety for breeders.

An enlarged liver may also accompany fowl cholera. If you have more losses, it would be a good idea to get in touch with your farm agent at the court house at once and have him look at the birds. In cholera outbreaks the course of the disease may be very rapid and many deaths occur in a short time. If your birds have greenish yellow diarrhea, are listless and upon opening dead ones show congested blood vessels and red spots or specks on the heart, cholera is to be feared. In such an outbreak, the sick birds should be removed at once, the rest put in another house, and the original house thoroughly cleaned and disinfected, as cholera is contagious. I do not know of any medicine for cholera.

Whether your losses came from "liver trouble" or cholera you will probably know by the time you receive this letter, because of further deaths in your flock. If it is cholera, surviving birds should not be bred from. R. L. S.

Colds and Roup

Will you tell me what ails my chickens? Their eyes get all white and frothy, then in a day or so they swell shut. F. C.

YOUR fowls are probably suffering from colds which have developed into some cases of roup. Very often when colds are present in a flock roup, canker and chicken pox later develop.

As a flock treatment I would suggest that you use chloride of lime in the drinking water at the rate of two to three teaspoonfuls per gallon. This water should be given fresh daily. It would also be advisable for you to use a two per cent solution of mercurochrome applied directly to the affected areas. This material may be purchased from a druggist. If the nostrils of the chickens are congested, this material may be injected into the nostrils with a medicine dropper.

It would be well to remove the badly affected birds, those having eyes completely swollen shut, and treat them several times daily with mercurochrome. If they do not respond to treatment, they should be killed and burned or buried deep.

Resistance to colds can be obtained by feeding one per cent of cod-liver oil in the mash and by the use of a suitable scratch and grain mixture. Some poultrymen who have used cod-liver oil for a number of years are convinced that the percentages of colds in their flocks have been materially reduced. H. C. K.

Ducklings

I would like to inquire a little about raising ducklings. Are they as easy to raise as baby chicks? Do they require the same temperature as baby chicks under the hover? What is their feed? How long should they be kept off the ground? Do they need water to swim in? Will it hurt them if they do swim? Can they be raised as broilers and be profitable?

I intend to house these in a 10x12 brooder house and a 500-chick size brooder stove. H. G. W.

YOU did not state the breed of ducks in which you are interested. The Pekin duck is raised primarily for meat, while the Indian Runner is raised more for eggs. Most large duck farms, however, are operated on the basis of meat production.

Ducklings are as easy to raise as chickens. In fact, some people believe they are much easier. Certainly ducks are subject to fewer diseases than chickens.

The temperature, under the edge of the hover, should be approximately 90 degrees and the room temperature approximately 70 degrees. As the ducklings develop, the temperature may be lowered as in the case of broodering chicks.

There are many methods of feeding ducklings. It is important that they are not fed until they are at least 36 hours old. One authority states that for the first three days, after they are allowed food, they should be fed five times daily. A mixture of equal parts by measure of rolled oats and bread crumbs with three per cent sharp sand should be fed. After three days the feed is changed to equal parts of bread, rolled oats, bran and corn meal with three per cent of sand. After the first week the feed consists of three parts of bran and one part each of low-grade flour and corn meal with ten per cent green food and five per cent. meat scrap with a little sharp sand.

Feed four times daily after the first week until the ducklings are three weeks old and three times daily thereafter. The amount of meat scrap should be increased greatly after the second week so that by the time the ducklings are a month old they will be receiving approximately ten per cent.

Ducklings do not need water in which to swim, though it is well to raise them near water when possible. Ducklings should never be allowed in the water until they are well feathered.

The most profitable age at which to market ducklings is usually between 10 and 12 weeks. H. C. K.

Chicks Die

My last week's order of baby chicks is dying by the hundreds. V. I.

YOUR losses may be due to bacterial white diarrhea, for which there is no cure, or may result from chilling and crowding. When you get your next hatch of chicks, dip the bill of each one in sour milk or dilute commercial condensed buttermilk as you put it in the brooder. A drink of sour milk or buttermilk the first thing acts as an intestinal antiseptic, and may help to control various disorders of the digestive system. Be sure that the temperature under the edge of the hover on the floor is 98 or 100 degrees when the chicks are put out, and that this temperature is gradually lowered without fluctuations or sudden changes as the chicks grow. Also do not put over 350 chicks to a hover. R. L. S.

Engineering

To Pull Posts

YOUR issue of April 27, 1929, contains an inquiry by Chas. Brahm about pulling posts with horse and chain. If he will use a plank two feet long or thereabout and run his chain over the top of the plank the horse or horses pulling will lift the post straight up. If the posts are set very deep may be he will need to use a second hitch to do the work. G. H. Huston

NOTICE in your paper that Chas. Brahm wants to know how to pull fence posts with horses and chain. Tell him to loop a chain around the post close to the ground, secure a stout piece of wood about two and one-half feet long, set it on end beside the post, bring the loose end of chain up over the top of wood, hook horses to the chain and go. If that doesn't bring them out tell me I don't know anything. C. E. S

Fire Preventive Paint

Is there any way of treating cedar shingles to make them fire resistant? We have a number of roofs needing shingles, and we have our own cedar but I hate the fire hazard of shingles when they weather. C. M. B

NEW shingles can be fairly well fire-proofed by dipping them into some of the commercial fire-proofing paints. Most of these paints are based on sodium silicate or water glass. Apply two or three coats of equal parts sodium silicate and water, letting each dry before the next is applied. Before the last coat has set hard, apply a coat of lime water. This will unite with the silicate of soda and make silicate of lime, which is insoluble in water and will not wash off, as the water glass alone would do.

Wooden shingles already laid and in good condition can be made much more resistant to sparks by two or three coats of the same paint and finished up with lime wash, provided the paint is worked up under the butts as much as possible. If the shingles are starting to lift or curl, such paints will do but little good, since a spark is likely to blow under a shingle, where conditions are ideal for starting a fire. Such shingles should be removed and a coated asphalt, asbestos cement, or other fire-resistant roof put on. I. W. D.

Harrow Alongside Plow

Please tell me how to hitch one section of drag harrow to a 14-inch gang plow so as to harrow the plowed land outside the last furrow plowed. I do not want to keep filling the furrow by harrowing the last furrow turned over. Have tried several types of hitches, but they have too much of a tendency to pull the plow over. I am using five horses, three behind and two in front. Any suggestions will be appreciated. R. B. G.

I DO not believe a harrow that far over on the plowed ground can be hitched to the plow in any way so that it will not tend to pull the plow out of the land. The only solution I can see for such a hitch is to hinge a 2x4 to the plow beam so as to hold the harrow at the proper distance away, but to pull it by a cable running up to the evener of your lead team. This would not be at such an angle as to make them uncomfortable. If possible they should be given just a slight advantage in lever arm over the rear team against which they pull. This cannot be done with a pulley equalizer, but can if it is a short evener instead of pulley.

Much the same effect as this type of harrowing is secured in a more convenient way and at practically no increase in draft by using a series of sharp knives which pulverize the furrow slice just as it leaves the back of the moldboard. Some of these fasten to the moldboard while others are clamped to the plow standard and hence do not make trouble about keeping the plow from scouring. I. W. D.

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The 6-Door Sedan — Body by Fisher

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Many a farmer is driving one because his previous car was built by Oakland . . . but thousands more . . . newcomers to the All-American family . . . listened to the enthusiastic words of present owners . . . then investigated the features responsible for Oakland's long life . . . for its proved economy.

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Oakland All-American Six, $1145 to $1375, f. o. b. Pontiac, Michigan, plus delivery charges. Spring covers and Lovejoy shock absorbers included in list prices. Bumpers and rear fender guards extra.

OAKLAND MOTOR CAR CO.
PONTIAC, MICHIGAN

The New OAKLAND ALL-AMERICAN SIX

PRODUCT OF GENERAL MOTORS

To You

The farm market is recognized as one of the most important elements of American business. Agriculture's income amounts to more than twelve billion dollars a year. From this income the farmer buys many things; implements, paint, automobiles, furniture, medicines, clothing, musical instruments, tractors, shoes, cooking utensils, seeds, rugs, books, coffee, jewelry, fountain pens, cameras, power plants.

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Many of their messages are printed in this journal. They are here to help you in your buying. Reading them, you can select those articles best suited to your needs and your pocketbook with the assurance you are getting high quality at fair price.

Advertisements are personal messages to you from the manufacturer.

TIGHT BINDING TEXT CUT OFF

THE YOUNG PEOPLE

Soap Sculpture

A DELIGHTFUL pastime with possibilities of developing talent is the novel art of carving from white soap. It is something that both big folks and little folks enjoy. For the adults there are party favors and little colorful objects of decoration such as bits of statuary. It is often difficult to find favors in stores that are distinctly individual and making them at home enables the hostess to avoid the sameness that marks too many of the manufactured favors; quaint carved favors make delightful surprises.

Children enjoy carving out quaint toys and it forms a diverting game with friendly rivalry among their companions. The photographs show some interesting ideas. The favors are as much fun to make as they are appropriate to give and they are all quite inexpensive.

Materials

The materials necessary are large cakes of white soap, sticks of the desired colors of sealing wax and a little denatured alcohol with which to dissolve the wax into paint. The simple tools include a paring knife, orangewood sticks, one having a pointed end and a blade-shaped end for cutting and lining, and one should have a curved end to use in achieving symmetrical curves and indentations. On the opposite end a bent hairpin can be tied and the sculptor will find the hairpin constantly convenient and useful.

Designs

While many times suitable designs to be used as patterns can be found in the magazines, perhaps those designs and motifs found on decorated crepe paper are the most convenient and picturesque. In either event all that is necessary to do is to cut out the design or picture, lightly paste it on the soap, cut around its outlines and trace the important lines that distinguish the features and form.

Designs for children to select are ducks, frogs, Mother Goose figures, clowns, soldiers, Dutch boys and girls, parrots, elephants, lions, simple flowers and miniature furniture.

Directions

Carefully cut down both sides of a bar of soap to a smooth, even surface. Paste the pattern on the soap and with the point of an orangewood stick trace the design on the soap. Turn the soap over and repeat the design on the opposite side. Make sure that it is laid in exactly the same position on both sides. With paring knife carefully carve away the soap on both sides to within a quarter of an inch of the design (Figure 2). With the blade end of the orangewood stick or knife blade round off the sharp edges. Work slowly and cut away only small bits at a time to make sure of getting symmetrical lines and not spoil the form. Too much soap cut away cannot be replaced.

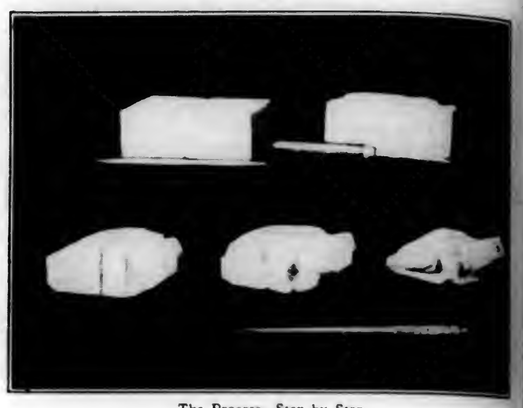
The most artistic and professional looking results will be achieved by not working too long on one particular part of any model. Keep turning it constantly and go back, over and over again, if necessary. Too much soap is likely to be carved away by attempting to finish any portion or part of the model at one time.

Color Finish

After the trip of carving, to make the articles really attractive, and to prevent the soap from warping, they must be painted. This should be done with the sealing wax paint made by dissolving pieces of wax in the denatured alcohol.

As an illustration, if you are making the duck, paint the body golden yellow, the bill orange and the eyes, wings and tail feathers black. Touches of blue-bronze and green-bronze on the wings and tail feathers would add realistic effects.

Sometimes it is desirable to keep the model, such as a bit of statuary, entirely white. In this case paint it with light transparent amber wax paint.



The Process—Step by Step

HOW WISE ARE YOU?

1. Can you put your right hand where your left hand cannot touch it?
2. Can you put your handkerchief where everyone in the room but you can see it?
3. Can you bite an inch off the piano?
4. Can you place a pencil on the floor in such a way that you cannot jump over it?
5. Can you sit on Niagara Falls?

A BOOKLET with further instructions and suggestions will be sent for 10c. Send all orders to Patty Editor, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.



Make Your Own Circus

Education

Less than one per cent of American men are college graduates, yet out of this one per cent have come:

Fifty-five per cent of our Presidents.

Thirty-six per cent of our Members of Congress.

Forty-seven per cent of the Speakers of the House.

Fifty-six per cent of the Vice-presidents.

Sixty-two per cent of the Secretaries of the State.

Fifty per cent of the Secretaries of the Treasury.

Sixty-nine per cent of the Justices of the Supreme Court.

A MAY PLANTING

The answers to the following will be either flowers, plants or trees. The first is "dates."

1. Plant the days of the year and what will come up?
2. Plant tight shoes, and what?
3. Plant a disciple of Saint Paul, and what?
4. Plant a landing for boats, and what?
5. Plant some rats, and what?
6. Plant a government building, and what?
7. Plant a tramp, and what?
8. Plant a dude, and what?
9. Plant something black, and what?
10. Plant a puppy, and what would come up?
11. Plant a wise man, and what?
12. Plant an Israelite with the habit of traveling, and what?
13. Plant a bird in old clothes, and what?
14. Plant a cow, and what?
15. Plant a vessel for holding water, and what?

ANSWERS TO LAST WEEK'S PUZZLE

Bark, leave (bark), trunk, root, branch, laurel, pear, yew, evergreen.

SOMETHING NEW

NEXT week we will publish some of the prize winning letters and cartoons submitted in our April contest. Watch for your name, you may be one of the lucky ones.

Now that we've told how intelligent our pets are, we really have to acknowledge that they are pretty low. Prizes will be given for the best drawing to reach our office by June 1st, telling about the time "The Dog Caught a Skunk". This should be a "strong" subject for our artists!

With school days nearly over for this year, the time has come, as the writer said to Jack of many things, and no doubt Teacher will come in for a big share. Three prizes will be given to the boy or girl who sends in the best letter on "What I Would Do If I Were Teacher."

Just two weeks to go!—June 1st all drawings and letters must be in our office. Address Young People's Editor, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Little Folks Corner

The Story of Two Violets

By MRS. M. K. MAMMEL

"HERE come some more horrible children, looking for us," said little Miss Violet, trying to hide herself among her cool, green leaves. "I do hope they miss us."

"Dear me! So do I," answered the little violet close by. "It makes me shudder to think of what might happen if they see us. I remember those poor, withered little spring beauties that were thrown down by us yesterday as some children passed. They soon tire of us because we cannot hold up our heads very long after being torn from our homes and carried about in warm, sticky hands."

"Oh, dear, Oh, dear!" wailed little Miss Violet, as a tall lad bent over them exclaiming,

"Look, Mother! Here is a beautiful clump of violets. It will just fit this basket."

Slowly and gently the boy dug down into the earth with a trowel and lifted the clump of sad little flowers into his basket. Great was their surprise to feel the cool, sweet earth and leaves still about them as they were carried away.

"I wonder where we are going," whispered Miss Violet to her sister. "I'm so thankful not to be torn from my roots. Aren't you?"

"Yes, indeed," answered sister violet in a low voice. "It's not nearly so nice as staying in the cool, quiet woods though," and she started to weep a little.

"Anyway, we're together," she sobbed and snuggled up a little closer to her sister.

(To be continued.)

Queries and Answers

Why does Santa Claus come down the chimney?—Because it soots (suits) him.

• • •

Which burns longer, a wax or a tallow candle?—Neither. They both burn shorter.

• • •

What is the hardest key to turn?—A donkey.

• • •

If a man was out riding by himself and his horse threw him, what is the first thing he would do?—Hit the ground.

• • •

What was Adam and Eve's telephone number?—281 Apple.

• • •

Why is a hen sitting on top of a gate like a penny?—Because she has a head on one side and a tail on the other.

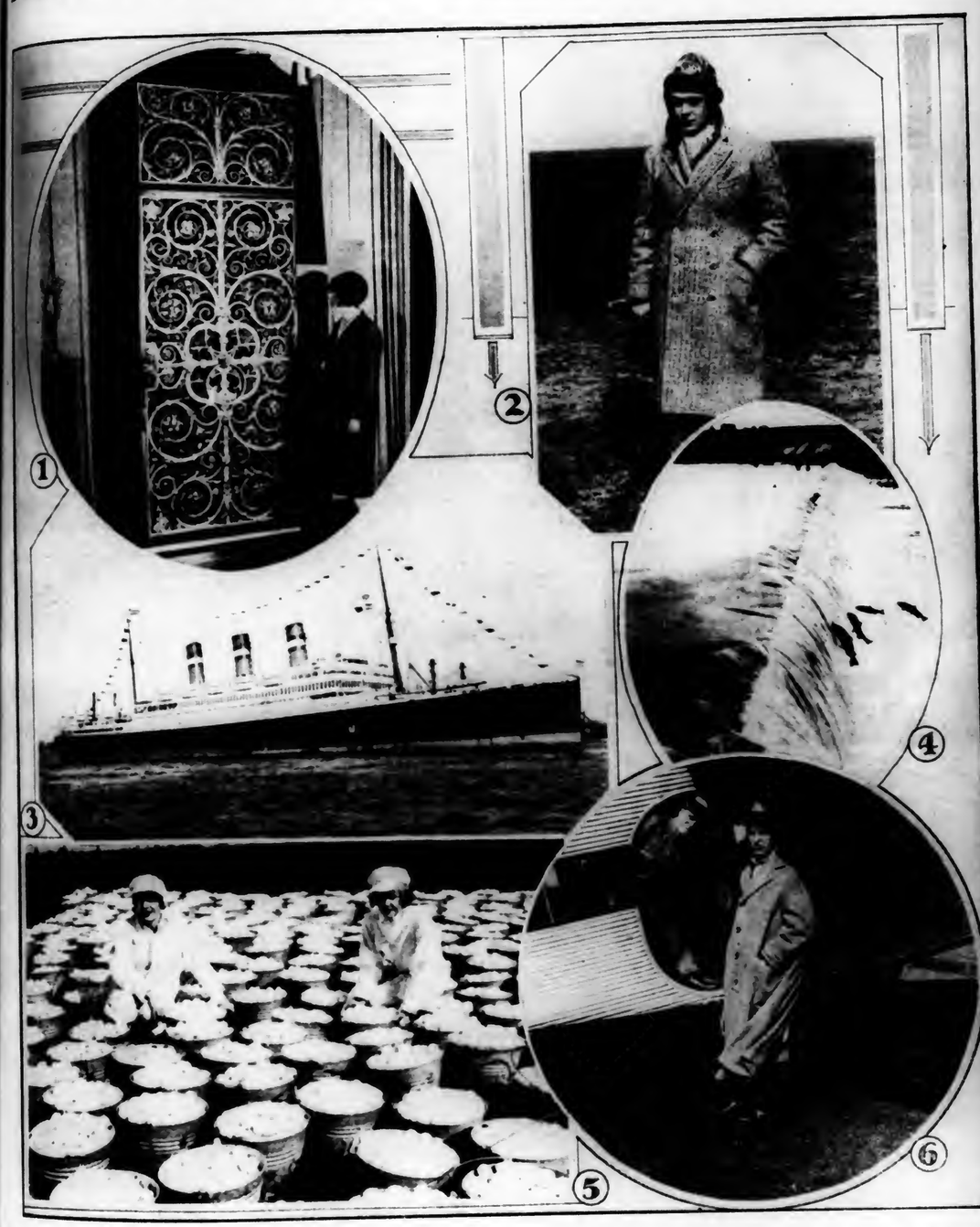
• • •

Why is a horse a most amiable creature?—Because he can stand any amount of chaff.

BIRD TWISTER WINNERS

Gene Singleton, Helen Reed, Margaret M. Schoener, D. C. Morris, Jewel Nestor and Audra V. Burditt.

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1.—The beautiful door made by Germaine for Edsel Ford's home in Detroit. This excellent work is of wrought bronze, silver finished. It is valued at $10,000 and took six months to make. It is on display at the Exposition of Architecture and Allied Arts given by the Architectural League of New York at Grand Central Palace.

2.—The Prince of Wales in his flying togs photographed as he arrived at London after flying from Bognor, where his father, King George, has regained his health. His round trip flight caused certain anxiety in the public.

3.—The new Holland-America liner "Statendam" with flags and streamers flying, photographed on its arrival in New York harbor, completing its maiden [illegible] just 320 years after Hendrik Hudson's [illegible]. The ship is of 30,000 tons, 700 feet long and built to carry 1,070 passengers.

4.—Salmon attempting to jump the falls of the Willamette River, Oregon. Photo shows a tempting sight for the fisherman, four salmon attempting to jump up the falls of the Willamette River during the present spawning period. After great effort, these fish, battered and bruised by the rocks and leaps—finally reach the still upper waters of the river where they spawn—and then die. During the present season the size of the salmon varies between 10 and 48 pounds.

5.—Los Angeles, California.—All of the departments of the 100-acre tract of the largest poultry farm in the world thrown open to the public for inspection. Here is one scene at the mammoth ranch which has 300,000 laying hens, 150,000 chicks, uses 1,000,000 pounds of poultry feed every year and produces more than 30,000,000 eggs annually.

Photo shows some of the thousands of eggs displayed for visitors at the Runnymede Farms.

6.—W. W. Atterbury, president, and J. L. Aymans, vice-president in charge of traffic of the Pennsylvania railroad, recently took off from the municipal airport in a tri-motored plane on a business trip from Chicago to Omaha, Nebr. The big plane, with accommodations for twelve persons, was piloted by John A. Collings of the N. A. T.

Photo shows Mr. Atterbury just before taking off standing outside of plane, which Mr. Aymans is inside.

TIGHT BINDING TEXT CUT OFF

MILK couldn't be cleaner than *this*-

MILK is delivered into the sanitary, dust-tight, seamless aluminum pail of the Universal Milker just as clean as it comes from the cow, untouched by human hands and protected against dust and filth. And the *Universal Sterilizer-Washer* (the only machine of its kind on the market) keeps Milker in perfect sanitary condition at all times—thoroughly cleaned and sterilized after each milking.

Many of the country's leading certified dairies use Universal Milkers exclusively — for producing cleaner milk at lower cost.

Write for 24-page FREE Catalog.

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Dept. A Frederick, Md.

Farm and Dairy

By L. W. LIGHTY

THE apples are in full bloom, while peach and cherry trees have dropped their petals. The early planted potatoes are well up and other tender things planted early are likewise above the ground. Last night was clear and calm. As the sun rises I look over the valley and the hills. My



cottage is on an elevation. The thermometer outside my window registers 34 and there is no sign of frost on our elevation, but along the depressions and by the courses of the brooks the grain and grass are covered with a snow-white frost extending up the hillside several hundred yards and corresponding to the elevation. Some fields are half white and the other half rich green. The line of demarcation is distinct.

I never observed a more forceful lesson for planting fruit and the early vegetables on an elevation for frost protection.

Our early settlers located nearly all their homesteads in the lower places because of the springs and the water supply. Being imitators we rarely change and so our gardens and fruits about the home are in low and frosty places. Many farm buildings should be relocated, but few ever are.

The Wind Storms

My friends point to a number of buildings unroofed and some wrecked by the recent great wind storms that have passed over this section. It is true the damaged buildings were in exposed places, but not always on high ground. I note on some of the most elevated sections no damage was done. However, there was a protection of trees and undergrowth.

About twenty years ago I planted several hundred trees about the buildings and later I transplanted many. Today several of the trees are as high as or higher than the buildings. About our cottage are masses of trees and shrubbery. All appear natural and informal and of course are beautiful and restful to look at. Formal planting usually is horrible. This tree and undergrowth is a perfect protection against the wind storm and at the same time it is a very wonderful bird sanctuary.

Our Bird Sanctuary

Every season hundreds of song birds have their protection and their nesting places in the trees and the shrubbery and their number increases annually. Several mocking birds thrown thrush are swaying on the topmost twigs of the tallest trees, pouring forth streams of melodious sweetness. The beautiful cardinal, so rich red maroon, is with us all winter. As the first warm days of spring come he perches on the loftiest limbs and calls, "Good-cheer", for hours. Cardinals nest in the tall trees. The scarlet tanager is another of our very brilliant birds that will nest only where trees and shrubbery are plentiful.

We have hundreds of warblers and song sparrows of many varieties, all sweet singers. The towhee or chewink is quite at home here and is nearly as good a singer as the Baltimore oriole. The latter are not so plentiful any more, but usually a pair hang their nest on a long swaying limb. The blue jays and flickers are abundant and beautiful and all talk in their own way. Of robins we have scores, one nesting above the back door. There are several pairs of wrens, one nesting on the front porch and another on the back porch, all lovely singers. The phoebe nests under the eaves at the house gable. There are also many turtle doves and some cuckoo, shy and interesting with very weird solemn notes in the chorus. The catbird, nighthawk, whippoorwill, ruby throated hummingbird and dozens of others find a very congenial home here. We welcome them and gladly feed them the bugs and insects that threaten to eat up all vegetation.

Resents Cruelty to Bulls

I HAVE read every bull tragedy and experience. I love all dumb animals and often my heart goes out to them in pity from the abuse I see them getting from a brute of an owner. I trained my first yoke of steers sixty-seven years ago when I was but seven years old. Later when grown to manhood if I required a heavy team quick to put into the woods to skid logs I would go out and look up two three or four-year-old bulls and within a week's time would have them trained (not broke) so that they would pull with all the power they had at the command of word (not whip).

I have owned a great many bulls and came very near being killed with a large four-year-old Jersey. Did I blame the bull? Not a bit. I blamed myself for my carelessness. Carelessness or thoughtlessness are the words the editor is trying to impress on those who have the handling of bulls, yet some seem to think it shows prowess to mail their bulls because they have them fastened so they cannot help themselves. Are they teaching the bull anything? Just turn him loose and see it your hastiness has made him afraid of you.

When my bull hurt me he had got loose in the night and gone to a neighbor's. They had a two-year-old with long sharp horns. My bull had none. They were fighting. I managed to get them separated. I did not have even a stick in my hand but had no fear of them. I started my bull home up a ravine. He had lost a small chain out of his ring that I usually led him by. When we got up the creek out of sight of the other bull and other cattle my bull went to a pool of water and began to drink. I stepped up to him, took hold of his ring and tied a piece of binder twine to the ring, then let him drink his fill. When through I said, "Come on now," and instead of taking hold down by the ring as I usually did I took hold of the string and about eight feet from his nose. We had gone about two rods when he made a charge and tossed me up.

When I struck the ground I was flat on my back and the bull's head was crushing in my breast, breaking three ribs. I was in such a shape I could not use the right hand, but got hold of the ring with my left hand. I gave a twist and a sharp command for him to behave himself and he threw up his head. I led him to a fence, tied him, tumbled over the fence and staggered to the house.

Everybody had a remedy for curing that bull of his rash deed. Most of them prescribed a rifle. But I knew his worth as a breeder and kept him as long as I could use him which was five years after he hurt me. I am milking a fine herd of cows now from that bull. I have three bulls now, one yearling, one 19 months and one four-year-old. I do not use my bulls harshly or allow others to, nor do I try to show off in handling them. I try to be kind but firm with them.

I am not so smart but what I may be killed by a bull. If I am it will be because I was for the moment thoughtless and off my guard as in the case related. C. W. Cobb.

Erie county, Pa.

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HOLSTEIN JERSEY 50,000 PEDIGREE SELECTED REGISTERED STOCK

Transportation and full time Salesman to cut cost to buyers. Fifth County in U. S. to be accredited. Can generally supply herds with anything in pure-bred or grade stock that may be in need of.

Crawford Co. Co-op. Dairy Improvement and Sales Association, Market House, Meadville, Pennsylvania

Wanted. A fresh young Jersey or Guernsey or mixed breed. Not over 30 mi. from Pittsburgh. State price. Stewart Johnston, 221 6th Ave., Pittsburgh, Pa.

Keep up with the advertisements to keep apace with progress. When answering them say you saw the ad in Pennsylvania Farmer.

DAIRY CATTLE

Guernsey Bull Calf

Best of blood, big and well marked. This is real stuff. Don't miss him. Also fresh and coming fi ve years, a real beauty, by Oak Hall Sultan Tower. Investigate.

THE GRACE GAME PRESERVE, Harrisburg, Pa.

Fritzlyn Guernseys

Superior young bulls, two to twelve months old. Rich in May Rose blood. Dams with records up to 700 lbs. fat. Also cows and heifers. Accredited and blood tested. Write for descriptions and prices. Fritzlyn Farm, Pipersville, Pa.

REGISTERED GUERNSEY BULL FOR SALE. Three years old, name Approval's Rose 125870 from accredited herd. Price reasonable. T. E. Gingrich, R. 1, Lancaster, Pa.

REGISTERED GUERNSEYS for sale, by one or carload. Entire herd of registered Guernseys accredited and tuberculin accredited. Address BOX 118, Penn'a Farmer, Pittsburgh, Pa.

REGISTERED GUERNSEY COWS, HEIFERS and bulls ready for service. Good breeding and individuality. Accredited herd. Jacob S. Hoover, R. 8, Hanover, Pa.

Public Sale

on Tuesday, May 21st, 1929 at Shepherdstown, W. Va., of Registered Jersey cows, heifers, bulls and bull calves. Two granddaughters of Blond's Golden Oxford.

MAPLE LAWN JERSEY FARM

TWO RICHLY BRED, thrifty, registered Jersey bull calves, 2 months old. According to Test. W. F. McPARRAN.

Holstein Bulls for sale, from 10 months old, from high record, from calves to 2 years old, choice ones from K. P. D. P. 22, the 1,000 lb. sire. Heifer and 4% bull. Also females. Crystal Spring Stock Farm, Littlestown, Pa.

BROWN SWISS BULL CALVES for sale. Will exchange for Pedigreed Chester White Pigs. Chancey L. Friedline, R. 5, Greensburg, Pa.



W. HIBBARD
Sec. Ass'n No 2



B. E. WHITNEY
Tester, Gelatt-So Gibson Ass'n



N. C. DALE
County Agent



TOM DAVIS
Tester, Ass'n No. 1

Susquehanna County C. T. A.

THE Susquehanna County Cow-Testing Association No. 1 finished its third year, June 30, 1928, with 24 whole year members and one part year member. The total number of cows in the association during all or part of the year was 532.

Result for the three years is as follows:

Year	Av. No. Cows	Lbs. Milk	Lbs. Fat
1926	365.51	7445	298.8
1927	389.08	7971	311.0
1928	406.75	7477	283.2

Individual Herd Records

Five herds with an average of five cows or more cows exceeded an average production of 300 pounds of butterfat. A complete list follows:

Owner	Breed	Lbs. Milk	Lbs. Fat
R. S. Carter	R. & G. G.	7964	381.0
E. E. Bush	R. & G. H.	10034	365.4
H. D. & T. J. Brown	R. H.	9054	327.5
Claude Carter	R. J.	5866	311.8
R. R. Williams	R. & G. H.	9129	306.2

Nineteen cows produced over 400 pounds of butterfat.

• • •

THE Western Susquehanna County Cow-Testing Association Route No. 2 finished its first year, Feb. 1, 1929, with 16 whole year members. In addition there were seven members in the association only part of the year. There were 565 cows in the association during all or part of the year.

The Holstein herd of S. E. Horton leads the association in production in both milk and butterfat with an average of 13,198 lbs. milk and 435.9 lbs. butterfat. The registered Holstein cow Ethel 2nd, six years old, belonging to C. B. Dayton, leads the individual cows in both milk and butterfat production with a production of 18,758 lbs. milk and 666.2 lbs. butterfat. There are 15 cows more in the same herd in the 400-pound butterfat group.

Individual Herd Records

Five herds with an average of five or more cows exceeded an average production of three hundred pounds of butterfat. A complete list of these herds follows:

Owner	Breed	Lbs. Milk	Lbs. Fat
S. E. Horton	R. & G. H.	13198	435.9
Chas. B. Dayton	R. & G. H.	12631	423.8
F. R. Coon & Sn.	R. & G. H.	10622	358.6
Archie Ellsworth	R. & G. H.	10380	350.7
D. H. Green	R. & G. H.	9888	332.2

Thirty-seven cows produced over 400 pounds of butterfat during the year.

• • •

THE Gelatt-So. Gibson Cow-Testing Association finished its second year, Dec. 1, 1928, with 23 whole year members. In addition there were three members in the Association only part of the year. There were 423 cows in the association during all of part of the year. A registered Holstein belonging to Arthur Bowell leads the association in both milk and butterfat with an average of 12,522 lbs. milk and 449.9 lbs. butterfat.

The result for the two years is as follows:

Year	Av. No. Cows.	Lbs. Milk	Lbs. Fat
1928	406.75	7477	283.2
1927	234.84	8357	301.4
1928	314.86	7809	279.0

Individual Herd Records

Eight herds with an average of five or more cows exceeded an average production of three hundred pounds of butterfat. A complete list of these herds follows:

Owner	Breed	Lbs. Milk	Lbs. Fat
A. L. Bowell	R.H.	12522	449.9
Hayden Bros	R.H.	9235	326.8
F. J. Rosegrant	R.H.	9245	326.8
C. B. Dayton	G.H.	9769	324.6
Curtis Allen	R.H.	9050	322.9
S. L. Horton & Son	R. & G. H.	9990	322.3
Cordie Allen	R. & G. H.	9990	322.3
E. B. Gillett	G.H.	8064	312.6
L. F. Whitties & Son	G.H.	9289	302.7

Fourteen cows produced over 400 pounds of butterfat during the year.

Compiled by I. O. Sidelman.

Dairy Topics

By A. G. HUMPHREYS

"HOW easy it looks," said the hired man watching an experienced dairyman operate on a full udder of milk at the regular milking period. The operator had been milking cows for thirty years. The hired man thought he could turn the trick in two days. He couldn't.

• • •

IT is surprising how little it takes to hold the normal supply of milk during warm weather. The cows seem to do well on less than half the feed consumed during cold weather. In that respect cows are like people. They do their best when they are comfortable.

• • •

BETTER not cool the morning's milk at all than to cool it to exact degrees and start it to the factory on a sultry morning. That is a radical statement, but we have found the truth of it by returned cans of some milk. Better still cool it to fifty degrees and hold it there.

• • •

"THE time of cottage cheese is with us again, and I am glad," said one of our lady readers recently. We are all glad to have cottage cheese weather at this time of the year. Cottage cheese is a great aid to beans which rightly applied. It is said to prolong life. As a means of disposing of milk which would otherwise be a total loss it has no equal. It blends well with apple sauce, strawberries, roast lamb, rhubarb pie, macaroni, pineapple and some hundred other eatables. It is one of the most valuable by-products of whole milk.

• • •

"WHAT would you do if you had a million dollars," asked a friend. I told him what I would do, or a part of it, and he then wanted to know what somebody else would do with it. I didn't know. "That," said he, "is the farmer's problem today. To know what the other fellow wants and is going to do."

• • •

WE are told that bootleggers are turning to milk as a means of supply for their wares. It will never become popular. Intoxicating beverage made from milk is mild. It takes too long to properly ripen it. It has little if any murder in it. It is too harmless, and the taste is all out of proportion to the kick it contains. This may sound like words of wisdom coming from the lips of experience, but nevertheless it is true enough that milk will always be more popular as an antidote for alcoholic poisoning than a factor in its makeup.



What has Time *told* You?

Sixteen years ago, we invited C. E. Hoyt, Sabula, Pennsylvania, to try Larro on his herd.

Mr. Hoyt's Jerseys led all Pennsylvania Jerseys in butter fat production per cow. Mr. Hoyt says:

"I'm still using Larro with great success."

Twelve years ago we asked Mr. E. T. Othosen, Kennedyville, Md., to try Larro. Mr. Othosen now says:

"I've used Larro for twelve years straight and believe it to be the best on the market."

Ten years ago we asked Mr. John Dzuris, Westfield, Mass., to try Larro on his herd. A short time ago he wrote:

"We have been feeding Larro for the past ten years and are still feeding it. We made a great record with it."

When dairymen say things like this, there must be some reason—some real reason for it.

Larro Dairy Feed—proved under exacting conditions on the country's most efficient Research Farm and then made so that, from one year's end to the other, it never varies from its formula, is bound to keep cows healthy—to make them produce all the milk they are able to—to give you the biggest profit after your feed bill is paid.

If you try Larro you'll find out by actual use, what Messrs. Hoyt, Othosen, Dzuris, and thousands of other dairymen already know—that a cheap price doesn't save money—protein doesn't denote profits—tags and formulas don't mean a thing. The health of your cows determines the money they make.

Keep your eye on results—give Larro a chance to prove itself and you'll get a real increase in your dairy profits.

Larro

FEEDS THAT DO NOT VARY
FOR COWS · HOGS · POULTRY

THE LARROWE MILLING CO., DETROIT, MICHIGAN

TIGHT BINDING TEXT CUT OFF

A Concrete Milk House

with an asbestos-shingle or slate roof is FIREPROOF, DURABLE and SANITARY... It is believed to be the cheapest in the long run, for it requires few repairs and no painting.

—*Farmers Bulletin No. 1214, "Farm Dairy Houses" U. S. Dept. of Agriculture, Washington, D. C.*

Free Construction Plans

A four-page leaflet has been prepared containing plans and instructions for building a concrete block milk house.

INSULATED CONCRETE COOLING TANKS which SAVE HALF YOUR ICE are included in the above plans.

Your Copy Is Free—Ask For It

These plans may be procured from your County Agricultural Agent or by mailing the coupon below:

Mail this coupon to office nearest you

Portland Cement Association

1315 Walnut St. PHILADELPHIA — 1705 Koppers Bldg., 436 Seventh Ave., PITTSBURGH, PA.

Please send me a free copy of your booklet on "Milk Cooling Houses of Concrete."

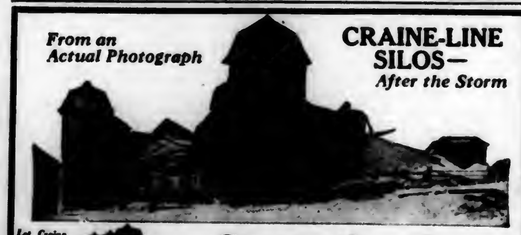
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City..... State.....

From an Actual Photograph

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Let Craine Lift Your Dairy to a Higher Level of Profit.

THE CRAINE LINE

Strength--plus

You can easily understand the strength of the Craine Silo from its construction. But the HIDDEN value that enables it to keep almost ALL the food value of the corn in the silage, thus producing more milk—is even more important. Our Catalog explains this and also contains tables of capacities; the number of acres to plant; ideal rations; probable profits; descriptions of various types of Silos and parts, etc., etc. Worth real money to every dairyman—sent free on request.

CRAINE, Inc.,
60 Grant St., Norwich, N. Y.

Herd Infection—

Write for information. Ask for a FREE copy of THE CATTLE SPECIALIST and how to get the PRACTICAL HOME VETERINARIAN a livestock Doctor Book without cost. Find out why your cows lose calves—why they retain the afterbirth—why they fail to breed—why they have scours—why your calves have scours and goiters—why you have a shortage of milk. Veterinary Advice Free. Write to

DR. DAVID ROBERTS VETERINARY CO.
126 Grand Avenue Waukesha, Wis.



AT YOUR SERVICE is the attitude of every advertiser in this paper. Write them about your needs. Mention Pennsylvania Farmer.

Do You Know a Master Farmer

(Continued from page 5)

James E. Eastman, Bradford county, Pa.
Fred E. Hess, Luzerne county, Pa.
Jacob L. Pittenger, Monmouth county, N. J.
Charles B. Probasco, Mercer county, N. J.
John Schrope, Schuylkill county, Pa.
H. H. Snavely, Lancaster county, Pa.
Eugene Stapler, Bucks county, Pa.
Frederick Taylor, Lawrence county, Pa.
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Master Farmers of 1928

Ray F. Brown, Huntingdon county, Pa.
William J. Clayton, Monmouth county, N. J.
L. Otis Corkran, Dorchester county, Md.
E. S. Ferry, Bedford county, Pa.
Edson M. Hay, Somerset county, Pa.
Amandus Larson, Elk county, Pa.
S. S. Lehman, Erie county, Pa.
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O. A. Newton & Son, Sussex county, Del.
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Clarence H. Smith, Bucks county, Pa.
C. B. Snyder, Lancaster county, Pa.
Clifford E. Snyder, Hunterdon county, N. J.
F. P. Willits & Son, Delaware county, Pa.

Application of the Score Card

I.—OPERATION OF FARM—290 POINTS

1.—Maintenance of Soil Fertility—50 Points

Drainage. On soils that lack natural drainage, suitable ditches or the drainage systems should be provided.

Manure. If all manure is carefully saved and is hauled to the field with the least possible loss no deduction will be made. If manure is located so as to leach badly, or if much of it is left in yards or piles during the summer, deduction will be made.

Lime.—If soil is too acid to produce a good stand of legumes three years out of four deduction will be made where no lime has been applied. Exception will be made in case of farmers whose operations are not favored by lime.

Legumes plowed under.—If most of the plowed fields are devoted to cash crops at least one-fourth of the cultivated acreage should be in legumes each year, and at least half this legume acreage should be plowed under.

Commercial fertilizers.—If used in sufficient quantity with barnyard or green manure to replace food removed in crops no deduction will be made. If other methods of maintaining fertility are followed this point will be disregarded.

Pastures. Pasture land should be maintained by fertilization and re-seeding as necessary for best results.

2.—Crop Rotation—15 Points

The crop rotation should include adequate legumes or other green manure crops to be plowed down, unless other provision is made for maintaining soil humus. It should also include a maximum of the most profitable cash crop, or on a live stock farm a maximum of the feed needed. The crop rotation should provide for the distribution of labor. Credit will be made as it falls short in these respects.

3.—Seed Used—25 Points

If home-grown seed has not been carefully selected and stored, if seed has not been treated for the control of disease, or if seed of mixed, unknown or unadapted varieties is used deductions will be made.

4.—Quality, Feeding and Care of Livestock 60 Points

If all sires are pure-bred, and if all females productive and high-grade or pure-bred, no deduction will be made for quality. Credit will be given for satisfactory pure-bred breeding work.

On a dairy or beef farm, if no silage, legume hay or an insufficient quantity produced and fed deduction will be made. Whatever the class of livestock the animals should be properly supplemented with pasture feeds, home-grown or purchased. Livestock should be thrifty, healthy, productive and properly housed.

The Master Farmer Score Card

DIFFERENCES of soil, climate and type of farming make necessary some flexibility in the rules governing the scoring of nominees. However, the Judges will be guided by the Score Card as closely as circumstances permit in each individual case.

	Full score	Score
I. Operation of Farm—290 Points		
1. Maintenance of soil fertility	50	
2. Crop rotation	15	
3. Seed used	25	
4. Quality, feeding and care of livestock	60	
Alternative—Quality, variety and care of fruit trees and truck crops		
5. Efficient use of man and horse labor	25	
6. Adequate tools, machinery and equipment well housed and repaired	35	
7. Convenience of farm arrangement	15	
8. Products of farm, yield and quality	65	
II. Business Methods and Ability—190 Points		
1. Relation of income to expenses	100	
2. Accounting methods	30	
3. Business reputation	30	
4. Marketing methods	30	
III. General Farm Appearance and Upkeep—110 Points		
1. Repair and upkeep of buildings	40	
2. Appearance of yards	40	
3. Condition of fields	15	
4. Condition of fences and ditches	15	
IV. Home Life—290 Points		
1. Convenient house	50	
2. Labor-saving equipment in house	75	
3. Character as father and husband	90	
4. Education and training of children	75	
V. Citizenship—120 Points		
1. Neighborliness	30	
2. Interest in schools and churches	30	
3. Interest in other community enterprises	30	
4. Interest in local and national government	30	
Total	1000	

Credit will be given if leguminous hay is purchased for all livestock; if cattle herd is U.S. accredited, if hogs are immunized against cholera (where advisable), if market lambs are properly trimmed. If any contagious disease is present in the stock no credit will be cut.

Alternative—Quality, Variety and Care of Fruit Trees, Field and Truck Crops

Fruit and truck growers will be cut if trees or garden crops are not of varieties most suitable for locality, or if trees or seed and plants are not secured from reliable sources.

Fruit and truck growers will be cut if trees or garden crops are not sprayed according to schedules recommended by the State Agricultural Experiment Station or other recognized authority, if general orchard or truck growing practices are below standard; if trees are not pruned regularly and properly; if weeds are not kept down; if insects or diseases are present.

The farm woodlot should be thinned and managed according to recognized good practice.

5.—Efficient Use of Man and Horse Labor 25 Points

Work should be managed to keep labor and horses occupied with seasonable work. Deductions will be made if winter hauling, machinery repairing, etc., are neglected and allowed to interfere with rush season work.

6.—Tools, Machinery and Equipment 35 Points

If the equipment is inadequate for the efficient handling of the farm work, is poorly housed, or in poor repair, deduction will be made accordingly.

7.—Convenience of Farm Arrangement 15 Points

New buildings should be so located as to minimize the amount of labor required to perform work about them. If fields are not conveniently arranged as to shape and size deduction will be made, unless topography prohibits improvement.

8.—Yield and Quality of Products 65 Points

This paragraph covers all products sold of the farm. The five-year crop average yields in most cases should be twice the five-year average for the state. Credit will be given for high quality products.

II.—BUSINESS METHODS AND ABILITY—190 POINTS

1.—Relation of Income to Expenses 100 Points

If operating and living expenses (including interest and taxes) exceed income for an average of five years full deduction will be made. If income exceeds expenses (including operating cost, taxes, interest, repair bills, labor cost and a reasonable salary for the farmer himself) no deduction will be made except in case of extravagant expenditures. Life insurance should be carried to cover all indebtedness.

2.—Accounting Methods—30 Points

A checking account should be kept and all expenditures and receipts properly recorded. If complete book account of income and expenses is kept and balanced at least once a year, or if accounts are kept on a cost account basis, full score will be given.

3.—Business Reputation—30 Points

As a rule bank credit should be used to avoid over-use of dealer and store credit. If bills are promptly paid, and if reputation for honesty and square dealing is good, full score will be given.

4.—Marketing Methods—30 Points

Deduction will be made in proportion as the nominee fails,—through improper grading, packing or selling methods,—to take full advantage of his marketing opportunities.

III.—FARM UPKEEP AND APPEARANCE—110 POINTS

1.—Repair and Upkeep of Buildings 40 Points

Buildings should be kept well painted and in good repair; if they fall short deduction will be made accordingly.

2.—Appearance of Yards—40 Points

Lawns should be in good condition, and well mowed. Shrubbery and trees should be healthy and properly cared for. Yards should be neat and free from weeds and rubbish.

3.—Condition of Fields—15 Points

Fields should be neat, and as free as practicable from noxious or unsightly weeds.

(Continued on page 26.)



It's a wonderful feeling to sit at the wheel of your own McCormick-Deering Tractor. When you "give it the gas" and feel and hear the powerful motor, you say to yourself, "This outfit sounds like business—now we'll get things done!"

Muscles or Motors

. . which will it be for you this year?

Will you be riding at the wheel of an all-purpose, row-crop McCormick-Deering Farmall—getting the year's work done easily and on time? Or will you be riding behind slow muscles and sinews—worrying about the next job—never quite caught up?

New opportunities are ahead of you. Be ready for the rush of plowing, tilling, planting, cultivating for now and for years ahead. *Right now is the time to make up your mind to start working with tractor power.*

Because it is so generally useful, and because it will put your farming operations on a completely new and better basis, the Farmall is recommended as a logical tractor to buy when changing from muscles to motors. Perhaps the McCormick-Deering 10-20 or 15-30 will more fully meet your requirements. Talk it over with the McCormick-Deering dealer near you. He is well qualified to recommend the tractor best suited to your needs.





Would you like to know exactly the advantages of tractor power? Do you know how many acres you can plow, cultivate, harvest, etc., with a tractor? Our 32-page booklet, "Muscles or Motors," answers these and many other questions. A copy will be sent to you on request.

INTERNATIONAL HARVESTER COMPANY OF AMERICA (Incorporated)
606 So. Michigan Ave. Chicago, Illinois

18th Cooperative Public Sale

60 Bradford County Registered Holsteins

Wednesday, May 22 **Troy, Pa.** **Livestock Sale Pavilion**

40 Cows Fresh or Due Soon, 12 Heifer Calves and Yearlings, 8 Bulls

All but a Few Head are Fully Accredited. All Tuberculin Tested and sold with a 60-day Retest privilege.

Many of the cows have Cow-Testing Association Records that range up to 15,750 lbs. milk and up to 670.6 lbs. butter in a year made under ordinary dairy farm conditions. Many are daughters or sons of 1,000-lb. sires.

For Catalog apply to
R. H. FLEMING 315 Main Street TOWANDA, PA.

SWINE

Chester Whites

Big type, pedigreed. Two months old, from prizewinners. Prices reasonable.
HOOPER VINES, Lincoln University, Pa.

Registered Ohio Improved Chester Pigs. The best. Seventeen years careful breeding. We ship C.O.D. W. Runcraft Mallory, R. Y.

Chester White and Poland China Pigs

for feeders or breeders, 6-8 weeks old, $6.50 each. Express paid. C. E. Kennedy, East Berlin, Pa.

CHESTER WHITES. Pedigreed big type champion blood, from merit and ton litter producing sows. Write your wants. Must please. L. O. Corman & Son, Beach Creek, Pa.

BIG TYPE CHESTER WHITE FALL BOARS. Spring pigs and gilts bred for September litters. Ship C.O.D. A. H. Crowsover, Mt. Sterling, Ohio

CHESTER WHITES.—Pedigreed big type Champion blood, all ages, 13 sows farrowed 151 pigs, priced low, must please. C. E. Cassel, Hershey, Pa.

CHESTER WHITE and BERKSHIRE PIGS, 6 weeks old, $3.25 each, 8 weeks $4.
C. LEWIS TAYLOR, Wyalusing, Pa.

SWINE

Chester White Pigs BIG TYPE. $10.00 each, prepaid.
GEO. F. GRIFFIE, R. 3, Nauvoille, Pa.

90 GOOD CHESTER, BERKSHIRE and POLAND-CHINA pigs, 6 to 8 weeks old, $6.50 each. Express paid. I. R. Tanger, York Springs, Pa.

Reg. Berkshires Superior breeding stock. All ages. Both sexes. Cholera immune.
WOLF CREEK FARM, R. 2, Slippery Rock, Pa.

Large Berkshire Service Boars

Five this fall and 40 years breeding.
GEO. W. DOZER, South Zanesville, Ohio

BETTER BERKSHIRES. Boars ready for service. Bred gilts, young pigs, prize winning stock. Near-By Stock Farm, Pottsgrove, Pa.

Large Modern Berkshires. Correct type and fashionable breeding. Ditts & Gorman, Roseville, Ohio

GREENFIELD FARMS The place to buy REAL Poland-Chinas. Now offering big, growthy fall gilts, bred and ready to breed for early fall farrow. Also spring boars ready to wean. Prices right.
GREENFIELD FARMS, Tiffin, Ohio

REG. SPOTTED POLANDS. Pigs 8 weeks, $11.00, either sex. Express paid on orders of 3 or more. Boars and sows not related.
A. M. KENNEL, R. 2, Honey Brook, Pa.

—REGISTERED BERKSHIRE BOAR PIGS—
9 weeks old, prize winning stock.
FRED HILNER, R. 1, Millville, Pa.

BERKSHIRE PIGS, 8 weeks old. Registered, $12 each. Elimination and Hoosier Champion King breeding. C. E. Tanger, York Springs, Pa.

—REGISTERED HAMPSHIRE PIGS—
Hampshire pigs, eight weeks old, both sexes.
J. J. RAILING, R. 2, Shippensburg, Pa.

DUROCS Fall boars and gilts, bred from champions. March farrow pigs, either sex, not akin.
Thorndale Farm-on-the-Ohio, Marrietta, W. Va.

DUROCS Big Type Reg. Durocs. Priced right. Shipped on approval. Visit us or write your wants. G. C. Sautley, Rummelstown, Pa.

HORSES

HORSES—Registered Belgians

Young stallions and mares. Write fully your wants or better come and see.
NYLLMEDE FARM, Beaver, Pa.

SHEEP

TEN REGISTERED DORSET RAMS, one and two years old, $30.00 and up. Four registered Shropshire ewes with four lambs, sired by second prize aged ram 1928 Ohio State Fair, $150.
MYRON H. LOFFER, DeGraff, Ohio

For Sale—61 Delaine Ewes
James L. Kauffman, Mohrsville, Berks Co., Pa.

POULTRY

AYLESBURY and ROUEN DUCKS, Embden geese. Purse boars, bred from prize-winners.
SHALLENBERGER FARMS, Amanda, Ohio

Special Fall Prices on high class breeding Turkeys, Geese, Ducks and Guineas; write your wants and for mailing list. Pioneer Stock Farm, Telford, Pa.

TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

WITH fairly liberal receipts the cattle market was heavy after a good Monday opening and showed losses of 25 to 40 cents on the week. Tops reached $15, a gain of five cents over the week before, but bulk of sales were at $13 to $14.35, against $13 to $14.50 last week and $12 to $14 a year ago. In view of the moderate supply of beef available the market fails to show quite the strength producers would like to see. It weakens off a bit too readily.

Returns on cattle now being marketed vary widely. Some cattle have been marketed recently at or near their cost as feeders some months ago. That, of course, means loss. On the other hand, some margins have run as high as $85. Those who bought cheap cattle last fall are coming out all right, as a rule; and where such cattle did well in the feed-lot there has been a substantial profit.

Kansas and Oklahoma pastures have been filling up recently, trainload after train-load of southern cattle moving in. The grass is so good and the movement so large as to raise some question regarding the market prospects when the stuff moves out.

Stocker and feeder supplies available in market continue very light, and demand is correspondingly light. The Wadsworths of Genesee, N. Y., were in this market not cattle to stock their pastures. They like steers of around 900 lbs. weight, and expect the grass to put 200 to 250 lbs. on them. Their purchases included 950-pound Montana Shorthorns at $13.25, native Shorthorns at $13.15, mixed Herefords and Shorthorns at $12.90 and $13 and 1200 strong weight cows at $9.10. One load of Holstein springers was also bought at $9.75.

Erratic Hog Market

Nobody seems to be able to offer any very good explanation for the behavior of the hog market. There is a lot or one-day price fluctuation. In the main, it seems to be a fight between the big packers and the so-called interior packers, located chiefly in Iowa and Minnesota, close to source of supply, and rapidly becoming big packers. They have several advantages, such as cheaper labor, lower capital investment, availability of trucked hogs, and perhaps most important of all the fact that they can operate on an even keel, no over-loads, no under-loads, taking only about so many hogs a week and thus giving steady employment to a minimum working force. They are able to offer the keenest kind of competition in the meat trade.

The big packers go to the country for hogs, and apparently try to use their directs to the disadvantage of these interior packers and if producers suffer in consequence—well, they just suffer. Monday of this week the Chicago packers had more than 27,000 directs, out of a total run of some 60,000. The market went off some that day, and more later.

Average price for the week was $11.30, against $11.50 last week and $9.85 a year ago. The eleven-market run of hogs was 532,000 this week, against 520,000 last week and 501,000 a year ago. During April eleven markets received 2,250,000 hogs, largest for the month with two exceptions since 1919, and during the last half of the month there was some further accumulation of lard at western points.

Big Break in Lambs

The sudden and severe break in the lamb market this week came as a surprise to the trade. Prices are lowest, on the average, since the first week of the year. Top wooled lambs, at $16, compared with $18.10 about two weeks ago and with $18.50 a year ago. Best shorn lambs, selling below $15, compared with $16.85 a year ago. There is usually a slump in the lamb market in May, but it generally comes near the middle of the month, about the time the Colorado season ends, and as a rule is followed by a reaction as the trade adjusts itself to the new crop of lambs.

The government reports had indicated that spring lambs would come later than a year ago, but so far they have come earlier. The bulk of the spring lambs so far have come from California, and reports from there state that many of them are being forced out by dry weather and lack of feed. Eastern markets have been liberally supplied with fresh lamb, demand has been only moderate and prices have declined. Whether or not the break in the market is temporary cannot be said with any degree of certainty.

Receipts of sheep and lambs at leading points showed quite a gain over last week, and this helped to depress prices. So far this year twenty markets have received 5,250,000 sheep and lambs, a gain of about 250,000 over the same date last year.

To Move Out Old Wheat

Strenuous efforts are being made to move out old wheat before the new crop comes on. With prospects of a big crop, something of an emergency exists if elevator room is to be provided for harvest time. That is, unless something should happen to the growing crop. May is regarded as the critical month for the crop in Kansas and adjacent territory. To move the old wheat a cut of 7 cents in the freight rate on every 100 lbs., equal to a little over 4 cents a bushel, has been put into effect from Kansas City territory to the Gulf. There is estimated to be 40,000,000 bushels of old wheat to be moved out of Kansas alone before July 1. In addition, a cut in rail rates is announced by eastern lines of 2-on grain at and east of Buffalo, with the all rail re-shipping rates from Chicago to eastern seaboard points lowered from 22½ to 17½ per 100 lbs. and from St. Louis to New York from 20½ to 16. This emergency rate is to expire Sept 30.

To meet this condition the Co-ordinated ways may announce a like cut in rates.

It is felt that these reduced rates will help to move grain rather than to advance prices.

Bearish influences continue to predominate in grain trade. Other countries can still undersell us on wheat, and the prospect is for increased corn acreage due to failure to get some ground intended for oats seeded, on account of wet weather.

J. H. Mohl, of the Chicago office of the grain futures administration denies that the grain interests are backing a movement on trading. In speaking on the value of a futures market he says: "The fact is that the futures market has become firmly established as a part of our grain marketing system. It is useful in gambling as well as in legitimate trading. There is no movement that cannot be put to evil purposes. It is proving to be a wholly constructive force that has made possible the handling of our crops on a distributed and necessary part of the present system of grain marketing."

Horses Lower

About 500 horses were sold in the market here this week and while the sale was fairly good, horses moved on taking off $5 to $10. Top was $265 with a pair at $315. It took a pretty decent kind of a worker of some weight to bring over $200.

Export of Farm Implements

Export of agricultural implements for the first quarter of 1929 amounting to $37,100,000 were the largest on any quarter noted in the history of the industry, the Department of Commerce reports. This total exceeded by nearly one-third that of the first three months of 1928 by more than $12,000,000. Exports of notewothy increases were in the case of tractors in all of the wheel type with a value of $16,913,219 being exported during the three months, as compared with $6,116 worth $11,130,707 in the same period of 1928.

Selling Tractors

Reports from some sections indicate that scarcity of horses is helping tractor sales. At one Iowa point the local implement dealer has sold 40 tractors this spring. The two-plow tractor was the popular choice.

Return on Soy Beans

An Iowa farmer reports a return of from 50 to 54 bu. an acre on soy beans. Seven acres netted him 380 bushels and they were sold at $1.50 per bushel. He has grown the crop several years and the yield has been fairly good each year.

Nebraska to Grade Spuds

Nebraska has passed a law providing for inspection and grading of potatoes. The act provides that whenever growers representing 51 per cent of the commercial acreage of a county petition the state department, inspectors will be furnished. Temporaries of the act all fields of five acres or more sown to potatoes are included in commercial acreage.

Watson.

Chicago, May 4, 1929.

LANCASTER FAT CATTLE SHOW

THE Lancaster Fat Cattle Show will be held again this year at the Lancaster stockyards. The date of the event is June 19-20. Four premiums will be given for each class of cattle; first prize ranging from $20 on calves to $75 for single animal. Regarding the show are as follows:

1 Competitive exhibits shall be limited to cattle that were sold as feeders at the Lancaster Stockyards.

2 In judging no any competitive exhibit the cattle must have been on hand by the calendar month prior to March 1, 1929.

3 Carlot exhibits shall consist of not less than 10 nor more than 20 cattle in one lot. Exhibits of less than ten but the minimum number shall be ten head and the maximum number three head, fed in one lot.

4 Single fat heifer and single fat cow exhibits shall not be subject to the restrictions set forth in regulation No. 1, preserving their identity from the time of purchase prior to March 1, 1929.

5 All cattle to be entered only through a member of the Lancaster Livestock Exchange.

6 All cattle shown in the competitive exhibit must be sold on the auction ring to the highest bidder.

7 Carlot and fat cattle that are not eligible to the competitive exhibit, as defined by regulation No. 1, may have the privilege of being sold in the auction ring, providing the regular entry fee has been paid on them.

Entry blanks may be obtained from H. E. Sayler, secretary, Livestock Exchange Union Stockyards, Lancaster, Pa.

CORRECTION

"Will not please change the date of sale and to read Thursday, May 23 to Thursday, May 23." writes H. O. Lamp of May Lawn Jersey Farms. The ad appears on page 11 of this issue, the above correction having received too late to make the change on that page.

Miscellaneous Produce

Philadelphia

Eggs.—Firsts, 30½c; seconds, 29½@29½c.
Butter. Creamery, tubs, 92 score, 46½c; 90 score, 45½c.
Poultry. Fowls, 25@35c; broilers, 26@45c; old roosters, 18@21c; pigeons, per pr., 38@50c.
Apples. U. S. No. 1, per bu., nearby, Staymans, $1.75@2; Romes, $1.50@1.90; Winesaps, $1.50@2.
Strawberries. N. C., 32-qt. crate, Klondikes, $4.15@5.80; Missionaries, $3.00@3.50.
Asparagus. N. J. & Md., doz. bunch crates, green, large, $3.50@4.
Beans, snap, Fla., ¾ bu. hmps., green, $1.50@2.25.
Cabbage. S. C., ½ bbl. hpr., $1@1.15.
Cucumbers.—Fla., ¾ bu., $1@2.50.
Kale. Nearby bushels, 25@50c.
Mushrooms. Nearby, 3-lb. bskt., 75c@$1.10.
Lettuce. Arizona Iceberg crates, 4 to 5 doz., $3.50@4; Calif. crates, $3.
Onions.—Texas crates, yellow U. S. No. 1, Bermudas, $1.70@1.75; yellow boilers, $1.50@1.65.
Potatoes. Pa. round whites, per 120 lbs., $1.40@1.50; Fla., new stock, per bbl., Spaulding Rose, U. S. 1, $7.50.
Sweet potatoes. N. J. ¾ bskt., yellow, $1.15@1.35; Md. and Delaware, yellows $1.00@1.85.
Tomatoes.—Fla., choice to fancy, $3@5.
Radishes.—Nearby, bu., 75c@$1.25.
Rhubarb. Nearby bunches, 10@12c.

Lancaster

Butter. Country butter, 52@53c; creamery, 50@55c.
Poultry.—Chickens, dressed, $1.25@2.50 each; springers, 75c@$1.25 each; ducks, $1.50@2.50 each; squabs, 25@50c each.
Eggs.—Fresh eggs, 32@35c.
Vegetables.—Asparagus, 15 & 25c per bunch; beets, 10@15c per bunch; egg plants, 15@30c each; string beans, 30@35c; per ¾ pk.; beans, Lima, 35@40c per pt. box; cabbage, 10@20c per head; carrots, 8@15c per bunch; cauliflower, 25@40c per hd.; celery 15@25c per bunch; cucumbers, 8@15c each; spinach, 12@15c per ¾ pk.; rhubarb, 5@10c per bunch; peppers, 5@8c each; endive, 10@15c per head; lettuce, 10@20c per head; radishes, 5@10c per bunch; mushrooms, 25@30c per pt. box; peas, 25@30c per ¾ pk.; onions, 20@25c per ¾ pk., green onions, 8@10c per bunch.
Potatoes.—Old, per bu., 60@75c; new, 25@30c per ¾ pk.
Sweet potatoes. 20@25c per ¾ pk.

York

Butter.—Country, 45@50c; separator, 55@60c.
Poultry.—Hens, per lb., 24@30c; Leghorns, dressed, $1.25@1.65 each; heavy, $1.75@2.50.
Eggs.—Fresh, per doz., 28@30c.
Vegetables.—Potatoes, 75@90c per bu.; cabbage, 5@15c per head; lettuce, 10@20c, hd.; spinach, 10@13c ¾ pk.; celery, 8@10c stalk; onions, green, 5@8c bunch, asparagus, 12@15c per bunch; rhubarb, 5@6c bunch.

Apples.—Per bushel, $1.25@2.50.

Baltimore

Butter.—Creamery, tubs, 47½@48c; rolls and dairy prints, 34@35c; packing stock, 30@32c; butterfat, lb., 45c.
Eggs. Md Pa nearby firsts (loss off), 29½c; western firsts, 29½c; southern, 28½c.
Live poultry.—Hens old 4½ lbs and over, 33@35c; small to medium, 32@33c; Leghorns, 27@28c; Guineas young, 1½ lbs. or over, each 75c@$1.00; roosters, 18@20c; ducks, 30@32c; geese, 20@22c; pigeons, 40@50c per pair.
Potatoes. Per 150-lb. sack, U. S. No. 1 Md. Barals, $1.85@1.90; Penn'a Whites, $2@2.25, 2 bu. sack, Maine Green Mts., $2.85@2.90.
Apples. Bu. bsk. N. Y. Baldwin, $1.75@2; Russets, $1.40@1.50, barrel, N. Y. Baldwin No. 1, 2½ in., $4.50@5.50.
Lettuce. Ohio hothouse, 10-lb. basket, $1.75@2.
Mushrooms. Pa. 3-lb. basket, $1@1.25.
Cucumbers. Ohio hothouse, 2 doz., $2.
Spinach. Virginia and Md. bu., $1@1.25.
Kale.—Va., bu. bskt., 75c@$1.

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FOR HANDLING HAY WITH GASOLINE ENGINE HAS CLUTCH BETWEEN DRUM AND BAND BRAKE WHICH DRIVES OPERATED FROM ANY ONE ROPE. SEND FOR FREE CATALOG
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Chicks C.O.D. $1 Down

Let us ship you our chicks, $1 with order, balance C. O. D. Our chicks are from some of Ohio's best flocks that have been carefully culled for type, color and egg production. 100% live arrival.

Prices Delivered	50	100	500	1000
S. C. White, Buff and Brown Leghorns and Anconas	$5.25	$10.00	$47.50	$ 90.00
Rocks, Barred, White, Buff; R. I. Reds and S. C. Reds	6.25	12.00	57.50	110.00
Buff Orpingtons, W. Wyandottes, S. L. Wyandottes and Partridge Rocks	6.75	13.00	62.50	120.00
Heavy Mixed, 1c; B. J. Giants, 1c. Order direct or send for illustrated circular.				

EMPIRE HATCHERY, Box 70 COLUMBUS GROVE, OHIO

Produce Market Review

THE EGG MARKET in Philadelphia was firm during the week and a strong tendency developed. Prices on all grades advanced in spite of liberal offerings at lower prices at a low level. Receipts of keep prices at a low level. Receipts of southern ungraded eggs, which had been in plentiful supply and which were very difficult to move at 25 a dozen, fell off sharply. With very limited offerings the prices of this ungraded stock worked up to 28, and better at the close. Cold wet weather throughout the western producing sections held up receipts and made it difficult to secure eggs which can be sold to meet the requirements of the trade. Storage packed eggs were held at the close of the week at 28@30.

The nearby eggs were about as they were according to quality. The poorer grades were collected and bought by packers and jobbers. The "checks" have been removed and have no place in the retail trade or shipped eggs. The condition has resulted in a more even discriminating against the poorer grades. Desirable lots of nearby mixed colors are bringing mostly 31@32c with white eggs 30@33c. These prices are for the best eggs in the market and are not the prices the trucker or shipper receives. Most eggs are rather lengthy and receipts are at least until the weather moderates and receipts increase. It looks as though the market will be about as it is for the present that it gained this past week.

The egg market in New York was generally firm. Lighter receipts on account of bad weather caused prices to advance. Extra nearby white eggs were in better demand and some of the chain stores have again turned to nearby eggs. The average prices obtained for nearby eggs were from 33c to 36c per dozen with extra large shades selling readily at prices as high as 37c a dozen.

Butter.—Receivers and buyers of butter lacked confidence in the market during the week and while prices were practically unchanged from the opening of the week to the close, trading was not satisfactory. Buyers were very conservative and would not buy in excess of their actual pressing needs and reserves were worked down in an effort to keep their down to a minimum. Increased production is expected in the near future. Creamery operators also feel that prices would work lower as the season advances and that if any material changes are made several shipments would be cleaned up as close as possible. Extra cows they even resorted to extreme measures.

Arrivals of butter at leading markets were considerably heavier than last week or of the same week a year ago. Most undergrades were offered at this period at this time of year. Extra grades were and weedy flavors were somewhat the exception noted in butter received in Philadelphia and New York.

The live poultry market was generally firm in New York toward the end of the week. Fowl sold well and prices advanced slightly. Even the heavier fowls which are usually hard to move, sold readily. Light receipts of chickens were in demand and the market for broilers improved.

Leghorn fowl were quoted at 28 per pound, colored fowl at 34@36c and broilers at 35@50c, depending on breed and quality. The dressed poultry market was firm with receipts rather light. Fancy fresh killed broilers sold well but quite the stock which comprised most of the offerings sold slowly at irregular prices. Supplies of fowl were light and prices somewhat higher. Most of chickens offered were rather ordinary. Fowl brought 30@40c per pound, broilers 47@55c, and chickens 30@32c.

Old potatoes were firm during the week and prices advanced on most sizes. Offerings of Pennsylvania potatoes showed a wide range of quality and condition, as the higher prices have attracted more stock to the market. Many growers have about cleaned up their stores and shipments are naturally very irregular in quality. Pennsylvania round whites were quoted at $1.75 to $2 per 150-pound sack in Philadelphia while Long Maine Green Mountains brought $2.25. New potatoes showed a weaker tendency in consequence of lots toward the close of the week but prices showed but little change. The best Florida Spaulding Rose sold around $7.50 to $7.75 per barrel with sales reported in several markets. These prices are considerably higher than those prevailing at this time last year.

Carlot unloads of potatoes during April in Philadelphia totaled 627 cars, compared with 510 during the same month last year. One feature was the heavier supplies from Florida. Last month we received 280 cars of Florida potatoes compared with 115 the same month a year ago. The bulk of Porto Rico potatoes so far sold were sized much heavier totaling 276 cars as against 57 for the other Island Potatoes. Lighter cleanup supplies from Maine. During the month 70 cars of Maine potatoes were unloaded on this market as compared with 129 in 1928.

The sweet potato market was quoted during the week and the best sweets brought somewhat higher prices. New Jersey yellows sold at $1 to $1.25 per basket in Philadelphia. The sweet potato market in New York was quiet with a slow demand and steady prices. The best New Jersey yellows sold at $2.50@2.75 per bushel while poorer stock brought $2@2.25.

The asparagus market was quoted quiet prices showed considerable variation. Extra fancy stock of the heaviest grades sold readily. The weather has been favorable for the production of asparagus and the supply is liberal. Most of the receipts are green and white and stems have reached in some salable quantities. Shipments of California asparagus were lighter in Philadelphia and supplies of nearby stock were not excessive.

During most of the week prices held about steady with occasional lots of fancy green stock bringing high prices. Later in the week the demand fell off and dealers found it difficult to move any but the finest offerings. Large green asparagus sold at $3@4 per dozen bunches with exceptionally fancy lots selling at $4.25@4.50. Pennsylvania asparagus began to arrive in Philadelphia and New York in larger quantities, and sold at about the same prices as New Jersey, Maryland and Delaware stock.

There seemed to be a higher percentage of green stock in the Pennsylvania receipts and for this reason the prices averaged higher than those received for asparagus from the competing states. New York quoted Pennsylvania extra large grass at 36c per dozen bunches, large at 30c and medium and small stock at 25@c.

Apples continued to move slowly although fancy offerings sold at good prices. Romes and Staymans brought $2@2.25 per bushel in Philadelphia with average offerings around $1.50@1.75. Porages sold at $1.25@2 and Winesaps at $1@2. W.R.W.

LIVESTOCK

PITTSBURGH

Cattle

MONDAY'S supply was 250 loads. The demand for cattle was less urgent than in recent weeks as if buyers showed a disposition to discriminate against the non-dressing kinds. Good fat steers sold pretty well, but last week's prices for the same kinds and grades were generally 10@25c lower. Good fat weights and handy weight steers brought $14.25@14.40 for loads. Handy selling fat heifers sold at $13@13.75. Some of the offerings from the same source would have brought $14@14.25 last week. Fat cows were in good demand and sold at $8@10.50, with cutters at $6@7.50. Bulls were steady. Veal calves were in good demand and sold at $16@16.50.

1	680	12.50	1	850	12.00	1	800	12.00
1	1170	11.50	2	860	11.00	4	1145	10.50
1	650	10.50	1	1070	10.25	2	1000	10.10
1	1280	10.00	1	1250	10.00	1	1140	10.00
1	1160	9.60	4	1227	9.50	3	1163	9.50
4	1237	9.50	1	1060	9.00	2	1045	9.00
2	970	9.00	1	840	9.00	1	1010	8.75
1	1290	8.50	6	1025	8.25	1	980	8.00
2	940	7.00				5	748	6.50

Bulls

1	1560	11.75	1	1375	11.50	2	1475	10.80
5	1436	10.80	6	1005	10.50	1	1200	10.50
1	880	10.50	1	1000	10.25	7	1320	10.00
1	1270	10.00	2	1140	10.00	2	1100	10.00
2	980	10.00	1	1080	9.50	1	920	9.25
1	910	9.00				1	830	8.75

Hogs

Monday's receipts were about 32 double-deck carloads. Buyers were able to get concessions of around a quarter from last week's closing prices and about everything was sold on the basis of 8½ for good handy weight and best mixed lots not too heavy. Very few heavy hogs are coming and no sales of straight heavies were reported. They would bring around $11.75 on account of extreme weight. Light Yorkers brought $11@11.50 according to the kind and sold around $11 as good. Pigs are dragging in market. There was a good market for sows at $10.25@10.50.

Heavy wts., 250 lbs. up, over	$11.75@11.75
Heavy mixed	11.50@12.00
Medium wts., 180@200 lbs.	11.90@12.00
Heavy Yorkers, 165@180 lbs.	11.90@12.00
Light Yorkers, 125@150 lbs.	11.00@11.50
Pigs, 90@100 lbs.	10.00@11.00
Roughs	10.00@10.50
Stags	7.00@8.50

Sheep and Lambs

The market for sheep and lambs slumped last week. Consumers balked at the cost of lamb when prices advanced Monday's supply was about 50 carloads. Sheep were lower with one deck at $9.25 and not many up to $9 per cwt. A few weights were brought $8. Lambs were lower than a week ago, but about steady with last week's close. Very few good to fancy are coming. Orders were on to them at $14.50@14.75, but could not be filled. Receipts of spring lambs are light. Lots were fairly cleaned up at $15@16 and many good lambs are coming from outside points.

Good to best wethers	$ 9.00@10.00
Fair to good wethers	8.50@ 9.00
Best mixed	8.50@ 8.90
Fair to good ewes	6.50@ 8.00
Culls and common	3.00@ 6.50
Extra spring lambs	15.00@16.00
Good to best lambs	14.50@14.75
Medium lambs	11.50@13.00
Culls and common	7.00@10.00
Early lambs	15.00@16.00

Calves

The calf market has shared the tendency of other markets. Monday's supply was around 4 per load. Best veal calves being sold at $15.50 but later sold was lower and the market for all kinds was slow and 50c to $1 lower. Culls and common sold at $10 to $13.50 per cwt., top veal sold at $16.

CHICAGO

Cattle

Chicago, May 6. Receipts totaled about 17,000 head. Market steady to a quarter higher. Best steers here brought $14.90.

Common to fair steers	11.50@12.25
Fair to good corn-feds	12.25@13.25
Good to choice corn-feds	13.25@14.00
Choice to prime corn-feds	14.00@14.25
Common to good cows	8.00@ 9.75
Good to prime cows	9.75@11.50
Heifers, common to good	9.00@12.00
Heifers, good to prime	12.00@14.75
Canners and cutters	6.00@ 8.00
Interior light bulls	8.50@ 9.00
Bologna bulls	9.00@10.15
Fair to choice butcher bulls	9.75@12.00
Stockers, common to fair	10.00@11.25
Stockers, fair to good	11.25@12.00
Stockers, good to choice	12.00@12.75
Fancy yearling stockers	12.75@13.25
Stocker and feeder heifers common to choice	8.75@11.00
Stocker and feeder cows	7.75@ 9.00
Feeders, common to fair	10.25@11.25
Feeders, fair to good	11.25@12.25
Feeders, good to choice	12.25@13.00
Fancy select 1 feeders	13.00@13.75
Milkers and springers	90.00@125.00
Common to best feeder	13.00@16.50

Hogs

Fortv-two thousand hogs made up the supply. Market steady to 25c lower.

Heavy butchers, 270 lbs. up	10.55@11.00
Mediums, 225 to 265 lbs.	11.00@11.25
Lights, 190 to 225 lbs.	11.00@11.25
Selected, 160 to 190 lbs.	11.00@11.50
Mixed packing 270 to 350 lbs.	10.00@10.40
Heavy packing 350 to 500 lbs.	9.75@10.00
Roughs, 300 to 500 lbs.	9.00@ 9.75
Stags, subject 70 lbs. dockage	9.25@10.25
Pigs, best grades	9.50@11.00

Sheep

Receipts of sheep and lambs amounted to 20,000 head. Market 50c lower.

Wethers, all ages	8.50@11.00
Yearlings	10.50@13.00
Western ewes	5.50@ 8.00
Native ewes	5.00@ 8.00
Fed western lambs	13.00@14.00
Native lambs	9.75@14.00
Feeding and shearing lambs	14.50@15.00

Wooled stock $1 to $2 above foregoing quotations, except feeding lambs as indicated.

Stock Movement

	Cattle	Hogs	Sheep
Receipts this week	43,875	144,919	77,923
Last week	43,863	128,440	58,370
Year ago	56,205	140,830	67,137
Shipments this week	12,567	25,141	17,637
Last week	11,039	25,438	13,148
Year ago	16,256	23,425	20,890

LANCASTER

Cattle

Lancaster, May 6.—The cattle market was active with best steers and yearlings strong to 25c higher, most advance being on the lighter weights. The market top was $13.75, paid for 1,425-lb. steers. Best yearlings brought $13.35. Bulk of sales ranged from $12.25@13. Bulls, stockers and feeders steady.

Good steers	$13.00@13.75
Medium to good	11.75@13.00
Common to medium	8.75@11.75
Good to choice heifers	10.50@12.00
Medium and common	7.75@10.50
Good to choice cows	8.25@10.00
Common and medium	6.75@ 8.25
Low cutter and cutter	4.00@ 6.75
Good to choice beef bulls	10.50@11.75
Cutter, common and medium	7.75@10.50
Feeder and stocker cattle	7.50@12.00
Good to choice calves	15.00@17.50
Medium	13.00@15.00
Culls and common	7.50@13.00

Hogs

Hogs were strong to a quarter higher with top at $13.25 for the 200-225-lb. class.

Heavy weights 250-350 lbs.	$11.75@13.00
Medium weights 200-250 lbs.	12.50@13.25
Light weights 160-200 lbs.	12.00@13.25
Packing sows, rough and smooth	8.25@11.75

CASH GRAIN

Chicago, May 6. The following cash prices prevailed here today: No. 2 yellow corn, 80@80½c; No. 2 white oats, 47½c.

THE Executive Committee of the 1928 International Livestock Exposition, Union Stock Yards, Chicago, is ready for distribution. As it desires to have these books to all its friends as soon as possible of those in need of this season we are endeavoring to drive them at it was decided to send copies of this souvenir edition to any address upon receipt of the nominal sum of $1.50 which, in the way is considerably below the cost of production.

H. H. Hoide, Sec't'y.

Chautauqua Co., S. W. N. Y.

April 26. April has been wet and chilly. Some plowing done. Eggs 25c, butter 50@55c, potatoes 60@75c. Some sheep are sheared but the unclipped flocks must be far more comfortable. The maple sugar season was the most complete failure in several years.

Mrs. E. M. A.

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DID you ever stop to think of the amount of time, trouble and expense that our "Farm Service" Hardware Stores save for you? Just imagine what a job it would be for you to send to each different manufacturer to get each different article you might need—and then not be sure that what you ordered was exactly what YOU wanted! The most important part of the service that we are doing for you is to select just the right sort of goods from all the widely scattered makers and bring them to a place near you where you can see them before you buy and make a personal selection that just suits your ideas and needs. It's bringing thousands of great factories right to your doorstep! Goods in our stores—from nails to power washing machines—are carefully picked out from the many kinds made with just the one idea in mind: That they must be right in quality, right in the service they give to you and right in price.

The country's great factories are making many things that will lighten the laundry work of farm women. Take time to come to your nearest "Farm Service" Hardware Store and learn what they can do to make your worst job easier. ★

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The "Burgomeister" of a small village out of Munich, Germany, lived in this house. The style of architecture is Swiss, and the Alps could be plainly seen in the distance. Fruit trees were trained like vines on the side of the house and dwarf apples in the front yard were trimmed like rose bushes or grape vines.

R. S. B.

Do You Know a Master Farmer?

(Continued from page 23)

4.—Condition of Fences and Ditches 15 Points

Deduction will be made for broken or rotten fence posts, unstapled or broken wires, broken or missing gates, unsightly fence rows, and also for ditches that are not working properly or are clogged with rubbish or filled with weeds.

IV.—HOME LIFE—290 POINTS

1.—Convenient House—50 Points

The farm house will not be scored on its size or cost, but only on its convenience and adaptability as a home.

2.—Labor-Saving Equipment in the Home 75 Points

Deductions will be made as follows if labor saving equipment is lacking:

No running water system, 20 points.

No sanitary sewage disposal system, 15 points.

No heating system other than stoves, 10 points.

No lighting system other than kerosene lamps, 10 points.

No refrigerator or cooling system, 10 points.

No power washer, 10 points.

If any of these appliances are inefficient or in poor repair, deduction will be made accordingly.

3.—Character as Husband and Father 90 Points

This must be necessarily a matter of judgment. A man who is kind to his wife, does what he can to make her work easy, and makes her life interesting by providing for trips and entertainment, and who is also a companion to his children, taking an interest in their training their recreation and their problems, will receive a full score. Deduction will be made in proportion as he falls short of this standard.

4.—Education and Training of Children 75 Points

If children are sent through college or teacher training school no deduction will be made. Otherwise deductions will be made as follows: if sent only through high school deduct 15 points; if sent only through grade school deduct 30 points. If children are now in school no mimeo will be scored according to plans for their further education. If home is not well supplied with books and periodicals deduction will be made.

V.—CITIZENSHIP—120 POINTS

1.—Neighborliness—30 Points

Do neighbors regard him as a good neighbor and a helpful friend? Is he cheerful and friendly, always ready to help where help is needed and always avoiding a quarrel with a neighbor? If so, full score will be given.

2.—Interest in Schools and Churches 30 Points

If he visits schools, or otherwise shows evidence of an active interest in school affairs, 10 points will be given.

If he attends church with reasonable regularity, 10 points.

If he is active in religious education work, 10 points.

3.—Interest in Other Community Enterprises—30 Points

If not a member of farmers' organizations, 15 points will be deducted; if an inactive member, 5 points. If known in community as a chronic "knocker" on community enterprises, full deduction will be made.

4.—Interest in Local and National Government—30 Points

Fifteen points will be deducted for failure to vote in either of last two elections unless prevented by sickness or other unavoidable occurrence.

for Sprains *and* Bruises

Absorbine reduces swollen tissues, soft curbs, filled tendons, soreness from bruises or strains. It does not blister, remove hair or lay up horse. $2.50 at druggists, or postpaid. Book 1-B free. Write for it today.

Read this: "Horse had large swelling on hock. Used Absorbine and in three days there was no lameness. Have used Absorbine for years with great success."

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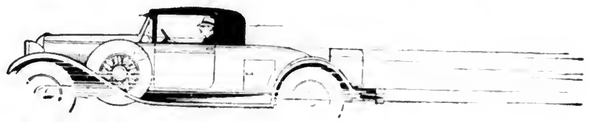
25c plus your head back, if Temple Bonus Rabbit Tonic is not the ONLY KIND of conditioner to anything but flats and Mice. Pests outside. Proved by thousands! Send no money—just your name to Temple Laboratories, Dept. 1603 Com. Com. Bldg., Kansas City, Mo. for a large $2.00 Farm Size jar—carriage paid. Remit for only one dollar, or 10 Days Trial. If there is a fine one left, the size you paid the postman (with postage). Send for your trouble, will be sent fully paid. No risk nothing—so write today.

SEEDS AND NURSERIES

FIRESTONE CABBAGE and ONION Plants. Market, Ballhead, Wakefield, Copenhagen, Danish Ballhead. Prepaid, 500, $1.50; 1,000, $2.50; 2,000, $4.00; 5,000, $10.00 expressed. Tomato plants, 200, $2.00; 1,000, $7.50 prepaid. 500, $2.00; 1,000, $3.50 prepaid. Pepper and Sweet Potato plants, 500, $2.50; 1,000, $4.00 prepaid. Transplanted Tomato plants, 500, $2.50 expressed. Transplanted Tomato plants, 100, $1.50; 500, $5.00; 1,000, $9.00 prepaid. Pepper and Sweet Potato plants, 100, $1.50; 500, $5.00; 1,000, $8.50. Cabbage, 100, $1.25; 500, $5.00; 1,000, $8.50. Ruby King pepper plants, 100, $1.25; 500, $5.00; 1,000, $8.50. Tomatoes expressed $1.50 per 500. Cabbage, $1.00, prepaid. Cauliflower, $1.25. Good order delivery guaranteed. J. P. Cromwell Company, Franklin, Va.

MILLIONS of field-grown vegetable plants for sale. Cabbage, Copenhagen, Danish Ballhead, Wakefield, Flat Dutch, Succession, Stone, Matchless, Enkhuizen, Early Jersey Wakefield, Flat Dutch, Tomatoes Stone, Marglobe, Bonny Best, Greater Baltimore, Matchless, Chalk's Early Jewel, Peppers, Ruby King, Bell Boy, Sweet Potatoes, Nancy Hall, Porto Rico, Yellow Jersey, Red Bermuda. Prices: Cabbage, 200, $1.00; 500, $1.50; 1,000, $2.50; 5,000, $10.00; 10,000, $17.50. Tomatoes, Peppers, Sweet Potatoes, 200, $1.00; 500, $2.00; 1,000, $3.50; 5,000, $15.00; 10,000, $25.00. Cauliflower, 100, $1.50; 500, $6.00; 1,000, $10.00. Prompt shipment guaranteed. Prepaid parcel post, 100, 75c; 200, $1.25. Express, 500, $2.00; 1,000, $3.50; 5,000, $15.00; 10,000, $25

Fast driving gives oil its hardest test



Oil which lasts longest at high speed lubricates best at any speed

You will find that the New Mobiloil outlasts other oils at high speeds. This explains why the New Mobiloil will save you money in operating car, truck or tractor.

Improved roads . . . higher speed limits . . . modern engines . . . have made fast drivers of us all. And probably you've noticed that the faster you drive the higher the oil consumption.

Our assurance that the New Mobiloil will stand up better and last longer than other oils under high speed is really a conservative reflection of the speed test records made in thousands of miles of running at the Atlantic City Speedway. And it is an established engineering fact that the oil which lasts longest and stands up best at high speed also lubricates best at ANY speed.

Repeated road and laboratory tests prove that when lubricated with the New Mobiloil engines commonly develop more power than with other oils of equal viscosity. In addition this New Mobiloil often reduces oil consumption as much as 50%. Other economies result from fewer repairs, less carbon, and time saved in costly breakdowns.

Substantial quantity discount

For a season's supply it is cheaper to buy in the 55-gallon and 30-gallon drums with convenient faucets. On these large containers your Mobiloil dealer will give you a substantial discount. His complete Mobiloil Chart tells you the correct grade of Mobiloil for your car, tractor and truck.

VACUUM OIL COMPANY

Makers of high-quality lubricants for all types of machinery

Make this chart your guide

It shows the correct grades of Gargoyle Mobiloil for certain prominent cars. If your car is not listed here, see at your dealer's the complete Mobiloil Chart, which recommends the correct grades for all cars, trucks, tractors, etc.

NAMES OF PASSENGER CARS	1929 Engine Summer	1929 Engine Winter	1928 Engine Summer	1928 Engine Winter	1927 Engine Summer	1927 Engine Winter	1926 Engine Summer	1926 Engine Winter
Auburn, 6-cyl.	BB	Arc	BB	Arc	BB	Arc	A	A
" 8-cyl.	A	Arc	A	Arc	A	Arc	A	A
" other models	BB	Arc	BB	Arc	BB	Arc	A	Arc
Buick	BB	Arc	BB	Arc	BB	Arc	BB	Arc
Cadillac	BB	Arc	BB	Arc	A	A		
Chandler Special Six			A	Arc	A	Arc	A	Arc
" other models	A	Arc	A	Arc	A	Arc	A	Arc
Chevrolet	A	Arc	A	Arc	A	Arc	A	Arc
Chrysler, 6-cyl.			A	Arc	A	Arc	A	A
" Imperial	BB	Arc	BB	Arc	A	A	A	A
" other models	A	Arc	A	Arc	A	A	A	A
De Soto	A	Arc						
Dodge Brothers	A	Arc	A	Arc	A	Arc	A	Arc
Durant	A	Arc	A	Arc				
Erskine	A	Arc	A	Arc	A	Arc	A	Arc
Essex	A	Arc	A	Arc	A	Arc	A	Arc
Ford, Model A	A	Arc	A	Arc				
" Model T					E	E	E	E
Franklin	BB	Arc	BB	Arc	BB	BB	BB	BB
Gardner, 8-cyl.	BB	Arc	BB	Arc	BB	Arc	A	Arc
" other models							A	
Graham-Paige	BB	Arc	BB	Arc				
Hudson	A	Arc	A	Arc	A	Arc	A	Arc
Hupmobile	BB	Arc	BB	Arc	A	Arc		
La Salle	BB	Arc	BB	Arc	A	Arc		
Marmon, 8-cyl.	A	Arc	A	Arc	A	Arc		
" other models			BB	A	A	A	A	A
Moon	A	Arc	A	Arc	A	Arc	A	Arc
Nash, Adv. & Sp. 6	BB	Arc	BB	Arc	BB	Arc	A	Arc
" other models	A	Arc	A	Arc	A	Arc	A	Arc
Oakland	A	Arc	A	Arc	A	Arc	A	Arc
Packard	A	Arc	A	Arc	A	Arc	A	Arc
Peerless, 72-90-91			BB	A	BB	A	BB	A
" other models	BB	A						
Plymouth	A	Arc	A	Arc	A	Arc	A	Arc
Pontiac	A	Arc						
Reo	A	Arc	A	Arc	A	Arc	A	Arc
Stearns Knight, 6-cyl.	A	Arc	A	Arc	A	Arc	A	Arc
" other models	BB	Arc	BB	Arc	BB	Arc	A	Arc
Studebaker	BB	A	BB	A	BB	A	BB	A
Velie, 8-cyl.	A	Arc	A	Arc	A	Arc	A	Arc
" 6-cyl.	BB	Arc	BB	Arc	A	Arc	A	Arc
	A	Arc	A	Arc				

the New GARGOYLE Mobiloil



Clean Water *for* *Man's Best Friend*

CLEAN water, and plenty of it, is as important an item in the health of your horses, and other stock, as good feed.

Built of concrete, made with Medusa Waterproofed Gray Portland Cement, you get a non-leaking, easy to clean watering trough. Pages 45-46 The Medusa Farm Book give you complete instructions, including drawing, for making a trough with tools and materials around the farm. Don't put off sending for your copy. You can use it many times.

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1002 The Engineers' Bldg., Cleveland, O.

Manufacturer of
Medusa Gray Portland Cement (Plain and Waterproofed), Medusa White Portland Cement (Plain and Waterproofed), Medusa Waterproofing Powder or Paint and Medusa Portland Cement Paint

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EFFICIENCY means



EFFICIENCY multiplies one dollar into many. It doesn't matter what the business happens to be—apply the principle of efficiency and the ratio of profit increase will be the same.

Tractors . . . alarm clocks . . . eggs . . . milk . . . producers of these and other things are getting rich by appreciating EFFICIENCY.

Efficiency has no use for "guess-so." "Know-so" is the order of the day for those who wish to make profits.

To be efficient, to actually "know", the feed manufacturer must institute considerable research in his laboratories and on his experimental farms. Different combinations must be tested to see which is the best in actual practice. New discoveries are constantly being made, and they also must be tested. There can be no standing still, for the running mate of efficiency is progress.

But organization in manufacturing and distributing the feed is equally important. It must reach the feeder at a price low enough for him to realize a handsome profit on its results. Large buying power, labor-saving machinery and efficient distribution are essential for an economical selling price. But nothing must be sacrificed for the sake of lowering the price. Low price is meaningless if the feed will not yield a profit to the consumer.

These are the considerations that have influenced Park and Pollard in the manufacture of their feeds. Their object is to supply an efficient feed that will aid the farmer to achieve efficiency in his own business. This makes profits for their customers and thereby makes profits for themselves.

To be sure of profit-making feeds—look for a Park & Pollard dealer

The Park & Pollard Co
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Poultry Feeds: Lay or Bust Dry Mash • Red Ribbon Scratch • Growing Feed • Intermediate Chick Feed • P & P Chick Scratch • P & P Chick Starter—Dairy Rations: Overall 24% • Milk-Maid, 24% • Bet-R-Milk 20% • Herd-Helth 16% • Milkade Calf Meal—Other Feeds: P & P Stock Feed • Bison Stock Feed • Go-Tu-It Pig and Hog Ration • Pigeon Feed • P & P Horse Feed • Pocahontas Table Corn Meal.

Farm Facts and Fancies

By ALVA AGEE

NOW and then someone may think that a frank statement of both sides of an economic question, as one tries to find it in the interest of clearness, is dull. Most of us have outgrown such views and resent an effort to make the essay only what he imagines to be pleasing. It is true as I said in an earlier article to good foodstuffs in market has made us more complacent about some of our combinations. It is likewise true that mergers have reduced costs of production and prices to consumers in some lines. We are [illegible] who want to see [illegible] have proved [illegible] are [illegible] cess to secular [illegible] eaten glossed over and we do not want to be taken [illegible] enough we were [illegible]

Mutual Fire Insurance

I do not [illegible] cooperative effort [illegible] has been generally successful, as natural fire insurance. One reason is that there is a broad margin of profit in the rates charged by old-line companies, as evidenced by the enormous surpluses piled up by them. A mutual company may not be run as well as possible and yet afford cheaper insurance than can be had from other companies.

Another reason for a good measure of success is that a group of people doing their own insuring are not dependent on any one except themselves for a satisfactory outcome. It is dependence on others that plays the mischief with much cooperative action. The U. S. Bureau of Agricultural Economics has data showing that nearly ten billions of dollars of risks are carried by farmers' mutual companies.

I am mentioning this with the thought that Circular No. 54, U. S. Department of Agriculture, entitled "Developments and Problems in Farmers' Mutual Fire Insurance," should be read and studied by all farmers who have anything to do, or should have anything to do, with the management of the organization they are depending on for insurance. A study of this circular shows that the very best methods have been worked out by the most successful organizations, and that there can be reduction in cost and risk and increase in fairness to all members when faulty methods are cut out. It is an interesting circular.

Saving Money

There was a discussion in the newspapers a few months ago, based on the statement of a most successful business man, that the saving of money by young people was not a desirable thing in itself. While he had in mind the need of young people for better training, and the need of spending their earnings to get better equipment, the public naturally emphasized only the criticism of saving.

Granting the need of most young people for more training, there is certainty in my mind that an essential part of the training we need is in ability to put some money aside, no matter how small income may be, until there can be a sense of freedom from fear of absolute want. It is a training that one does not get easily today. Luxuries have become seeming necessities and it takes pretty good stuff in a young person to refuse to go with the crowd when there isn't enough money to pay one's going and save something at the same time.

Probably nearly every one could save some money if he lived as people did a generation ago. He says quickly enough that he does not want to be that far behind the times, and he speaks truly, but neither will he want to face the later years of life without a sense of some personal independence. It is a matter of choosing, and if he prefers the former he will miss some of the finest training that can be had, and it is strange that he begs money in instead of sending it out.

[illegible] most of us think that we economize but the point that we are in error about is less on the savings how [illegible] that may be. It is a poor [illegible] generally poor, if one can [illegible] and the sure road out is [illegible] some permanent saving. This [illegible] pounds but I wanted to put [illegible] on the chance that some [illegible] on weight read it. Try [illegible] back for a time.

Buying a Savings Bank

When a young man buys a farm he gets up his own savings bank. This is the reason he can risk the buying when he has only capital enough to pay half down. I have enough over to finance the next year. He is making some improvements all the time, adding value to the farm in respect to buildings, etc. [illegible] has enough before the end [illegible] that he could not [illegible] and [illegible] he were putting cash aside. And right it is not half as bad as it sounds to some one is headed toward independence. His capital is increasing because his farm is growing better, provided always that he bought right.

All of us listened to Mr. Coolidge's preachments on economy, and the most of us let it go at that. Personally I like to see people spend money freely when they have it to spend and know how to get pleasure out of it, but my admiration is for the man or woman who determines to be independent in some small way some day and, as a college president used to say, "takes the appropriate step." Most young people could do that.

Results from Fertilizers

A general statement may have more value than a single specific one. There is one in a recent Indiana Station circular that contains a program for building up the productive power of the soil. It is a good thing to carry in mind, and charts one's course. The statement is: "The most satisfactory results from the use of fertilizers will be secured when they are used in connection with otherwise good systems of soil management, including legumes in the crop rotation, the careful use of manures and crop residues, tile drainage and liming where needed, and the practice of good cultural methods generally."

"Until Frost"

FARMER BROWN owed X. In July X (for a legal consideration) agreed to wait "till frost," and sued Brown in August.

"You agreed fair and square to wait till frost," Brown protested.

"I know I did, but an agreement like that's too loose and indefinite for the courts to enforce," X retorted.

The Supreme Court of New Mexico, however, in the case of West vs. Montgomery, 200 Pacific Reporter, 681, ruled in favor of Brown, and decided that the agreement was binding.

"We are satisfied that an extension of time 'until frost' is an extension to a definite time, the rule being that an agreement to extend the time for payment, in order to be valid, must be for a definite time, although no precise date need be fixed, it being sufficient if the time can be readily ascertained. It is sufficient if the promise is to pay at a time which must certainly arrive at all events. In this latitude frost must come, and the coming of frost is certain, and not contingent," said the Court. M. L. Hartley.

A Letter from India

THE work of Sam Higginbottom, agricultural missionary in India, is well known to many of our readers. In the following letter, written to us at Allahabad, March 1st, to Homer H. Crawford of Venango county, Pa., he gives us some high-lights on the problems of the dairyman and those who are interesting dairying in India. The Mr. Carter mentioned in the letter is L. B. Carter, well-known Jersey breeder of Crawford county, Pa.

* * *

My dear Mr. Crawford,

One good friend Mr. Bayard has forwarded to me your choice for the use of the Agricultural Institute. On behalf of the Institute I wish to thank you and also personally.

Mr. Carter's Jersey bull calf has just come through his inoculations for tick fever and rinderpest and appears to be in good condition. He lost quite a little weight during the inoculation but has rapidly picked up again. We are mixing these Jersey bulls with one of the best dairy breeds of India, the Sindhi, a little red breed from the desert about the size of Jerseys. Our present Jersey bull is from the Mendale Herd. We have two of his daughters in milk and a number coming on. The daughters are giving three or four times as much milk as their Indian mothers.

An Important Factor

We are planning to breed half-bred Jersey-Scindhi bull to half-bred Jersey-Scindhi cow. We know that we will get a good many culls in this but we will get a few first-class animals and from these best ones we hope to establish a new breed. The Jersey bull contributes the dairy type. His Indian animal contributes ability to stand the climate, immunity to tropical diseases and a very high digestive efficiency.

The cattle of India have had to eke a living on such poor fodder that any which could not manage it died out. The result has been that Indian animals can live on a great deal less food than our American types. This is a very important factor. I will keep you posted as to the progress we make. We are also trying condensations with Guernsey, Brown Swiss and Holstein and the best dairy breeds of India.

The best breed of pure-bred Indian cattle gives less than 4,000 pounds of milk on the average for the mature cows. So you can see how important it is that we introduce some cross that will speed up milk production while retaining the valuable characteristics of Indian cattle.

With all best wishes and many thanks. Sincerely yours,

S. Higginbottom.

Horse 33 Years Old



Mrs. Bertie Mellot, astride "Maud", 33-year-old horse which has been on the Mellott farm all her life. Mr. Ralph Mellott is standing at the right. If any one has a horse of this age that is still used with buggy I should like to see a report on it. Mrs. Sabina Mellott. Fayette county, Pa.

Refrigeration...

-that protects health!
-that stops germ growth in food!
-that saves thousands of footsteps!





DR. WM. H. PETERS
Health Commissioner,
City of Cincinnati

"Bacteria multiply rapidly in warm milk. All milk must be cooled immediately after milking and kept at a temperature low enough to check the growth of bacteria."
(Signed) Wm. H. Peters, M.D.

BACTERIA IN MILK MULTIPLY ENORMOUSLY WHEN TEMPERATURE RISES ABOVE 50°

In fifteen drops of finest milk obtainable 3000 germs were counted. In 24 hours, at a temperature of 50°, these germs had multiplied to 11,500. When the temperature was raised to 55°, the germs increased to 18,000. At 60°, there were 180,000 of them. At 68° nearly one half million. Properly operated the Crosley Icyball unit will keep a constant low temperature in the Icyball refrigerator.

Saves Us $3.00 a Week

"From the cream produced by seven cows we get $2.25 and more than we got before we used the Icy ball because with it we can always get Grade One cream. Besides we make one trip to the creamery instead of two as before. This makes a total saving of more than $3.00 a week which in one season will pay for itself. Then we have ice for the table and ice cream whenever we want it."
—*Carl Moyer, Kansas.*

Better Than Ordinary Ice Box

"It sure is a wonderful blessing for people that are unable to get ice. We think it keeps food better than an ordinary refrigerator and is much cleaner."
—*C. C. White, Colorado.*

HERE is an amazing invention that does everything costly refrigerating devices do at a price about equal to that of a good ice-box. Foods spoil—germs multiply—health is endangered when proper protection is not available. Now comes this wonderful improvement over spring houses, caves and wells. This new refrigerator saves not only food, health and money but millions of footsteps, for it can be located conveniently by the housekeepers' center of activities—the kitchen.

Natural ice if available is costly in money, energy and time. Those who buy natural or artificial ice find it very expensive and in many localities difficult to get.

The Crosley Icyball Refrigerator is operated by heating. This can be done easily on a simple gas or oil stove. The time and attention needed in operating it is hardly more than lifting it from box to stove and back. Operating expense is cost of fuel. The general average about 2c per heating. Each heating is equivalent to replenishing the cabinet with a fresh cake of ice.

The cabinet storage space is equivalent to that of the ordinary 75-lb. icer type of ice-box.

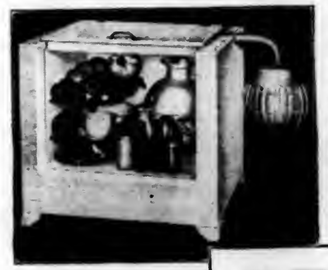
The Crosley Icyball Refrigerator is efficiently insulated, so that the coldness of the box remains practically the same while the refrigerating unit is being heated.

It does everything the high price refrigerators do.

The Crosley Icyball Refrigerating unit makes ice cubes. The steady cold it maintains keeps drinking water, milk and other beverages at a most palatable and healthful temperature. It keeps salads crisp. It actually freezes those most delectable of desserts—ice cream, sherbets and ices.

This remarkable invention has no moving parts. Nothing to get out of order. Nothing that should ever need any service. The refrigerating material never needs replenishing.

Over 22,000 were sold last year. It is a device which has proven its value and its practicability. It is made by The Crosley Radio Corporation. It is sold by Crosley dealers everywhere. If you cannot locate a Crosley dealer send this coupon to the factory for further information.



Adaptable to Many Uses
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Complete with Cabinet
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The Crosley Radio Corp.,
Dept. 136, Cincinnati, Ohio.
Gentlemen: Please send me all information about your Icyball Refrigerator, without any obligation on my part.

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One-half pint, $1.00 POSTPAID One pint, $1.50
Enough for one bushel seed — Enough for two bushels seed
Order direct enclosing money order or check, or pay postman on delivery.

Manufactured by APOTHECARIES HALL CO., Waterbury, Conn.

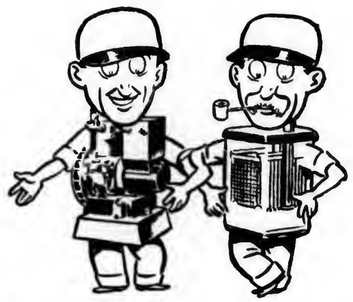
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The electrical help you've always wanted

Two electrical servants to do your bidding any second of the day or night — that's what the new Westinghouse Automatic Electric Service Plant offers you in Pat, the Plant and Bill, the Battery.

This new automatic electric plant is almost human in its action. It practically runs itself. All it asks of *you* is to give it fuel and orders. Moreover, it plans its work systematically. Part of the time the engine generator carries the load. Part of the time the battery carries it. Sometimes both carry it. And it's this perfect team work that gives you unfailing electric service *whenever* and *wherever* you want it.

The new automatic features of the Westinghouse Automatic Electric Service Plant have been perfected by a world-famous engineering organization. Its standard features are the same time-tried ones that have made other types of Westinghouse Electric Service Plants the choice of the U. S. Government and farmers everywhere. It is the last word in reliability . . . economy . . . and efficiency.

A Westinghouse Automatic Electric Service Plant will provide you with an independent electric service of your own . . . will enable you to increase the productiveness of your farm by replacing man-power with electric-power . . . and will make it possible for you to enjoy city conveniences no matter where you live.

WESTINGHOUSE ELECTRIC & MFG. COMPANY
Farm Light Division, East Pittsburgh, Pa.
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Enjoy These Advantages Now

Send in the coupon below for the complete story of this new plant and the new electric service it offers to farmers, with an easy, convenient plan of payment.

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Westinghouse Electric & Mfg. Co.,
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Please send me more information about your new 24-hour Electric Service and your easy payment plan.

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PP-5-18-29

NESHAMINY GARDENS

By R. P. KESTER

IN spite of the fact that [illegible] work in earnest is [illegible] cold except [illegible] and in spite of the [illegible] weather, it has been [illegible] wonderful rate. And the [illegible] are producing bigger [illegible] usual this early in the spring. As [illegible] as the [illegible] dent [illegible] went to college [illegible] and I [illegible] the row.



• • •

High [illegible] rains [illegible] vented [illegible] our peach [illegible] since the [illegible] dropped. In [illegible] we have been waiting until we are sure that peaches are going to set. We have had our doubts because of the long, wet spell during the blossom time.

• • •

I heard a [illegible] coaxing his parents the other day to let him stop going to school [illegible] could help with the spring work. I do not know how much [illegible] was inspired by a desire to [illegible] how much of it was owing to a dread of school. In either case he did not prevail, and he has [illegible] ever since.

• • •

I do not know to what extent [illegible] affects a flow of [illegible] the late spring weather [illegible] the cold days [illegible] middle of March and [illegible] time to enjoy [illegible] fishing I had out [illegible] But evidently [illegible] obstacles [illegible] have been extolled so much [illegible] young folks get out of school [illegible] time for [illegible] camping schedule.

• • •

For forty years I have been [illegible] by the trout fishing season. I [illegible] thrilled me to read of [illegible] "speckled beauties," and the [illegible] trying fresh trout over an [illegible] in camp life has a thrill that [illegible] for me. I was raised in a [illegible] numerous trout streams [illegible]

• • •

[illegible] blessed [illegible] innumerable springs [illegible] the [illegible] mountain sides. One [illegible] ing this confession would [illegible] conclude that I am in fellowship [illegible] Evil Eaters. But this I am in spirit [illegible] but [illegible] all. I never [illegible] trout in a [illegible]

• • •

I [illegible] as a preface to [illegible] I [illegible] a little [illegible] sting in [illegible] potatoes about school [illegible] realize that something was [illegible] from school something [illegible] being furnished most boys in this [illegible] especially those who are [illegible] going to [illegible] a good Boy [illegible] Illness is a little vein of [illegible] I [illegible] and [illegible] that leads to the perpetration [illegible] the ability [illegible] and to have nature [illegible]

• • •

I [illegible] tinted with [illegible] was when I [illegible] to several years [illegible] school and more [illegible] the two little [illegible] In them I see [illegible] rudiments of [illegible] such as Indian [illegible] and above [illegible] I [illegible] the basis of [illegible] should be the [illegible] not the [illegible] system of mental [illegible]

• • •

Several years ago I visited a [illegible] where chickens [illegible] for market. As [illegible] was ready to fatten each [illegible] a separate coop just [illegible] and sit [illegible] not [illegible] enough to have [illegible] but this was not enough. [illegible] was forced down [illegible] the [illegible] mash was [illegible] the other crops had a jump [illegible] the [illegible] the operator. In this [illegible] and to be ready to [illegible] weeks sooner than [illegible] natural feeding. Attached [illegible]

A Czechoslovakian Farm



At right—The only silo I saw while in Czechoslovakia is shown at the right. Beet tops were used for silage. Note the barefooted women who did most of the work except handling horses of machines. This was in Bolemia.

I was told that in summer families of peasants from Slovakia come to work in the harvest fields just as in New Jersey families go from Philadelphia and New York.

Below—Visiting a farm in Czechoslovakia meant walking down a village street and passing under a heavy stone arch doorway. Inside would be a large court yard with buildings on four sides, apparently all of the same general style, with many doors and windows, and I could never tell where lived the people and where the animals without actually looking.

Ellen S. Bronson



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Down the Atlantic Coast

By R. B. THOMPSON

HAVING just returned from a winter spent in that section of the United States where agriculture as a big business proposition had its origin in those states along the South Atlantic seaboard some observations in the light of current agricultural discussion may be interesting to readers of this paper.

First, let me say that while I made a diligent effort to find that popular interest in cooperative marketing and big unit, or industrialized, farming about which so much is written and spoken the results of that search were not impressive. Commodity cooperation I did find here and there, probably the most outstanding being among the citrus fruit growers of Florida and the potato growers of the Virginia Eastern Shore. But even these two rather noteworthy marketing groups did not present as attractive a close-up as some of the recent comment on capitol hill in Washington might suggest.

Fortified by somewhat more than twenty-five years of training as a newspaper reporter and agricultural observer, the trip south began last November at the upper neck of the old Maryland, Delaware and Virginia Eastern Shore country, now more popularly known as the Del-Mar-Va peninsula. From its lower point, we crossed the wide mouth of Chesapeake Bay landed at Norfolk Va., and from there coasted along almost floor-like concrete over the Atlantic Coastal highway into the historic Low Country of the Carolinas and Georgia and on into Florida. Returning this spring by way of U. S. Highway No. 1, up through the famous Piedmont sections of the seaboard states to Washington, there was opportunity for still more investigation of agricultural evolution, or revolution—if any.

Cooperation

It was in no sense a hurried tourist trip to and from Florida, but rather a rambling perusal of the best text book I have ever found on geography—the country itself. Exactly one month was consumed, for example, on the trip from Ohio to the gulf coast town in south Florida where winter quarters were established. County agents were visited; in a few instances we drove with them through the country; brother editors were "pumped" for tips and advice; extension leaders of various sorts were interviewed, and we even listened patiently to the optimistic boostings of land agents and real estate dealers, to say nothing of the courteous and equally optimistic secretaries of many chambers of commerce.

Somewhat fresh from a summer tour of the Pacific coast and an intensive study of cooperative marketing in that veritable cradle of cooperation, these questions were always put:

"How about cooperative marketing? Is it succeeding? Are your farmers sold on it? If not, why?"

The answers almost invariably began something like this:

"We-ll, yes—but,"—and then would follow the qualifying explanations. They had just gone through a trying period of over-production and low prices; the season had been too late for the early vegetables and berries of the coastal plain country; California had a big crop of oranges; it was slow work anyway getting the farmer interested in his own welfare, and—oh well, you know the usual line. I got so proficient in it I could say it forward or reverse.

At the South Florida fair in Tampa developed the story of a winter vegetable grower whose carload of lettuce just netted him $3.60 as his labor income; of a neighbor whose thirty cars of mixed winter vegetables left him "in the red" almost $500. Their cooperative enthusiasm was at low ebb.

And then there was much talk of the severe blow given citrus cooperation in Florida last fall by the shipment of too much immature or artificially colored or gas "ripened" fruit by growers who would not stick with the cooperative; of the shippers who would not play fair with the shipping schedules outlined by the clearing house organization.

In the early potato and vegetable sections of Virginia and the Carolinas a railroad man told me, confidentially, that even if the growers had a good crop and made some money this season "the bankers will get it all anyway." And that gave me an idea, so I talked with country bankers and other business men who were dependent on the farmer as so many of them are in that section.

Yes, they would like to see more cooperation, better grading and packing, but how can we keep down overproduction? That seemed the bugaboo on every mind.

Repeatedly I asked whether farming on an industralized basis in big units had developed in recent years. How about this new scheme, or system, of farm management, with one capable manager handling a dozen or more farms? I was rather insistent about that, for I knew something of the growth of that sort of thing in the corn-belt territory.

A few county agents admitted that they had heard of a few cases—principally where banks had employed some manager to help them out of a hole with farms taken in on foreclosure. One county agent said he had given up extension work for a time and had taken a farm management job with a big land company. He returned to county agent work when the land company fell down on meeting the pay roll for several months.

During Farmers' Week at Ohio State University in the winter of 1928, I heard Dr. David Friday, economist and educator, predict that the next great industrial and agricultural development in this country would occur in the South Atlantic states. After my rambling tour of investigation in that region I am convinced that the doctor was right at least as far as the industrial development is concerned. At every port where I "put in" along the seaboard at Norfolk, at Wilmington (N. C.), at Charleston, at Savannah, at Jacksonville, and over on the gulf coast at Tampa I found ample evidence of impending development in industry and commerce. This will come to these port cities in part through the development of more trade with South and Central America and in part through textile and tobacco industries and water power development in the Piedmont.

Once a Big Business

Naturally, there will be some accompanying development in agriculture. These states will ultimately produce more human food and less cotton and tobacco. They probably will diversify more and keep more livestock, which will be no misfortune.

As one writer has described it, here in this historic Low Country along the Atlantic coastline "civilization came up from the sea," and for many years prior to the Civil War agricultural development rested on waterborne traffic with other lands. Then the lords of cotton, tobacco, rice and indigo reigned in princely splendor, and bought and kept slaves because they had to have cheap labor. Farming on those old plantations was then indeed big business. But it isn't any more, and I found little indication of a comeback. Nor did I find as much indication as I had expected to find of a get together spirit exemplified in cooperative marketing such as is found on the Pacific coast. So I am very naturally wondering just how long it will be before legislative farm relief, designed to work only through cooperatives or big business organization in agriculture, will actually function in the region which probably needs relief as much as any other in these United States.

Do You Know a Master Farmer?

AS announced last week nominations are now open for Master Farmer candidates in Pennsylvania, New Jersey, West Virginia, Maryland and Delaware. Each reader is asked to send in the name of the man he considers the finest type American farmer citizen among his acquaintances. From these names will be selected the men to receive the Master Farmer Awards in this territory this year.

Master Farmer Awards are given by the Pennsylvania Farmer "to recognize outstanding success in farming and rural citizenship." Nominations may be made by any one. The blank at bottom of this page is for your convenience in making nominations. Any one who lives on a farm in Pennsylvania, New Jersey, West Virginia, Delaware or Maryland and secures the major part of his livelihood through his farming operations is eligible to become a candidate.

Nomination Blank

NO FARMER can be considered a candidate for the Master Farmer Awards for 1929 until some one sends his name to the Master Farmer Editor. We are printing this blank for your convenience, so that every farmer may easily be nominated. All nominations should be mailed on or before June 17, 1929 to the MASTER FARMER EDITOR, PENNSYLVANIA FARMER, 7301 Penn Avenue, Pittsburgh, Pa.

To the Master Farmer Editor:

I wish to nominate the following as a candidate for the Master Farmer Award.

Nominee's Name .....

Address ..... R. D. No. .....

County ..... State .....

Name .....

Address .....

County .....

TIGHT BINDING TEXT CUT OFF

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Volume 100, No. 20 — Established 1877

A CHANGE

THE other day we heard, in a public assembly, the president of an organization of farmers call on state legislators to explain why they had voted a tax on gasoline and off coal. That reminded us of another day, some years ago, when a farmer in a similar position wanted to know what the legislators were going to do about that growing menace to horses on highways, the automobile. Times do change.

NIGHT RACING

MANY years ago the rules prohibited racing after sunset, and properly, for it was dangerous to men and horses. Now Toledo proposes to carry out all its Grand Circuit racing program at night, using electricity to make the track as light as day. Will night racing prove popular? We don't know, but it will lack something to us old-timers who have been accustomed to "see 'em go" in the sunlight.

A MARKET MENACE

NOW and then a little wisdom trickles out of a debate in Congress. Here is a drop for which Representative Lankford of Georgia deserves credit: "There is much less farm relief and some real farm destruction in the plan of the present House bill to buy up and hold the surplus and thus build up an awful menace to the domestic market." Most of Mr. Lankford's colleagues haven't yet seen that far into the stabilization corporation scheme.

EQUALITY WITH INDUSTRY

SENATOR Hiram Johnson recently remarked in debate, "During the past year bellowed from the hustings, tintinnabulated over the radio, ululated from a servile press, enjoined by presidential proclamation, and resounding from every quarter has come to us here the objurgation 'Agriculture must be placed on an equality with industry.'" With what industry? Does agriculture want equality with the coal industry, for example? Or with the textile industry? Or with the industry of retail distribution now so full of bankruptcies and so uncertain of its future? Those who know the condition of these industries and some others cannot wish for agriculture any "equality" with them. Why not be honest and say that what agriculture wants is equality with prosperous industry and no other kind?

A PLAIN STATEMENT

A READER remarks: "You have condemned the equalization fee, the export debenture and the stabilization corporation as means of handling surpluses, but you haven't proposed anything better. What is your plan?" That is a fair question which deserves a frank answer. We have no plan of legislating out of existence surpluses or their consequences. Moreover we don't believe anybody else has a plan of legislating on surpluses (or deficiencies) that is worth a continental cussword. In the end all of these legislative schemes will cost agriculture more than they will benefit it. We are old-fashioned enough to believe that the only real cure for a surplus is its legitimate market consequences. The same is true of a deficiency. The best thing to do with an existing surplus is to take its natural market consequences, get it out of the way and learn something from the experience. This plan is less attractive than those which promise to move the surplus without sacrifice of price, but it has the advantage of actually doing the work instead of merely promising to do it. Is that plain enough?

THE TARIFF BILL

WHILE it is impossible to mention here all of the changes proposed in the new Tariff Bill we may consider a few of the principal items of direct interest to agriculture. The committee which framed the bill did not grant the extreme demands of certain farm organizations, and this will probably lead to several contests before the bill becomes a law. Dairymen were given important increases on dairy products but their effort for prohibitive duties on vegetable oils failed completely. Corn growers asked for a duty of 10c per gallon on blackstrap molasses used in distillation of industrial alcohol and got 2c, while the duty on corn was increased from 15c to 25c per bushel. Cattle raisers failed to convince the committee that a duty should be imposed on hides, so that commodity as well as leather and shoes will remain on the free list. The duty on live cattle was left without change as it should have been, but the duty on beef and veal was increased from 3c to 6c per pound. Other meat duties were raised also—lamb from 4c to 7c and pork from 1½c to 2½c. Wool growers and manufacturers got together and submitted plans for moderate increases and got a large part of what they asked for. Wool above carpet grade is to be dutiable at 34c per scoured pound, 3c above the present rate. Carpet wools are free if used for the manufacture of floor coverings, otherwise dutiable at 24c per scoured pound, a reduction of 7c. Fruit and vegetable growers were successful in their campaign for higher rates but not in securing a duty on bananas. Poultry and egg rates were increased but the latter not to so great an extent as demanded by domestic producers.

The sugar schedule was a difficult problem and remains so. Strenuous effort will be made to defeat the proposed sugar duties, which are substantially higher than the present rates. In these efforts some farmers will join, for they can see no reason for a higher tariff on an article of universal use but limited agricultural area in this country. We believe that a bounty on domestic sugar and lower rates or none on imported sugar would be the most economical system, but then we are not constructing this or any tariff. The rate on maple sugar was advanced to 7½c per pound and on maple syrup to 5c per pound. The duty on wheat was not increased, but rates on corn, rye, barley, buckwheat and mill feed are advanced. The same is true of rates on grass seeds and other seeds—but who buys these things?

We do not profess to be wise enough to foresee the effects of this proposed legislation and to say whether or how much it will prove helpful to agriculture. In some things which farmers buy, such as cotton and woolen products, hemp and flax products, certain metal products, rayon, a few building materials and sundry minor items, duties are advanced; but who knows enough to strike a balance and determine how much or how little the bill means to farmers? We do not and we don't believe anybody else does. One feature of the bill is certainly commendable, the proposed reorganization of the Tariff Commission. It is to be composed of seven members and the basis of its action is to be "conditions of competition in the principal market or markets of the United States between domestic articles and like or similar competitive or imported articles". That is better than the old cost-of-production basis, which was inconstant and couldn't be determined anyhow.

ANOTHER OFFICIAL PROPHECY

HERE is another glittering example of the dangers of official prophecy. On September 12 and October 27 of last year the then Secretary of Agriculture, W. M. Jardine, issued statements wherein he advised farmers to hold wheat for a better price, basing his counsel largely on the expectation that much of the Canadian crop would be of low grade. Nobody knows how much this advice has cost wheat producers, for nobody knows how many followed it or how far, but the holders of wheat have certainly lost money. We now have several conspicuous examples—in wheat, cotton and sheep—of the harm that may come of official price predictions. Such instances should help teach our public servants the fundamental lesson that prophecy is not one of their proper functions. This is true whether their predictions prove correct or fail, but failure is the only way whereby some lessons can be taught to some persons.

A BENEVOLENT TRUST

LEADING financiers are planning a great investment trust, designed to permit persons of small means to make safe and profitable investments and pay for securities on the installment plan. Its operations are to be given full publicity and one of its benevolent objects is to protect small investors from the sharks now preying on them. There is plenty of room in this country for such an institution, but no matter how much it may do or how well some people will continue to put their money into real estate that is under water, mines that are not even holes in the ground and "securities" that secure nothing but cash for the fakers who issue them. For human nature is so constituted that glittering promises will continue to be potent in separating men from cash.

DO YOU KNOW?

LAST week we presented a full outline of the Master Farmer movement and this project for the awards of 1929. This week and hereafter only the forms for the nominations will be given. Any farmer in Pennsylvania, West Virginia, New Jersey and Maryland is eligible to the honorary degree of Master Farmer, but in order that he may obtain it somebody must nominate him. Those who know a farmer who should be so recognized and honored will confer a favor by nominating him. Any one may make such nomination, on the blank given on page 5 or otherwise. The name of the nominator is not divulged; in fact most of the Master Farmers of past years do not know who first proposed them. If there is in your community a farmer who deserves this distinction see that he has a chance to get it by sending us his name. And if any further information is desired just drop us a line and it will be forthcoming. Entries are already coming in. All must be mailed by Monday, June 11. Now let us have the largest entry list on record, for we verily believe that there are more good farmers in our territory than anywhere else in America.



The Beverly section of Burlington county, N. J., ships large quantities of sweet corn to the New York markets during the season. An early warm spell rushed planting on the farm of Wm. Hookstra. Mr. Hookstra grades his sweet corn carefully and it always brings top price on the market.

New Jersey Farm Comment

By G. W. HARRIS

THE future outlook of the dairy industry was discussed at an interesting meeting of nearly 100 Burlington county dairymen at Mt. Holly on May 3.

That the future dairyman must set a standard, rather than just keep cows, and understand proper feeding practices was pointed out by County Agent Thompson. "Scoop-shovel" methods of feeding are expensive as is shown by one Herd Improvement Association whose membership saved approximately $22,000 in feed cost by feeding according to production. Good pastures aid in producing milk economically and should receive more serious attention.

The value of records was illustrated by a chart showing the wide variations in the average production per herd in the Herd Improvement Associations, as well as the wide variation in the cost of producing a pound of butterfat or 100 pounds of milk. The return above feed cost on 20 cows that were at the top of the list in production was about $9,400, while a herd of the same number of cows at the bottom of the list in production returned only $1,870 for the year.

A good herd sire can go a long way toward increasing production. A study of 987 records shows that the average pure-bred sire can be expected to increase production in daughters of dams producing 350 pounds of butterfat or less.

"If cow prices repeat themselves, we may expect to reach the peak in 1931, and then prices may trend downward," said Mr. Knowles in showing that the dairy price cycle runs for about 16 years. That New Jersey will long be a consuming market for dairy cattle is indicated by the fact that 26,322 cows were shipped into the state last year and only 74 were shipped out.

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A DECIDED increase in yields for some of the Burlington county vegetable growers may be expected as a result of soil testing this spring and the application of lime where needed. Of the 194 soil samples sent to County Agent Smith by 54 growers, over 100 showed the land too acid to grow spinach, carrots, beets or asparagus, and 50 would not profitably grow sweet corn, peas, beans or tomatoes.

Dealers in the county cooperated in this lime program. A small bag for the soil sample, along with directions for taking the sample were given out at their various places of business. These samples were tested at the county agent's office and two copies of liming recommendations sent out, one to the grower and another to the dealer whose name appeared on the sample bag.

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IN last week's issue of the New Jersey edition of Pennsylvania Farmer appeared an error. The item read "$92,000 appropriation will be made for a poultry laboratory at Vineland, $70,000 for the building." It should have been $9,200 appropriation and $7,500 for the building. Need for the new laboratory has become urgent because the present quarters, located in the Vineland Training School since the poultry disease laboratory for South Jersey was established in 1924, are now needed by that institution. The contract for construction work will be let before July 1.

Plans for the laboratory are now being drawn in the state architect's office in accordance with the suggestion of Dr. J. J. Black, assistant pathologist for the New Jersey Agricultural Experiment Station, who is in charge of the research work at Vineland. The new building will contain an ante-mortem examination room, a post-mortem laboratory, bacteriological and research laboratories and two offices. The building will be of tile and stucco construction and one story high.

Among the phases of investigational work that will receive special study at the Vineland laboratory are the para-typhoid infections of pigeons, chicken-pox control by vaccination and parasitic disease of poultry. The post-mortem service that has been offered to poultry raisers of South Jersey for the past five years will be continued and enlarged.

• • •

NEARLY 50 per cent of New Jersey's 29,671 farms are electrified, 11,800 are supplied with central station service, which is a larger percentage than any other state with the exception of California and Washington. That New Jersey farmers are rapidly putting this source of power to use on their farms is indicated by the number of farms that are using 3,000 kilowatt hours of electricity annually, according to W. C. Krueger, extension specialist in rural electrification. This amount of power would be equivalent to ten men's labor for ten hours a day throughout the year, provided we were to return to early pioneer methods of farm life.

Charles Probasco, Mercer county, and J. Pittenger, Monmouth county, both Master Farmers for 1927, are among those using 3,000 kilowatt hours of electricity on their farms each year.

A total of $72,000,000 has been spent on American farms within the past two years for electrification; with an average expenditure of at least $500 for wiring and essential equipment for each of the 144,000 farms electrified during that time.

The rapid progress of rural electrification is an important factor in the social and economical side of farm life, and the present demand for power and light on farms is greater than economical extension of lines can meet. Because of the heavy power requirements of the various beach developments and extensive industries in New Jersey, rural extension lines have been more easily obtained in this state than in strictly rural states where agriculture must bear the burden of power line extensions.

• • •

"DON'T blame your milking machine if your bacteria count is too high to make Grade A milk," said Dallas Connor, a Chester county dairyman, in answer to numerous questions on producing milk of low bacteria content. In his opinion the blame should be placed on the producer for neglect and carelessness in caring for utensils.

Mr. Connor has an accredited herd of 29 Jerseys and is consistently producing Grade A milk without the use of expensive equipment. Cleanliness and immediate cooling of milk is the key to his success in keeping down bacteria. About three years ago the count was running too high to suit Mr. Connor. He then installed a small coal-burning hot water heater in his milk house at an approximate cost of $25, and since it has been no trouble to meet the demand for Grade A milk.

His heating system is inexpensive to operate, and by banking the fire during the day and at night it is possible to have hot water within fifteen or twenty minutes before milking time. Immediately after milking, the teat cups of the milking machine are rinsed in cold water, then washed in hot water and placed in a solution of chlorine. Plenty of hot water and a cleansing and disinfecting solution are used on the metal parts.

"The aerators, pails and cans may be as great a source of contamination as the milking machine if not given proper care," explained Mr. Connor. It is the ordinary details, not the unusual ones, that the average dairyman must watch if he is to produce quality milk.

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WE are inclined to look on the cities with their subways, elevated systems, motor truck fleets and buses as completely motorized; yet when 800 work horses in all their sleek and shining glory paraded down Broad Street, Philadelphia, on May 8, we realized that horses still play an important part in the city industries. This was the eighteenth annual parade held under the direction of the Commercial Horsemen's Club.

The type of horses displayed showed pride on the part of their owners and drivers. A person would have to travel far to find a group of farm work horses better than these.

Charles A. Johnson, a 2,300-pound red roan owned by the George B. Newton Coal Co., was awarded grand champion. This champion was also the winner at the indoor show of 1925.

Many city concerns have found short hauls with teams more economical than the use of trucks. As long as this is true, horses will remain a familiar sight on our city streets.

• • •

THE number of boys and girls enrolled in club work in New Jersey has doubled during the past five years, according to statistics assembled by A. M. Hulbert, Assistant Director of Extension. Last year there were 5,505 boys and girls doing club work in the state.

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JUNE 17-22 is the date set for the seventh annual Rural Women's Short Course to be held at the University of Maryland. The course will offer instruction in foods and nutrition, household management, house furnishing, clothing, home health and sanitation, ornamental gardening, home dairying, poultry production and parliamentary law.

It is expected that in the fourth-year group this year there will be over fifty rural women eligible for the certificates of attendance at the Short Course. Fifty-five women were recipients of certificates last year.

Delaware Poultry Show

THE Delaware State Legislature has appropriated $1,200 to the State Board of Agriculture for the support of the Delaware State Poultry Show for the next two years. This show, which is sponsored by the Delaware State Poultry Association, will be staged at Milford, Delaware, December 3, 4 and 5.

The Delaware State Poultry Show is more than a show. It is in reality a great poultry institute. Educational features are given prominence in every department and the evening lectures are always well attended.

State aid will make it possible to extend the scope of the lecture program and add other educational exhibits. Four-H clubs will be given an opportunity to display their birds and a Junior judging contest will be conducted.

The Delaware State Poultry Association cooperated with the National Poultry Council in the distribution of 500 Egg Week posters. Plans are being laid for the annual poultry tour and banquet. Delaware poultry tours conducted by the State Poultry Association cover the entire state, featuring those farms which exhibit some outstanding development either in breeding, equipment or arrangement.

The Delaware State Poultry Association through its Publicity Director, Mr. M. C. Kilpatric, Georgetown, Delaware, will gladly arrange tours for poultry or Farm Bureau associations or groups of poultrymen from other states and provide guides and escorts. The poultry industry in Delaware has made unusually rapid development during the past ten years. A tour of the state will prove an inspiration and a delight.

TIGHT BINDING TEXT CUT OFF

Glimpses of Farming in Europe

Germany

By H. R. SMALLEY



Pot experiments at Darmstadt, Germany. Corn growing in these pots will be used in testing out the Hoffer method of determining plant food deficiencies.

LEAVING Switzerland we traveled for a few miles across the extreme western part of Austria and into Bavaria, which is one of the largest states in the German republic. The southern part of Bavaria is in the Alps, hence very much like Switzerland. We soon passed into a rich farming country, however, level land, good buildings, splendid crops of wheat, potatoes, oats and clover. The farms are apparently larger than in northern France and Belgium, and the farm buildings are on the farms rather than in villages. Crop yields are high, potatoes yielding about 300 bushels per acre, other crops in proportion.

We visited the Bavarian Agricultural Experiment Station near Munich, where 10,000 plots are employed in fertilizer experiments. Here we saw two kinds of fertilizer experiments not ordinarily carried on in the United States, namely,

1. Experiments to determine the best ratios and amounts of fertilizer for different varieties of wheat and other grains.
2. Experiments to determine the effects of different fertilizers on the seeds of different crops.

These experiments have shown that some varieties, of wheat for example, will stand heavy fertilizing, while other varieties will not stand heavy fertilizing or should be given a different plant-food ratio.

We saw an experiment with potatoes in which two adjoining plots were planted with the same variety and strain of seed and fertilized with the same complete fertilizer, yet one plot promised a splendid yield while the other was almost a failure. The difference was due to the way in which the seed had been fertilized, for the seed which was planted on the good plot had been grown for the previous four years with complete fertilizer, while the seed planted on the poor plot has been grown for four years with nitrogen alone.



Potatoes on the experiment station farm near Munich, Germany. These potatoes were planted from the same variety and strain of seed and fertilized with the same complete fertilizer. The seed which was planted on the left, however, had been fertilized for four years with a complete well-balanced fertilizer, whereas, the seed that was planted on the right had been fertilized for four years with nitrogen alone. This experiment would indicate that the kind of fertilizer used has an important influence on the vitality and vigor of the seed.

The most characteristic thing about Bavaria is the short leather breeches worn by the peasants. They stop about three inches about the knees and have wide bottoms. From the looks of some of them, I am convinced that one pair would last several years.

From Munich we went to Heidelberg for a visit to the famous old University where many American scientists have gone to complete their education. The University was founded in 1386 more than 500 years ago—and many of the most prominent men of Germany have been numbered among its students.

Only a few miles from Heidelberg is located the smaller of the two tremendous nitrogen fixation plants. This plant in the town of Oppau is turning out 110,000 tons of fixed nitrogen, and the larger plant near Merseberg is producing 550,000 tons annually. The combined production of these two plants is more than twice the annual consumption of nitrogen as fertilizer in the United States.

To extract hydrogen from river water and nitrogen from the air, combine them, and turn out sulphate of ammonia, nitrate of lime, or other forms of nitrogen all within two hours' time is quite an accomplishment, even from the chemical engineering viewpoint. Yet this is what is being done at Oppau and Merseberg. The Nitrogen Syndicate also maintains a modern experiment station where trained scientists test out the crop producing power of each new product before it is placed on the market.

The city of Darmstadt is of interest to farmers because it was the birthplace of Liebig, the father of agricultural chemistry. His house is now maintained as a memorial museum. It was Liebig who inspired Sir John Lawes to make fertilizer experiments which led to the establishment of the famous Rothamsted Experiment Station in England and also to the manufacture of superphosphate.

At Darmstadt is also located one of the leading German experiment stations. The former director of this station, Dr. Paul Wagner, was the originator of pot experiments which have contributed so much to our knowledge of plant nutrition.

After a few hours of sight-seeing in Frankfort-on-the-Main we proceeded to Wiesbaden for the night, and early the next morning we boarded a boat for a 100-mile trip down the Rhine to Bonn. The Rhine is famed for its beauty and it is not over-rated. Towns and villages dot its banks, feudal castles, many of them in ruins, remind us of a bygone age, and thousands of acres of vineyards occupy the steep slopes. We were told that wine grapes have been grown along the Rhine since the days of the Roman occupation nearly 2,000 years ago and that the land is very valuable. We stopped at Bonn just long enough to visit the experiment station and hurried to Cologne in order to catch an over-night train to Berlin.

We saw many interesting things in and near Berlin, but I shall only attempt to tell about our visit to a large farm near Nauen in the province of Brandenburg. We Americans are likely to have the impression that all farms in Europe are small, but this particular farm has 7,500 acres in crops, including 2,500 acres of wheat, 1,250 acres of cabbage, 600 acres of peas, 600 acres of sugar beets, 500 acres of potatoes, 500 acres of carrots, 125 acres of pole beans and 1,000 acres of hemp, which is manufactured on the farm. The equipment consists of all kinds of improved planting, cultivating and harvesting machinery, including nine tractors and one combine which is being tried out experimentally. Nine hundred workers are employed, including many women.

The owner and operator of this farm, Mr. Schurig, buys annually over 3,000 tons of fertilizing materials, which means that his crops are fertilized at the average rate of 800 pounds per acre. His average yields are, of course, high—wheat 2 bushels, cabbage 30 tons, sugar beets 18 tons, potatoes 450 bushels. He keeps relatively little live stock, and manure is therefore used sparingly.

The quantity and kind of fertilizer used in Germany, just as in the United States, varies from farm to farm and from section to section. On the average, however, German farmers use four times as much fertilizer per acre as is used by Penn yvania farmers. They use an average of 250 pounds per acre of 5-6-9 on all their crop and improved pasture land, whereas we use only 60 pounds per acre of something like 2-11-6. German soils are naturally rather poor, but they certainly make up the deficiency and fertility by using plenty of fertilizer.

After some more sight-seeing in and around Berlin we proceeded to Eisenach where we visited one of the largest and most modern German automobiles. We were especially interested in the American machinery which has been installed to reduce labor costs and to increase efficiency.

Wise or Otherwise?

THE plight of the American farmer is amusing and serious. It affords a wonderful field for the study of human nature.

It is like the old saying that misery loves company. Some farmers want only statements of farm failures; others want to throw a monkey wrench in the chain grocery store machinery because some farmers might get their fingers pinched in its cogs. Then again we have some who cast their jealous eyes on the fruit tree planted by labor and want to kill it in the bud. Some even go so far as to wish for a crop failure that would create a market shortage and then the consumer would have to pay a higher price.

These statements show that the good old country spirit has blown out of the window and is forever lost as far as the farmer is concerned. However, it might be good policy for him to use the broom and sweep his door steps clean before he calls the assistance of others to get him out of the mud. I have noticed for the past ten years where numerous farmers pay no attention to the advice given by farm papers that would save them millions of dollars each year by placing their machinery in the dry during the winter.

Yes, travel through the rural districts and one can consider himself lucky if he can find a night's lodging, and if he does he will pay New York hotel prices and be entertained with stories of hardships unequaled by our Pilgrim fathers on the rock bound coast. However, we do find our farmer friends surrounded with luxury, such as the radio, telephone, automobile and bathtub. And it is no uncommon to find them living along a leading pavement highway and then wondering when the taxes will be reduced. Some do not get up before eight or nine o'clock in the morning and take about two hours for lunch and I find them most apt to do the work about a month in harvest when they have a hired man who does about two-thirds of the work and then either starves or goes to work for some corporation.

It has been accepted without debate that the farmer works long hours, and every day these conditions are done away with, for a farmer can always find time to talk a couple of hours. The question of the average farmer works six months out of the year. Mostly in the winter time you will find them basking around the stove, listening to their radio, getting the market reports so they know what to charge the poor working man in the cities for their produce. And when they find that the chain stores can sell to them a cent cheaper they are out of tune with the whole world.

C. H. Wise, Ex-Farmer.

The Farm Home

Our Changed Habits of Eating

By HEPSY NEFF

GETTING the facts of history from novels is both easier and pleasanter than digesting them out of text books on history as such. Sir Walter Scott made an immortal name for himself when he wrote "Ivanhoe," "The Talisman" and in fact the whole series of the Waverly novels. Young people who can read the two books named above before they get into high school will have helpful advance information on English history.

A clear picture of the life and habits of our Anglo-Saxon ancestors will include such habits of eating. No imagination of today can provide. But along with these hours at the baronial board must come a picture of the hard ride on the chase and the long hours of outdoor life which tardily can be duplicated in our time. Naturally, queer habits and indoor living must bring about conditions of overeating.

Even the England that once looked greedily on a whole roast pig or even an ox roasted whole has doubled its imports of fruit in the last fifteen years and cut down the number of its beef cattle one-third in the last fifteen years. Only customs can bring about great changes in our habits and so far two explanations have been offered, a decrease in walking and increase in motor cars worth studying, fashion's decree that the human form must be slender and of light weight. The same facts are back of the changed habits of eating in our own land. These facts also have a bearing on the decreased returns from our farm products.

Demand for Dairy Products

The New York World is authority for the statement that the demand for beef per capita has increased 26 per cent in the past ten years. The use of whole milk has increased 64 per cent, fresh fruit 39 per cent, whole wheat bread 35 per cent, poultry 25 per cent and eggs 11 per cent. Along with these increases the use of raw vegetables and fruit in the form of salads has increased. During the same period, driving all other foods from the table. This means a shift to the use of foods richer in vitamins. Milk and eggs are more largely used for building materials, and at the same time, along with the fruits, vegetables, provide the essential vitamins, now known to be as necessary to power as the fuel in gasoline as the spark plug and the carburetor are to the power of the motor car.

With such an array of facts before us as to changes already made in our eating habits as well as the results that follow, diet is no longer a subject for sneers as a mere passing fad. McCollum's "Newer Knowledge of Nutrition" is one of our best authorities on the subject and he is still at work in one of the largest universities in the United States, keeping 2,000 rats for testing the effect of foods and verifying his experiments to the third and fourth generations.

Who knows but health may yet become the height of fashion and lack of the visible signs of health take its place along with last year's clothes in putting those of us who fall on the black list of nobodies?

Allow orange marmalade to cool slightly after cooking and stir before putting it in glasses. The peel will then remain evenly distributed instead of rising to the top.

* * *

The thrifty shopper buys cleaners which will be suitable for more than one season.



(Courtesy U. S. D. A.)

Mrs. Roop's living-room today opens into a sun-parlor. She enjoys the new windows at each end of the mantel.

A Country Reception

By ELIZABETH POUND

MY mess board for Saturday was that I could not entertain because the house was not large, and it wanted a few at a time. I objected to much work, so she persuaded me to have a party. It did not sound very sensible to me, but I continued it, but she is young and energetic and promised to carry it through all right, so I went into it. We divided the guests into three sets of groups, and asked them to be present hours, exactly like a town reception.

Well, it all turned out so well that other women say they are going to try the plan. It was a pretty spring day and the house was filled with the odor of lilacs, tulips and hyacinths from the flower beds. It was cool enough to have fire but Ruth would not have the rooms overheated. We had the big pieces of furniture pushed back against the walls, a few chairs in the living room, except in the dining room, where we had all the chairs arranged all around the walls. We could seat twenty at a time. I must confess that I was kind of nervous, but Ruth was as cool as a cucumber.

The ladies came in and laid off their wraps upstairs and after shaking hands with us they all adjourned to the dining room, where they were asked to be seated. The dining room tables were covered with cake and ice cream and coffee and each place was garnished lots of ribbon on them as they left the dining room. When more people began coming the first set left.

I used to make quite a town entertaining, but I am not too old to learn. Everybody had a good time, the cost was not excessive, and I was able to ask all my friends, so no one was offended. The next time I'll group the ladies so that the elderly friends can come first, and so make the occasion still more enjoyable, I hope.

"God send us a little home,
To come back to when we roam;
Low walls and fluted tiles,
Wide windows, a view for miles;
Red firelight and deep chairs,
Small white beds upstairs;
Great talk in little nooks,
Dim colors, rows of books,
One picture on each wall;
Not many things at all.

* * *

"God send us a little ground,
Tall trees standing 'round
Pretty flowers in brown soil;
Overhead, thy stars, oh God!
God bless, when winds blow,
Our home, and all we know!"
(From over the radio)

The Same Room, But How Different!

By GERTRUDE S. STEWART

IN Montgomery county, Virginia, the home demonstration agent was busy encouraging home improvement. A great many farm houses were made more homelike, yes, much more livable through her skillful advice.

Mrs. Roop's remodeled living room pictured on this page is just one of the successful changes worked out in their country home. Note how the cheery fireplace has been repaired.

The one time window became a door opening onto a cozy delightful sun-parlor, of which you can get a glimpse. The wood spaces on each side of the fireplace were cut for two new windows, adding light and ventilation to dark, dull corners.

Walls and woodwork were repaired and refinished. The floors were redone, and throw rugs, home-made, were used. All select pieces of furniture were retained and put into shape.

The space above this sun-parlor was made into a nursery, bathroom and sleeping porch. The bathroom was made possible by installing a water tank just outside the house. This tank is filled by a ram at a spring by the foot of a near-by hill. Rain water also does its "bit" entering the tank from the roof by spouting.

Many a rural home has been transformed by a few improvements which bring increased comfort and delight to all the family. Sometimes they help, too, to keep the youth "down on the farm".

* * *

Clean the shelves where the preserves are stored now while the supply is low.

* * *

Choose a clear windy day to launder blankets and pillows so that they will dry rapidly.

* * *

Rhubarb juice canned this spring may be used throughout the year for drinks, jellied desserts, or pudding sauces.



(Courtesy U. S. D. A.)

Our living-room of former days before we go to thinking.

TIGHT BINDING TEXT CUT OFF

6 Beautify Your Home at Small Cost—EVERGREENS FOR $1.10 Postpaid

These soon grow into handsome trees worth many dollars.

We ship during May and June (Planting Time).

Three to five-year trees are 10 to 15 inches high. 2 Norway Spruce, 2 American Spruce, 2 Chinese Arborvitae.



SWEET WILLIAM All colors, hardy, free bloomers. 6 plants ... $1.10

HARDY HYDRANGEAS P. G. Blue, Pink. 2 plants for $1.10

ASTERS Double, all colors; 40 plants for $1.10. (Extra fine.) Exhibition type.

WEIGELA ROSEA Deep pink; blos soms when a home in wonderful profusion and make a grand show. 2 shrubs ... $1.10

"Field-grown Stock From Our 150-Acre Farm"

Dahlia Flowered Zinnias Show Flowers of enormous size. 20 Plants $1.10 Brilliant colors.

FREE — 6 EVERGREENS, 3- to 5-year trees, above selection. FREE with each order of $5.50 and over. This Week Only.

COLORADO BLUE SPRUCE—Each $1.10 Selected, 5-6 years. Extra bushy, 1 to 1½ ft. high

Hardy Yellow Daisy (Coreopsis Lanceolata) This is the yellow variety you grow; about 2 feet tall. 6 plants ... $1.10

Chinese Arborvitae Fine, feathery, deep green foliage. 2 years old. 8 to 12 inches high. 6 trees for ... $1.10

Japanese Barberry Beautiful every month in the year. 2 year old plants ... 6 for $1.10

GOLDEN BELL (Forsythia) Its yellow flowers appear before the leaves, the earliest note of Spring; very striking. two plants ... $1.10

HARDY CHRYSANTHEMUMS Bronze, pink, lavender, white, red and yellow. Flowers measure 6 to 8 inches in diameter. 6 plants ... $1.10

MAGNOLIA TREES Bloom early in Spring pink and white; 2 trees ... $1.10

HARDY CARNATIONS Large, showy, fragrant; all colors field grown. 6 plants for ... $1.10

SNAPDRAGON NOVELTY SNAPDRAGON (Antirrhinum), 22 different colors; 40 plants (beautiful) for ... $1.10

HOLLYHOCK Chaters, double crimson yellow, salmon, white, rose, maroon. Newport pink. 6 plants ... $1.10

CHINESE PYRAMIDAL ARBORVITAE, 2-2½ feet high 1 foot wide at base. each ... $1.10

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DIGITALIS (Foxglove) White spotted, rose, purple and mixed. 6 plants ... $1.10

ORIENTAL POPPY Brilliant colors; scarlet, cerise pink flowers measure 8 inches in diameter; 6 plants ... $1.10

Hardy Azaleas (Nudoflora). A handsome, free-flowering, pink species. A beautiful variety. Very hardy. Ready to bloom. Each ... $1.10

PAINTED DAISY Tall mixed and choice varieties and colors, range from white to green red. 6 plants for ... $1.10

COLUMBINE — They are much used in any hardy border or rockery; blue, pink, yellow and other colors; 6 plants for ... $1.10

DELPHINIUM (Perennial Larkspur) BELLADONNA—Light Turquoise blue BELLAMOSUM—a dark blue type of the Belladonna. Very decorative and lasts for years; 6 plants for ... $1.10

Gaillardia (Perennial Gaillardia). This fine perennial, when once established in your garden, will last for years. Ringed with orange, crimson and red. It blossoms from June to November and grows 2 feet tall. 6 plants for ... $1.10

Shasta Daisy Large, pure white flowers which appear in early Summer, are excellent for cutting. 2 to 2½ feet. flowers measure 4 inches in diameter; 6 plants for ... $1.10

RHODODENDRONS (Catawbiense). One of the most beautiful native evergreen flowering shrubs. The flower is reddish purple and blooms in May. Grows well in shade or sun. 2 plants (one ft. high) for ... $1.10

RHODODENDRONS (Maximum Rosebay). Large plant with dark evergreen leaves and large clusters of pinkish white flowers in July. 2 plants (1 to 1½ ft. high) for ... $1.10

RHODODENDRONS (Carolinianum). The flower shades from light to dark pink and blooms with great profusion in May. The plant thrives best in partial shade or full sun. 2 plants (one ft. high) for ... $1.10

Colorado Blue Spruce The glory of the blue spruce is in its foliage, which is an intense steel blue. Heavy foliage of a rich glistening blue which flashes and sparkles in the sunlight, and you can form only a faint idea of the magnificent beauty of this truly marvelous specimen. With culture directions. Selected 5-6 years. Extra bushy, 1 to 1½ ft. high ... Each $1.10

Novelty Snapdragons A new group of Antirrhinums with extra large flowers on strong stems. Salmon, Yellow, White, Crimson, Rose pink, Red, Variegated, Dark Pink and other beautiful colors. 40 plants (mixed) planted). 22 different colors ... $1.10

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Add 15c for Packing and Insurance.

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BABY CHICKS C.O.D! Send no money, just mail your order. We ship C. O. D. and guarantee live delivery of chicks. From purebred, inspected and culled flocks.

Prices on	25	50	100
S. C. Wh. and Br. Leghorns	$3.00	$5.50	$10.00
Bd. Rocks and R. I. Reds	3.50	6.50	12.00
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Box 909 **Bellefonte Poultry Farm,** Bellefonte, Pa.

BIGGER CHICKS HATCHED FROM TWO OUNCE EGGS OR BETTER

	50	100	500
White Leghorns	$6.50	$12.00	$57.50
Barred Rocks	7.50	14.00	67.50
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COVALLEN POULTRY FARM, F. W. Mutzabaugh, Duncannon, Pa. Member I. B. C. A.

BABY CHICKS Why Pay More

Tancred Str. Wh. Leghorns	$10 per 100
White Leghorns	9 per 100
Barred Rocks	12 per 100
S. C. Reds	12 per 100
Heavy Mixed	10 per 100
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500 lots 25c less—1,000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for free circular. C. P. LEISTER, McAlisterville, Pa.

BABY CHICKS

	50	100	500	1,000
White Leghorns	$5.50	$10.00	$47.50	$90.00
R. Rocks	6.50	12.00	57.50	110.00
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Buff Orpingtons	7.50	14.00	67.50	
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Heavy Mix	5.50	10.00	47.50	

100% live delivery guaranteed. Send 20 with order, balance C. O. D. MONROE HATCHERY, Box 10, Richfield, Pa.

BABY CHICKS Prompt Delivery—Will Ship C. O. D.

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White & Bd. Rocks	$6.50	$12.00	$57.50	$110.00
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STOP! LOOK! and take notice to the special low prices on Cocolamus husky chicks for May delivery.

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Tancred strain White Leghorns	$5.00	$9.50
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100% live delivery guaranteed, parcel post prepaid. Special prices on 500 and 1000 lots. Free circular. COCOLAMUS POULTRY FARM, Cocolamus, Perry Co.

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White Wyandottes	$13.00 per 100
Wh. & Bird. Rocks	12.00 per 100
Heavy Mixed	9.00 per 100

100% live delivery guaranteed. Postage paid. JAS. E. ULSH, Beaver Springs, Pa.

New Styles in Potatoes

By FLORIS CULVER THOMPSON

THE 1929 potatoes are a distinct improvement over the potatoes of a few centuries ago, when our poor fat ancestors was to be seen in the streets of the Dutch East Indies, with a stone in each hand to crack the nuts on which they lived. Even the potatoes of our grandfathers were not as delicious as those we have today. Potatoes were first discovered in Peru by the Spaniards in 1537, and were carried back to South America by the explorers. There they were called "Batata."

It required a great deal of persuasion to get the people of Europe to accept the potatoes, sufficient to say that the rolling toward Ireland when Sir Walter Raleigh planted potatoes growing in South Carolina. He took it back to his estate in Ireland and raised quantities of them, but he left the potatoes in the ground until the tops were dead and the tubers ripened. Then he dug the potatoes, cooked them and ate them. Needless to say, he was quite disappointed in the results. He thought that the people would become fond of potatoes, which would be such a wholesome food in the case of famine.

Modified Potatoes O'Brian

Chop together six cold boiled potatoes, one green pepper, one small onion. Add salt and pepper to taste and mix thoroughly.

Melt two tablespoons of butter in a frying pan, add one tablespoon of flour and one tablespoon of chopped onion and when piping hot add the potato mixture. Cover and cook slowly for about fifteen minutes, stirring frequently to prevent burning. Have ready a cream sauce made of one cup of milk, one tablespoon of butter and one tablespoon of flour. Season with salt and pepper and add one cup of grated cheese. Pour this sauce over the potatoes and serve at once.

Have ready a cream sauce on which the cold potatoes may be placed. Using a pancake turner or spatula, and without removing the cover, loosen the potatoes along the edge of the skillet. Then with one hand supporting the cover, invert the skillet and slip the plateful of potatoes onto the platter.

The potatoes will be an appetizing golden brown sheet on top and tender and moist throughout. They keep very hot during serving and have the advantage of not being too rich for children as are fried potatoes.

Potato Soup

This nutritious, quickly prepared dish may save the day if the children or others unexpectedly return for lunch.

Cut six small potatoes in cubes and cook with one sliced onion in barely enough water to cover them. When tender mash them in the small amount of liquid remaining and add a cupful mixture of three tablespoons of butter and four tablespoons of flour. Whip until smooth and gradually add one quart of hot milk. If not thick enough, break into it several finely buttered crackers. Season with salt, pepper and celery salt.

Potato Salad

The secret of a good potato salad lies in having the cold potatoes smoothly diced, the sliced vegetables cold and dry, the salad dressing well seasoned and creamy, and in tossing the mixture lightly together.

A favorite combination is six or eight cold potatoes, one cucumber, one-half of green pepper, bunch of celery and one teaspoonful of minced onion. Fine shredded lettuce heart will substitute for celery, and a sour pickle, sliced thin, for cucumber. Almost any drained left over vegetable such as peas, string beans or carrots may be used in potato salad.

An attractive garnish is made by laying strips of pimento or slices of boiled egg across the top.

Potato salad should be served on a bed of head lettuce.

Pimento Potatoes

This dish is somewhat similar to [illegible] salad.

Cut potatoes are boiled in the [illegible]. Peel eight hot, fresh [illegible] eggs. Add one small can of [illegible] cup of cream. Chop potatoes [illegible] together. Season with [illegible] enough butter to prevent drying. [illegible] served.

Potato Cakes

[illegible] time, this potato dish [illegible] moved while the left-over, [illegible] potatoes are still hot.

Add one beaten egg and one [illegible] minced chives or [illegible] two cups of seasoned [illegible] potatoes. Make into patties, [illegible] cracker crumbs and [illegible] needed. Then brown them [illegible] drippings and half butter in [illegible] pan in moderate oven.

Appetizing Asparagus

When country folks who have [illegible] asparagus beds are [illegible] tasted for these tender shoots [illegible] helps us forget that most all the [illegible] fats are empty. The [illegible] cooked the more delicious it is [illegible] all to eat it at eleven o'clock [illegible] serve it at twelve.

Twenty minutes is the correct time for cooking. Toss the well-drained stalks into boiling water, and [illegible] of this valuable vegetable [illegible]. Keep it for the [illegible] and creamy asparagus soup.—To [illegible] asparagus soup: Cut [illegible] one fourth cup [illegible] tablespoons two cups boiling [illegible] teaspoon salt, cooked [illegible] half hour. Prepare [illegible] tablespoons butter, [illegible] flour, one cup top [illegible] evaporated milk, one cup beef [illegible] cooked. Force the tender vegetables through a sieve, add the cooked [illegible] reheat. Tender asparagus and a bit of grated cheese [illegible] this splendid soup. Six portions.

Asparagus en casserole:—Cook twenty minutes one large bunch of asparagus cut into inch pieces. Add four eggs. Cut the eggs into halves and put in bottom of baking dish. White sauce as in previous recipe, using all milk instead of part broth. Arrange asparagus over eggs, and pour the sauce over all. Cover with buttered crumbs and bake in moderate oven [illegible] crumbs browned. Serve piping hot. Recipe makes six portions.

Support asparagus with cheese and cook chopped asparagus till [illegible] about twenty minutes. Make white sauce as in casserole recipe. Arrange asparagus on buttered toast. Just before serving add one cup grated cheese to the white sauce. When melted pour over the prepared toast. Serve immediately. For an added touch of [illegible] add two chopped [illegible] at the last moment.

Cream Rhubarb Pie

To one cup of fine chopped [illegible] left, add one cup sugar and grated yellow rind of one lemon.

Blend smooth one tablespoon of corn starch in cold water, using as little of the water as possible. Then add [illegible] boiling water to make the cup full; [illegible] this immediately through the [illegible] rhubarb. Then add the yolks of [illegible] eggs well beaten. When thoroughly mixed pour into pie tin lined with [illegible] baked pastry. Dot with bits of [illegible] and bake.

When fruit is baked cover with meringue made with the egg whites beaten stiff and sweetened with [illegible] tablespoons powdered sugar. Brown slowly—about twelve minutes.

Clarice Rogers





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Of course, washing machines are wonderful aids to washing. And you'll find Fels-Naptha a wonderful help to any washing machine! It gives extra *help* in any washing—for it brings two active cleaners. Plenty of naptha and good golden soap, blended by our exclusive process, and working hand-in-hand to loosen even stubborn dirt and wash it away. Whether for washing machine, tub or boiler—

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If I Had Fifty Dollars

MY neighbor was in a few minutes ago and was wishing and wishing she had fifty house dollars. And what do you think she was longing for? Well, she saw on TV more than a half hour she would get for a electric refrigerator.

She had been over in the city attending the Refrigerator Show, and her desires had been quickened by seeing and hearing of the hundreds of the benefits resulting from this great modern improvement.

Imagine having ice cubes of correct size always at your finger ends! Imagine having milk keep sweet for days and never sour! Imagine the fresh head of cold to serve, all quick-crisp and cold in just four minutes! Imagine the possibility of frozen desserts at the ice box makers and the most delectable jellies all through the summer!

And then (in a whisper) no more ever having to guess when one has forgets to empty the pesky old things! But even as it was here thought we might be economical and spend our little extra money on ice! Ha! Ha!

A suggestion came well be sent to every person in this country that we get rich. What would you do with fifty dollars right now? Tell us before Decoration Day and win a prize. Something you'll enjoy having, too.

Send letters to Home Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

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No. 216 S[illegible] Collect. Designed [illegible] sizes 8 [illegible] 14 years. Size 8 requires 1¾ yards 32-inch material with ¾ yard 32-inch contrasting.

No. 150 Smart morning dress. Designed in sizes 36 38 40 42 44 and 46 inch bust measure. Size 36 requires 4¾ yards of 40-inch material with ¼ yard of 36-inch contrasting and 1⅞ yards of binding.

No. 328 New feminine elegance. Designed in sizes 16 18 20 years; 36 38 40 and 42 inch bust measure. Size 36 requires 4 yards of 40-inch material with ⅜ yard of 36-inch contrasting sash.

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Write your name and address clearly. State number and size of each pattern. Price 15c each, two for 25c. Our Fashion Magazine will help in preparing your wardrobe. Copy alone 15c; with a pattern only 10c. Address Pattern Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

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Orchard Windfalls

By S. W. FLETCHER

"OUR neighbors in the east panhandle of West Virginia are having a grand fight over the cedar cutting law. For a number of years Virginia and West Virginia have been cutting down red cedar trees that are a menace to adjacent commercial apple orchards, because they harbor the cedar apple rust and have been allowing a small bounty for the destruction of the trees cut. In recent years this district has cut hundreds of thousands of these trees, and has been able to trust growers of that district of over a million dollars. The cedars are, of course, practically worthless as compared with the apple orchards.



In past years there have been interferences, and a few law suits and injunctions, in the enforcement of the cedar cutting law, but the cases are nothing compared with the storm that has broken now. Certain ladies of big social position, being threatened with the loss of a few cedar trees from their country estates, have carried the war to the courts and the legislature and have even invoked shotgun diplomacy when the inspectors came to do their duty. It matters not, to them, that the cedars are of little value while the apple industry is one of the chief sources of income of the district, these ladies stand firm on their "rights" and the public be damned.

Fortunately for Pennsylvania cedar apple rust rarely is serious over a large territory in this state although occasionally it is a local problem of some importance. A bill was passed at the recent session of the General Assembly permitting the State Department of Agriculture to compensate owners of cedars when these are cut to protect adjacent apple orchards. The amount appropriated is $3,000. The Governor has not yet signed this bill.

• • •

SPEAKING of pests, those fruit growers who always are looking for something to be pessimistic about will be plunged into the depths of despair when they learn that the dreaded Mediterranean fruit fly has actually got a foothold in Florida. The entomologists tell us it is the codling moth, apple maggot, Oriental moth, Japanese beetle and red mite rolled into one. It attacks all kinds of fruits. The United States has maintained a vigilant quarantine against this pest for years, but it has slipped in. But all is not yet lost. There is a fighting chance that the present infestation may be exterminated. And if not, then we should take heart by past experience, remembering dark and gloomy days when other pests were about to "ruin the fruit industry". I have been through several of these scares, beginning with the San Jose scale about 1896, and coming on down to the Oriental fruit moth. But we are still growing fruit!

• • •

THE compulsory grape grading law passed at the recent session of the Legislature may be the opening wedge. At the last meeting of the State Horticultural Association a suggestion that we follow Virginia in the compulsory grading of apples met with comparatively little support. It was the feeling that we should wait two more years, at least, and see how the law works out in other states. There is more justification for this conservation in Pennsylvania than in states that are mainly carlot shippers. With grapes, however, the situation is quite different. Production is confined mainly to one county and sales are mostly wholesale. If, after two more years, compulsory grading of apples continues to work out satisfactorily in other states, Pennsylvania should not hesitate any longer, or it will find itself on the short end of the market in competition with neighboring states.

THE Commissioner of Agriculture for California has been properly rebuked by one of his constituents, a California fruit grower. The Commissioner recently rejected the recent severe injury to fruit crops by frost and thereby made an estimate of the probable money loss, based on the percentage of a full crop that remains. Said the Commissioner, in effect, if the fruit crop of California this year is only 60 per cent as large as that of last year, the growers will receive 40 per cent less money for it, which he then proceeded to calculate in terms of millions of dollars.

What foolishness! If this official had ever owned an orchard he would have known that a 60 per cent crop may return more money than a 100 per cent crop. Here and there are individuals who suffer, but the industry, as a whole prospers most in years of moderate production. Fruit growers, not particularly enthusiastic over "bumper crops" unless the bumper merely a gratifying local phenomenon.

Care of Nut Trees

By JOHN W. HERSHEY

SPRING and fall plantings of nut trees should be pushing foliage rapidly at this date. The newly planted trees and buds are slow, but will grow in the next few weeks. But don't overtake a chance and let them shift. Fill out with a broom handle and work the trees. Force it down along side the trees. Do so at an angle to keep from getting the soil forced under the roots. Keep on tamping until satisfied the roots are well packed. Year-old plantings will benefit by the same treatment.

If your trees are large ones do this several times during the summer. Remember never tamp immediately after a rain but wait until the soil has dried enough to work. Be sure to keep down weeds and grass away from around the trees by hoeing well. If dry weather is experienced give each tree several buckets of water.

Call your trees to mind every few days and as you think of other pointers dying think of this expression, "A stitch in time saves nine".

Top-Working Seedling Trees

And now in this glorious month of May we have the season for propagating the nut species. There is no question but that I know than grafting and budding unless it would be the getting of a start to grow after you have grafted. Many people think because nut trees are not much at the nursery they will do something by doing their own grafting, never taking into consideration the reasons for the high nursery cost and the high cost of production. There are two classes of amateur nut growers. One that can't get a thing to grow and the other who by some dumb luck gets a few grafts to catch the first time and never again seems able to do so. Should the state colleges and the departments of agriculture have one of their teachers learn the art of grafting and teach it to the farmers, how much good would be done for the public.

An Exacting Job

As mentioned in Dr. Smith's book, Crops many a worthless piece of ground covered with nut seedlings could be made to bloom like a rose. Every spring I have plenty of applicants who wish to become proficient, but most fall by the wayside. I do it with much pleasure, though, and have learn of several each year who have got a few grafts to grow. I have published the ones who have failed from year to stick it out and, instead of blaming the grafting blame themselves.

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The MARKET PLACE

By W. R. WHITACRE

"IF I will pay you to grade your potatoes," said the county agent to the grower.

"Well, I can get 50c a bushel for them with the culls out and if I sort out all the small ones and big ones, I won't get any more money and will have a lot more work."

The grower will generally admit that the theory of grading is good but actually he doubts whether it is practical.

D. M. Lantz of the Pennsylvania Bureau of Markets, tells of one of the largest producers in the eastern part of the state who made a test to determine whether strict grading is really practical.

The grower had two lots of potatoes of equal grades, each holding 1,050 bushels. The contents of one lot was run over a grader and the undersized and unsalable potatoes were taken out. There were 45 bushels of unsalable potatoes, 215 bushels of small potatoes which sold at 20c a bushel or $43 and 1,300 bushels that brought 50c, or $6.95. The grower received $7.38 for the contents of the lot.

The potatoes in the other lot were graded strictly to government grades. There were 1,200 bushels of U. S. No. 1's that sold at 50c a bushel or $720. Extra large potatoes which were scattered over 250 bushels and sold at 30c or $75. The 100 bushels of small stock and the unwholesomes which kept them out of the U. S. No. 1 grade brought 25c or $47.50 and in addition there were 50 bushels of unsalable culls. The contents of this bin graded according to approved standards sold for a total of $830.50, showing a profit of $92.50 over the bin graded according to usual practices.

This $92.50, according to the grower, does not fully represent the value of strict grading, since the good-will which these potatoes built among potato buyers will be a valuable asset in future years. The extra labor cost of strict grading was not high and it came at a time when labor was plentiful.

For Sweet Corn

AT the Marietta (O.) Truck Experiment Station sweet corn fertilized with 1,200 pounds per acre of 4-10-4 produced a greater profit than when a half less or a half more of the same fertilizer was used. Incidentally this treatment produced crops very nearly equal to those secured with 16 tons of manure and 400 pounds of superphosphate. The lower cost of the fertilizer alone made that treatment more profitable than the one employing manure. All the fertilizer was applied broadcast and harrowed in before planting. Perhaps 200 pounds per acre is as much as it is safe to use in the hill when planting in check rows or 400 pounds per acre in drills. G. W. S.

Pea Vine

Our asparagus bed is being overrun with pea vine. It is ruining the asparagus and we seem to be entirely unable to control its spread. Can you suggest a remedy?

Marion E. Eastburn.

I REGRET that I am unable to suggest any simple remedy. About the best that can be done is to cultivate frequently and begin hoeing before the weed gets a start. In addition it may be worth your while to give the bed a very thorough harrowing with a spring-tooth harrow once or more during the cutting season and again at the end of the cutting season. Cut closer than usual and harrow immediately. Of course some asparagus will be sacrificed, but the loss in this connection may not be as great as would be the expense of cleaning up by hand.

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But that is not all—The General does not tire out—or worry about flies, heat and dust. If necessary it will work twenty-four hours a day and deliver its full power to the drawbar or on the belt. Any tool that a team of horses can handle can be used behind this tractor.

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Spreads Manure	
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100% prepaid safe delivery guaranteed.
J. N. Nace Poultry Farm, Box A, Richfield, Pa.



Plenty of fresh water, a grassy range and opportunity for shade are three things that keep young pullets healthy. The early hatched, well-grown pullets should be saved for layers in the fall and winter. Small, weak pullets should be marketed along with the cockerels. L. R.

Fifty Years of Poultry Industry

THE poultry industry in Pennsylvania has undergone many changes during the past century, particularly during the last 50 years.

Most of the cities in the Commonwealth were relatively small a hundred years ago and it was customary for town people to have poultry flocks in their back yards. This condition gave little incentive for the development of a commercial poultry industry. Furthermore, the cold storage business was undeveloped so that the price of eggs in winter was comparatively high, with the result that per capita consumption was probably very low.

Census Enumerations

The demand for feathers is one reason at least why ducks, geese and turkeys made up a far greater proportion of the poultry population during the nineteenth century than they do today. In fact as late as 1879 more than ten per cent of all the poultry on farms was reported to be other than chickens. The number decreased to about four per cent in 1880 and is believed to be about three per cent at the present time. Renewed interest particularly in turkey raising, has been reported recently, however.

The importance of the various kinds of poultry in Pennsylvania during the last 50 years as indicated in a general way by the consideration given to them by the federal census. Previous to 1879 poultry was not enumerated in the census. In the 1880 census the number of barnyard fowls and other poultry and the egg product in the 1879 year was recorded. In 1890 the census included separate enumerations for turkeys, ducks, geese and guineas and gave the total egg product in 1889. Ten years later the above kinds of poultry were again listed separately, the total egg production was given and in addition the value of all poultry the value of poultry raised in 1899 and the value of eggs produced in 1899 were listed.

It [illegible] the poultry was enumerated as fowls on farms, the separate [illegible] being made for the different kinds. But this census did recognize that the poultry industry had reached commercial proportions, the value of both fowls and eggs sold from it being estimated to be $15,927,750. Being based in detail in 1920 the enumeration was entirely on chickens, though "other poultry" was recorded. The census [illegible] from the sale of chickens and eggs had jumped in ten years to $33,584,567, thus further emphasizing the commercial aspect of the industry. In 1925 all the enumerations were based on chickens only.

Trend of the Industry

With such variations in the character of, as well as the time of taking, the different censuses, it is difficult to secure comparable poultry statistics [illegible] are a period of years. An effort has been made by the writer, however, to eliminate certain differences from the various census figures in order to give a picture of the trend of the industry during recent decades. The accompanying table gives these adjusted [illegible]

Table Estimated Egg Production, Number of Hens and Pullets of Laying Age, Average Production per Hen, and Per Capita Production of Eggs, Pennsylvania, 1879-1927

Year	Hens and Pullets of Laying Age Number	Eggs Produced Dozens	Production per Hen Number	Production per Capita Number
1879	6,280,000	31,028,000	60	7
1889	9,344,000	47,000,000	60	9
1899	10,025,000	57,197,000	68	9
1909	11,461,000	67,358,000	71	9
1919	13,053,000	75,988,000	70	9
1924	15,576,000	102,048,000	79	12
1927	17,519,000	118,456,000	82	12

Two very significant points are brought out by these figures. The [illegible] is the apparent increase of approximately 20 in the annual egg production per hen during the 50 year period. The second is the increase in per capita production. Approximately 67 more eggs are being produced for each person in the Commonwealth now than in 1879, in spite of the fact that the population in Pennsylvania has doubled.

Favorable Outlook

Even though there has been a notable increase in total production of eggs, it is probably true that the production today is smaller in proportion to the total consumption of eggs in the Commonwealth than was the case in 1879. This is due, of course, to the great increase in consumption resulting in part at least from improvement in quality of eggs and from the service which makes eggs available throughout the winter to the baker as well as to the housewives at a reasonable low price.

Because of this notable progress in recent decades, present production of eggs falls short of the estimated consumption in Pennsylvania by approximately 42,744,000 dozens, assuming an average annual per capita consumption of 200 eggs. This "deficit" will be reduced in all probability during the next ten years in much the same way as it has been in the past, that is by continued increase in egg production per hen as well as by an increase in the number of laying hens. However, a "deficit" cannot be eliminated in ten or even 20 years, assuming the present rate of progress to continue [illegible] and consumption [illegible] is evident since 1909. Therefore, it is true that Pennsylvania poultrymen are in a position geographically and otherwise to supply a market for poultry products either all within or partly outside the state equivalent to the total requirements of Pennsylvania, then continued [illegible] expansion of the industry is warranted.

Such progress will enable Pennsylvania to continue as the leading poultry state of the nation. G. F.

Two Reasons and one Proof

There are two main parts to an automobile tire.

One part is called the *tread;* the other part is called the *carcass.*

There are definite reasons why Goodyear Tires are superior in *both* these two main parts.

These reasons can be demonstrated and proved:

1 Press your hand down on the Goodyear All-Weather Tread. Feel the *grip* of the deep-cut sharp-edged blocks, placed in the *center* of the tread, where they belong.

That shows why the Goodyear Tread imprints its safe and slipless pattern on the road, and why it has superior traction.



2

Ask any Goodyear dealer to show you on his cord-testing machine the greater stretch—up to 60%—in Goodyear Supertwist Cord over ordinary cord.

This extra stretch gives the Goodyear Supertwist Carcass its unmatched vitality, enabling it to withstand road-shocks and continuous flexing without premature failure.

These advantages in Goodyear Tires are concrete and real; so plain that a child can comprehend them.

The proof of their validity and that they are popularly understood is found in the fact that, year after year, MORE PEOPLE RIDE ON GOODYEAR TIRES THAN ON ANY OTHER KIND!

J. H. Warne of De Pare County, Illinois, one of the best known farmers in the middle west, writes:

"I have used Goodyear Tires for 15 years, and for last 6 years exclusively on passenger cars and truck and find they give complete satisfaction. Have been used on all kind, of country roads under all weather conditions. In my opinion they stand hard usage and give the most mileage of any and I shall continue to use them.

I have 2 passenger cars and 1 truck equipped with Goodyear Tires at present."

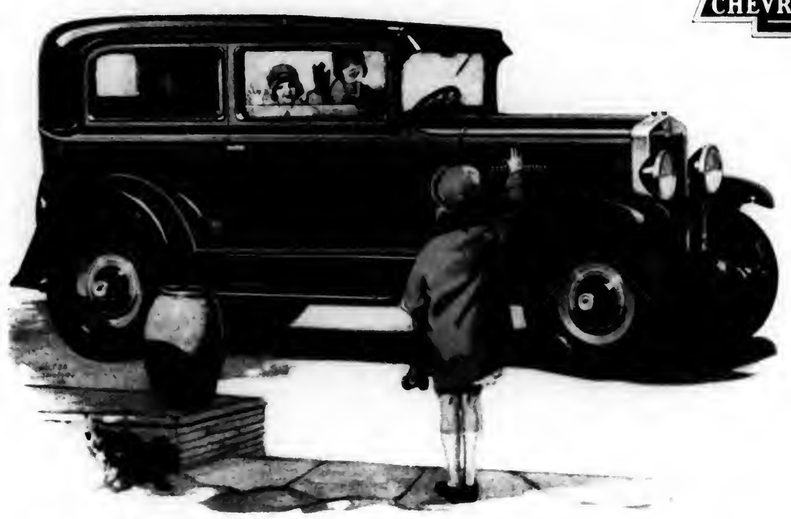
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GOODYEAR

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for Economical Transportation

CHEVROLET



The New Chevrolet Six gives you everything you want in a fine motor car··at prices within the reach of all

The new Chevrolet Six is more than just a Six in the price range of the four. It is an entirely new creation which makes available, for the first time at prices within the reach of all, everything you want in a fine car.

It gives you great reserve power to meet every road condition. It gives you high speed, fast acceleration and freedom from annoying vibration. It gives you sturdiness and rugged dependability that assure long life. It gives you fine car appearance, comfort and completeness of equipment. Yet it provides all this with outstanding economy—better than 20 miles per gallon of gasoline.

When you drive the new Chevrolet Six you will be impressed by the exceptional smoothness of its powerful six-cylinder valve-in-head engine, by the effortless handling resulting from the full ball bearing steering mechanism and the positive action of the quiet, non-locking, four-wheel brakes.

When you study the new Fisher bodies you will be immediately impressed by their beauty. And by those features that contribute to riding comfort restful cushions and ample leg room, adjustable driver's seat and Fisher VV one-piece windshield in all closed models, complete instrument panel with electric motor temperature indicator and theft-proof Electrolock—all of which are typical of the outstanding value provided in the new Chevrolet Six.

Visit your Chevrolet dealer and see this remarkable automobile today!

The COACH	$595
The Roadster	$525
The Phaeton	$525
The Coupe	$595
The Sedan	$675
The Sport Cabriolet	$695
The Convertible Landau	$725
Sedan Delivery	$595
Light Delivery Chassis	$400
½ Ton Chassis	$545
½ Ton Chassis with Cab	$650

All prices f. o. b. factory Flint, Michigan

Q U A L I T Y A T L O W C O S T

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

-a Six in the price range of the four!

ESTABLISHED — 1842

Eshelman

369 *out of* 371 *chicks*

Sturdy chicks you, too, can have them—but proper feed is absolutely necessary.

The remarkable results obtained from Eshelman Growing Mash, such as 369 out of 371—492 out of 500, and other equally good records, are due to our use of only the finest materials and an experience of 87 years in the manufacture of poultry and live stock feed.

The ingredients in Eshelman Growing Mash are so proportioned and balanced as to insure proper growth of bone and body. The protein—both vegetable and animal—is highly digestible.

And, remember, Eshelman Growing Mash is surprisingly economical in price.



F R E E !

We will send, free, this 64-page, 25-cent, book on poultry raising. It is written by one of our staff, a leading poultry authority from one of our State Agricultural Colleges, and is a simple, plain talk on common-sense poultry raising.

JOHN W. ESHELMAN & SONS
Lancaster, Pa.

Eshelman
GUARANTEED FEED
to meet every feeding requirement for livestock and poultry—backed by 87 years' experience—made of only the finest materials—economical



ESTABLISHED — 1842

Poultry Problems

Roup or Colds

An article by you published some time ago described various water systems to use in poultry houses. I led water from the house to two coops. The water that overflows in coop No. 1 runs in a box inch tile drain down around coop No. 2 and the overflow from coop No. 2 is run into the same drain by a Y tile connecting it.

Coop No. 1 houses 150 hens coop No. 2 200 hens. In No. 1 I have one trough about one and one half feet long and in No. 2 I have two troughs as the coop is 40x12 feet.

During the winter the latter part of November I let the water drain from the coops although I leave the box filled in coop No. 2 as most hens drink more water. I would several with their feet are frozen short. They feel more at ease. I put it to the dampness from letting the water run nights while the coop was closed.

W. G.

I RATHER doubt that letting the water run nights in the system would make your buildings damp enough to produce conditions favorable to roup unless the water splashed over the sides of your troughs and wet the litter near it away. However, if you can shut the flow it might be a good plan. I do not as the water would waste. I have never heard of a case where running water in a house started roup, and while it may have been responsible in a few cases, on the other hand the outbreak occurring after the water was let run may have been merely a coincidence.

Roup in a flock is very hard to check, and usually runs its course. Much can be done to help matters by keeping the house dry, clean and well ventilated but avoiding drafts. If a house is kept closed during cold weather and at night the exhalations of the birds condense and cause the litter to become damp, which is a condition favorable to roup as well as other troubles. Also in damp weather the house is liable to become damp because the moisture laden air is absorbed by the litter. Whenever the litter becomes damp from any cause it should be removed as soon as possible and as often as necessary and replaced with dry litter.

R. L. S.

A Laying Ration

Our Leghorn pullets do not lay better than 20 per cent. Oyster shell and mash are before them at all times. They have all the sour thick milk they want and after two or three o'clock we give them water. By doing this they drink more milk.

In the morning we feed five pounds of shelled corn to the 350 hens, two pounds of wheat and in the evening all the corn they will eat which is usually four quarts or about seven pounds. This is to last 100 birds. The mash is made of the following: 100 pounds bran, 100 pounds standard middlings, 100 lbs. corn meal, 25 pounds 41 per cent meat scrap.

A. K.

THE following ration is suggested as a suitable one for lay ing hens and pullets:

Mash—200 lbs. yellow corn meal, 100 lbs. wheat bran, 200 lbs. flour or straight wheat middlings, 150 lbs. ground oats, 100 lbs. alfalfa leaf meal, 75 lbs. meat scrap, 50-55 per cent protein, 50 lbs. dried buttermilk or dried skimmilk, 75 lbs. fishmeal, 20 lbs. oyster shell, 10 lbs. cod liver oil, 10 lbs. salt, 10 lbs. steamed bone meal.

Scratch—500 lbs. wheat, 500 lbs. cracked corn.

H. C. K.

A Big Egg

I HAVE been a subscriber of your paper for about 37 years. I am a retired farmer now. I am in the chicken business and often read in your paper about large eggs. The largest chicken egg I read of in your paper was 4½ ounces. My Black Minorca laid an egg last Friday which measured 9x7¼ inches, weight 10¼ ounces. Did you ever hear of such a large egg?

John A. Klingler.



Big Chicks from Big Eggs

Good Luck Chicks

REDUCED PRICES and SPECIAL SALE on our FAMOUS GOOD LUCK CHICKS

from May 15th to Sept. 1st. You can't miss with our Big Chicks hatched from best strains in America and eggs that weigh 26 oz. to the dozen. Our June and July chicks will make December layers. They are prize winners and Profit Makers. Hatches off every Monday and Thursday. Prompt shipment assured. 100% alive. Postpaid. $2.00 chart free with each order. Beautiful COLORED ART BOOK FREE. Write today. 10% cash will book your order. Balance C. O. D.

Breed	Number	25	50	100	500	1000
White, Brown, Buff Leghorns and Anconas		$3.00	$5.50	$10.00	$46	$ 90
Barred and White Rocks, R. I. and S. C. Reds		3.50	6.50	11.50	55	110
W. Wyds., Bf. & W. Orpingtons, Bf. Minorcas		3.75	7.00	12.50	62	120
Buff and White Minorcas, Partridge and Buff Rocks, Silver Wyandottes, Jersey Giants		4.50	8.50	15.00	72	140
Heavy Assorted $10.00 per 100 straight. Light Assorted $8.50 per 100.						

Also Choice PUREBRED COCKERELS and PULLETS to MATE with Your next year's flock. Write for prices.

NEUHAUSER HATCHERIES & POULTRY FARM, Dept. 46, NAPOLEON, O.

LANCASTER Chicks — Bring You PROSPERITY

LANCASTER QUALITY CHICKS

BRED FOR PROFIT • STANDARD QUALITY

LOOK! PRICES EFFECTIVE WITH YOUR ORDER.

Our chicks come from flocks that have been carefully culled for Egg Production and Standard Quality. By poultrymen trained at the Ohio State University. Our catalog is chicken from cover to cover, write for it or order from this ad. 100% live delivery guaranteed. Ref. Hocking Valley Nat. Bank. Member I. B. C. A.

Varieties—Postpaid prices:	25	50	100	300	500	1000
Quality Big Type Barron White Leghorns	$3.25	$6.00	$11	$32	$52.50	$100
Rose, Single C. Brown Leghorns, Anconas	3.00	5.50	10	29	47.50	90
Barred, White, Buff Plymouth Rocks	3.50	6.50	12	35	57.50	110
Rose, Single Comb Rhode Island Reds	3.50	6.50	12	35	57.50	110
White, Silver Wyandottes, Buff Orpingtons	3.75	7.00	13	38	62.50	120
Light Brahmas, Jersey Black Giants	4.75	9.00	17	50	82.50	160

Special Mating Chicks 1¢ each higher. Heavy Mixed $10 per 100; Light Mixed $8 per 100

LANCASTER FARMS HATCHERY — Route 33 — Lancaster, Ohio

WOLF SELECTED CHICKS

CHICKS C.O.D. Send only $1.00 and pay Postman the balance.

Special pen mated and extra high breed chicks at slightly higher prices. Shipment made any time you wish.

	25	50	100	500	1000
S. C. Wh. Bf. & Brown Leghorns, S. C. M. Anconas	$3.00	$5.50	$10	$48.00	$ 90
Bf. & Wh. Rocks, S. C. R. I. Reds, Bf. Min.	3.50	6.50	12	55.00	110
White Wyandottes, Buff Orpingtons	3.75	6.75	13	57.00	115
Jersey Black Giants	5.00	9.50	18	87.50	170
Assorted Odds and Ends Mixed chicks	2.50	4.50	8	38.00	75
Assorted Heavy Mixed chicks	2.75	4.90	11	50.00	97

Heavy Mixed 10c. R. I. Reds 15c. Order direct or send for illustrated circular.

WOLF HATCHING & BREEDING COMPANY, Box 41, Gibsonburg, Ohio

BABY CHICKS DELIVERED TO YOU — IMMEDIATE DELIVERY

HERE: NEARLY EVERYONE RAISES Full Blooded "AMERICAN" Quality Chicks.

Write now for our new low prices. Your opportunity to get our special flock mating chicks at utility prices. Chicks shipped C. O. D. Catalogue and prices on request. 100% live arrival guaranteed. 15 breeds. Write now.

AMERICAN CHICKERIES, Box 318, GRAMPIAN, PA.

YOU NEED THIS CATALOG!

Hoytville Accredited

Big Poultry Manual Given Free to All Buyers of Chicks

Write for details. Every chick buyer should know about Hoytville Chicks. Our beautiful illustrated catalog tells all about them. Your copy sent on request. Guaranteed chicks

OHIO ACCREDITED CHICKS — ALSO BABY DUCKS

Every bird in our breeding flock is banded and a record kept. Our flocks are inspected by experts trained and authorized by Ohio Poultry Improvement Association. Find out about our guarantee plan. 18 breeds. We have limited number Chicks from this U. O. P. pedigreed stock. Write today.

HOYTVILLE ACCREDITED HATCHERY, 117 MAIN ST., HOYTVILLE, OHIO

Buy C·M·L Chicks

C. M. L. CHICKS cost no more than ordinary chicks from the average Hatchery, but our Quality is far superior. For many years we have **specialized** in Barrons. We import direct from England. 100% Live Delivery Guaranteed, Postpaid.

	25	50	100	500	1000
BARRON S. C. WHITE LEGHORNS	$3.00	$6.00	$11.00	$52.50	$100.00
BARRED & WHITE ROCKS WHITE WYANDOTTES	3.25	6.50	12.00	57.50	110.00

All stock carefully selected for size and health. C. M. L. chicks mature early and are sure to please you. Better chicks cannot be had at these low prices. Write for Free Catalog or order direct from this ad.

C. W. LONGENECKER, Box 45, ELIZABETHTOWN, PA.

BIG CHICKS FROM HIGH RECORD MATING—Prices Effective May 4

200 to 328 Egg S. C. White Leghorns. Our long experience in Breeding will prove a satisfaction to our customers at the following prices. Postpaid.

	25	50	100	500	1000
White, Brown, Buff Leghorns and Heavy Mixed	$3.50	$6.50	$12	$57.50	$ 110
Black Minorcas, Barred and White Rocks, Orpingtons	4.00	7.50	14	67.50	130
S. C. Reds, White Wyandottes, Barron Leghorns	4.50	8.50	16	77.50	150
Grapes	5.00	9.50	18	87.50	170
Light Mixed	3.00	5.50	10	47.50	90
SPECIAL PENCILED WHITE LEGHORNS	4.50	8.50	16	77.50	145

Your order will receive my special attention. Satisfaction guaranteed.

Albert Snyder, Treas. Ref. Farmers State Bank

UHL PIONEER HATCHERY & EGG FARMS, Box P, New Washington, O.

BUY EARLE CHICKS

and in late April the first day in "making poultry pay". These pure-bred quality chicks come to you from the best of parent stock bred to lay and guaranteed to please. We offer the following popular breeds and best strains at the Lowest Prices. Quality supreme.

	100	500	1,000
Leghorns and Anconas	$13.00	$62.00	$120.00
Barred and White Rocks	14.00	68.00	130.00
R. I. Reds, Orpingtons and Wyandottes	14.00	68.00	130.00
Jersey Black Giants	20.00		

References: Richland Nat'l Bank. Book today on chicks that pay. You may order direct from this Ad. or ask our literature. We ship C.O.D. or upon receipt of 10% will send 1% Post prepaid with 100% live delivery guarantee.

EARLE F. LAYSER, Prop., Richland Poultry Farm & Hatchery, P. O. Box 1, Richland, Pa.

Chicks C.O.D. $1 Down

Let us ship you our chicks, $1 with order, balance C. O. D. Our chicks are from some of Ohio's best flocks that have been carefully culled for Type, color and egg production. 100% live arrival. Prices Delivered.

	25	50	100	500	1000
S. C. White, Buff and Brown Leghorns and Anconas	$3.25	$6.00	$10.00	$47.50	$ 90.00
Rocks, Barred, White, Buff, R. I. and S. C. Reds	3.75	7.00	12.00	57.50	110.00
Buff Orpingtons, W. Wyandottes, S. L. Wyandottes and Partridge Rocks	4.25	7.75	13.00	62.50	120.00
Heavy Mixed 10c. R. I. Reds 15c. Order direct or send for illustrated circular.					

EMPIRE HATCHERY, Box 70, COLUMBUS GROVE, OHIO

HERBSTER'S QUALITY CHICKS

New Low Summer Prices

	100	500	1,000
Barred Rocks and R. I. Reds	$11.00	$52.50	$100.00
White Leghorns and Heavy Mixed	9.00	42.50	80.00

Our breeders are selected for size and egg production. Post Prepaid Safe Delivery Guaranteed. You ship C. O. D.

HERBSTER'S POULTRY FARM, Box 171, McCLURE, PENNA.

BUY EASTERN QUALITY-PLUS BABY CHICKS

BIG HATCHES MAY 28, JUNE 4-11-18-25. WE SHIP C. O. D.

	Per	50	100	500	1000
Large Barron English S. C. White Leghorns		$4.50	$ 8.50	$42.00	$80.00
Pullets, which run to 2 pounds each at		5.50	10.00	48.00	95.00
Eckel Strain White Rocks		5.50	10.00	48.00	95.00
Jones Park Strain Barred Rocks		5.50	13.00	48.00	95.00

Sent parcel post prepaid. 100% live delivery guaranteed. 10% book order. Free circular.

SHERIDAN POULTRY FARMS, Box F, SHERIDAN, PA.

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FOR GREATER PROFITS
Hatchery Chicks

CHICKS FROM JANUARY TO SEPTEMBER, 1929
Barred and White Rock, White Wyandotte, Rhode Island Reds, White Leghorns, Anconas and heavy mixed. Our flocks have been culled by Mr. Lloyd Baker a graduate of Pennsylvania State College, also having several years practical experience. Write us your wants.
L. R. WALCK HATCHERIES
Dept. G. Greencastle, Pa.

BABY CHICKS
FROM HEAVY LAYING FREE RANGE FLOCKS

	25	50	100	500	1,000
S.C.W. & Br. Leg.	$3.00	$5.50	$10.00	$47.50	$ 90
S.C. Rocks & Reds	3.50	6.50	12.00	57.50	110
S.C.Buff Orpingt'ns	3.50	6.50	12.00	57.50	110
Wh. Wyandottes	3.50	6.50	12.00	57.50	110
Assorted Chicks	2.75	4.50	8.00	37.50	70

100% prepaid safe delivery guaranteed. Order from this ad or write for circular.
J. N. NACE POULTRY FARM Richfield, Pa. Box 3.

HILL SIDE CHICKS
Will Ship C. O. D.
May Chicks as Low as 8c.
S. C. R. I. OWENS STRAIN REDS
R. C. ROCKS S. C. W. L. TANCRED and HEAVY MIXED—LIGHT MIXED WYCKOFF Strain
100% live delivery. P. P. Paid. All free range stock.
T. J. EHRENZELLER, Prop.
United Phone Box 11, McAlisterville, Pa.

BABY CHICKS Order direct from this ad and save time

	25	50	100	500	1000
Free Range Bred					
White and Brown Leghorn	$2.75	$5.25	$10	$47.50	$ 90
Anconas & Black Leghorn	2.75	3.25	10	47.50	90
White and Barred Rocks	3.25	6.25	12	57.50	110
Columb. Wyan. & R. I. Reds	3.25	6.25	12	57.50	
Heavy mixed broilers	3.00	5.75	11	52.50	
Light mixed broilers	2.25	4.25	8	38.75	75

Full count and quality guaranteed. Catalog free.
For Greater Profit Utah Poultry Farm & Hatchery,
Hatchery Chicks Box F, Port Trevorton, Penna.

Penn'a State "Supervised" **CHICKS**
Flocks inspected by officials from the Penna. Dept. of Agri. our 19th year established 1910. Get our low prices on Reds, Rocks, Leghorns and Minorcas. Member I. B. C. A. Catalogue free. THE KEYSTONE HATCHERY, (The Old Reliable Plant). Richfield, Pa.

BABY CHICKS
From Free Range Selected Flocks

Prices on	25	50	100
S. C. White Leghorns	$2.50	$4.50	$ 8.00
Barred Plymouth Rocks	3.00	5.50	10.00

Send no money just mail your order. We ship C.O.D. and guarantee live delivery of chicks.
RINGGOLD POULTRY FARM, Box 306, Mangorville, Pa.

WHITE CAMPINES
Greatest All-Year-Round Layers
Superior to Leghorns. One customer writes: "245% net profit in 5 months." Another: "A flock of 34 hens laid an average of 198 eggs in a year." Still another: "210 Leghorns had 38% production in Dec. and 53% production in Jan. while 245 White Campines had 62% production in Dec. and 70% in Jan. CATALOG FREE; stamps appreciated.
HARBOR POULTRY FARM, Box 22, Sembler, Ohio

BARRED ROCK CHICKS
A Big modern Breeding Farm and Hatchery devoted exclusively to the production of
BARRED PLYMOUTH ROCKS
MARVEL POULTRY FARM, GEORGETOWN, DEL.

BEST CHICKS YET
Ohio Accredited chicks. Every breeding bird banded. Strong, healthy and well bred flocks carefully bred for high production.
WE SHIP C. O. D. $2.00 books order. Pay the postman for your chicks when they are delivered. Illustrated catalog and price list on request. Prices reasonable. Quality high. Write today.
BLUFFTON HATCHERY, Box H, - Bluffton, O.

ValleyViewChicks

	25	50	100
Tancred Strain Wh. Leghorns	$3.25	$6.00	$11.00
S. C. W. Leghorns	2.00	3.50	10.00
R. Rocks & R. I. Reds	3.50	6.50	12.00

Heavy Mixed, $10.00; Light Mixed, $8.00
500 lots ½c less; 1,000 lots 1c less. Free range. 100% live delivery guaranteed. Circular.
VALLEY VIEW POULTRY FARM.
W. J. Ehrenseller, R. 2, McAlisterville, Pa.

LIVABLE CHICKS sent C. O. D. from our own big healthy extra heavy strains, priced right for June delivery. "Big Indian" Rose Comb Reds dark color and Pullets bred-to-lay Barred Rocks. (Reg. Penna.) $12.00 per 100. Big type Tancred S. C. White Leghorns of 200 egg breeding $9.00-100. Discount on larger lots. Free circular.
WILSONS POULTRY FARM, Nottingham, Pa.

S. C. W. Leghorns, $9.00-100. Barred Rocks, $11.00-100. White Rocks and Reds, $12.00-100. Broilers, $8.00-100. Add 2c if less than 100 lots. My chix are all from good culled stock. I pay postage. Special prices on large orders. Circular free.
JACOB NEIMOND, Box 4, McAlisterville, Pa.

Chicks, Barron Eng. Wh Leghorns 9c
White Leghorns 5c; Barred Rocks 10c; heavy mixed 9c; light 7c. Reduced on large orders. 100% guaranteed. "New Circular Free." May 20th and later delivery.
TWIN HATCHERY, McAlisterville, Pa.

Chick Prices for May deliveries. S.C. Legh'n, $9.00,-100; Barred Rocks and Reds, $11.00,-100; Heavy mixed, $10.00,-100; Light mixed, $7.00,-100. 100% live arrival guar. Cir. free.
Penn's Creek Hatchery, Selinsgrove, Pa.

BARRON and WYCKOFF STRAIN
S. C. White Leghorn chicks for May, 9 cents each; $80.00 per 1000. Prepaid and safe delivery guaranteed. Our 19th year. Circular free. $1 books order.
THE PENN'A HATCHERY, Liverpool, Pa.

LOOK!
Baby Turkeys and Hatching Eggs
Mammoth Bronze Bird Bros. strain of extra weights. White Holland. Prize winners at International, Chicago Show, Chicago, Ill.; Narragansetts, Athol's strain of prize winners; Bourbon Reds, Athol's strain of Pa. winners. Hundreds weekly. Prize right. Illustrated circular free. Catalogue free.
NABOB POULTRY FARMS, Box Z, Gambier, Ohio

Schweglers' "THOR-O-BRED" BABY CHICKS
LIVE AND LAY

OUR breeders are bred for high egg production. White, Brown and Buff Leghorns, Barred and White Rocks, R. I. Reds, Anconas, Black Minorcas, Buff Orpingtons, White Wyandottes 12c and up. 100% live delivery guaranteed. Write today for FREE CHICK BOOK.
SCHWEGLER'S HATCHERY
28 NORTHAMPTON BUFFALO, N. Y.

TAKE NOTICE 75,000 CHICKS for May Delivery

	25	50	100	500	1000
S. C. White Leghorns	$ 3.00	$5.50	$10.00	$47.50	$ 90
Barred Rocks	3.50	6.50	12.00	57.50	110
Rhode Island Reds	3.50	6.50	12.00	57.50	110
Silver Laced Wyandottes	4.00	7.50	14.00	67.50	130
Light Mixed	2.50	4.50	8.00	37.50	75
Heavy Mixed	2.75	5.00	9.00	42.50	85

From selected selected free range flocks. Hens at rival. Prepaid. Write for illustrated catalog.
THE RICHFIELD HATCHERY. Box 170, Richfield, Pa.

GREEN FOREST HUSKY CHICKS
English and Tancred Strain
JUNE AND JULY PRICES

Ship C. O. D.	25	50	100
S. C. White Leghorns	$2.50	$4.75	$ 8.00
S. C. Barred Plymouth Rocks	2.75	5.25	10.00
Mixed Chicks	2.50	4.25	8.00

Leghorn chicks are out of hens with trapnest records of 200-260 eggs. We pay parcel post and guarantee 100% good strong chicks on arrival. Free, circular.
GREEN FOREST POULTRY FARM
J. W. Amig & Son, Props. Star Route Richfield, Pa.

PENNSYLVANIA COOPERATIVE LEGHORN FARM
Breeding COCKERELS with RECORDS to 303 EGGS. PURE TANCRED-HOLLYWOOD HARON STRAINS White Leghorns. Brown and Buff Leghorns. QUALITY EXTRAORDINARY. PRICE WAY DOWN. Send C. O. D. Get our price quick.
Pennsylvania Cooperative Leghorn Farms
Box 316, Grampian, Pa.

BABY CHICKS

	25	50	100	500
Wh. Bl. Bff., and Br. Leghorns	$2.75	$5.00	$10	$40
Rocks, Reds and Wyandottes	3.50	7.00	13	61
Heavy Broilers	3.25	6.50	12	59
Light Broilers	2.75	4.50	9	39

Twenty-four page catalogue free. 19 years in business. Hogan tested flocks. Postage paid. 100% delivery.
JOHNSON'S HATCHERY, ICKESBURG, PENN'A

Navy Brand Concentrated Buttermilk
From Tuberculin Tested Cows
28 per cent milk solids, 60 per cent lactose, thick as custard with no fat or ash ingredients. Reduces sour-picking and lessens danger from coccidiosis. Increases egg production and promotes fertility and hatchability. Good for chicks, broilers and laying hens. Sold direct from the factory in barrels of about 465 lbs. Write for prices.
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Titusville, Pa.

BABY CHICKS
13 Leading Varieties—White Leghorns, Black Minorcas, Rocks, Reds, Wyandottes, Hamburgs, Speckled Sussex, Buff Orpingtons.
$9.00 per hundred and up.
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Lantz Hatchery, Tiffin, Ohio


Baby Chicks
from
High Egg Laying Flocks
11 years reliability. Satisfied customers our specialty. Prices Reasonable. Write for catalog and price list.
BUCYRUS HATCHERY CO.,
Box 415, Bucyrus, Ohio

BROILER—RAISERS
SHIPPING CRATES LOANED FREE
SHIP YOUR LIVE BROILERS and other poultry to New York's oldest Live Poultry House. Est. 1862. We are bonded commission merchants. Birds fed; returns made daily. Highest prices. Our outlet is unlimited. Inquire about us. Write for quotations, stencils, tags, shipping instructions and Holiday Calendar. Folder F-2. KRAKAUR POULTRY CO., Inc., West Washington Market, New York City.

Baby Chicks
From Free Range Selected Flocks

	25	50	100	500	1,000
White Leghorns	$2.75	$5.50	$10.00	$47.50	$90
B. Rocks & Reds	3.25	6.50	12.00	57.50	110
Light Mixed	2.50	4.50	8.00	37.50	75
Heavy Mixed	2.75	5.50	10.00	47.50	90

100% Prepaid Safe Delivery Guaranteed.
Fair View Poultry Farm, R. 3, Millerstown, Pa.

Quality Chicks at Low Prices
PRICES FOR JUNE AND LATER

Variety	100	500	1000
United Strain Leghorns	$7.50	$36.00	$70.00
Barron or Wyckoff Leghorns	8.00	37.50	75.00
Special Leghorn Wyckoff only	9.00	42.50	80.00
Barred Rocks	9.00	42.50	85.00
Mixed Chicks	7.00	34.00	65.00

L. E. STRAWSER, McAlisterville, Pa.

Chicks from Blood-Tested Stock
Pennsylvania Supervised Flocks.
Shipped C. O. D. Free Circular.
Sunnybrook Poultry Farm, New Berlin, Pa.

CHICKS Tancred strain, W. Leghorns, $8.00 per 100 from our own free range flock. Our breeders are selected for size, type and egg production. Will ship C. O. D. Circular.
Meadow View Poultry Farm, McAlisterville, Pa.

Paralysis

Several of my Leghorn pullets have become helpless. Healthy appetite, laying pullets in a day's time get so that they won't try to walk but still continue to eat and seem quite well. Some seem to have had a spasm from life with their wings. One that was stricken three weeks ago is still eating and drinking. She tries to walk now but seems to walk on her joints.
F. H. S.

PARALYSIS is a condition which may be caused by intestinal parasites, coccidiosis or acute dysentery or gastritis. It has been quite clearly demonstrated that intestinal parasites will cause paralysis. These parasites are found in the intestinal tract and even live in the tissues of the body. Associated with the trouble that is caused by the presence of the worms and their eggs in the intestinal tract, there is also a toxemia or blood poisoning. This toxemia likewise causes a paralytic condition of adult fowls. Chicks, runs between the ages of four and 12 weeks are very often susceptible to coccidiosis. They may apparently recover but later on as pullets paralysis appears as a definite result of coccidiosis.

Some investigators believe that paralysis is caused by a very definite organism which they have been unable to isolate. A great deal of work has been done on this subject but as yet definite results have been obtained. Fowls can be raised free from intestinal parasites by the containment method.

During the brooding season I would suggest that you remove the litter twice weekly until the chicks are 6 to 8 weeks of age. This together with the liberal feeding of milk should prevent any serious outbreaks of coccidiosis.
H. C. K.

Egg Eaters

I am writing to you to know what to feed my chickens to keep them from eating eggs. Some people said to feed them paper. We tried it and they still eat them eggs. We feed corn and grain of all kinds.
H. L.

THIS is a vice which is often caused when birds are improperly fed. You do not state in your letter the exact feeds which you are giving and the proportions. When birds are confined and become inactive the egg eating vice often starts. As a remedy give the birds something to do. If necessary make them scratch for the feed, darken the nests and gather the eggs frequently, perhaps four to five times daily. A good mash ration will also be of benefit in reducing this trouble. This may be composed of equal parts by weight of wheat bran, wheat middlings, corn meal, ground oats and meat scrap. The scratch grain may be composed of two pounds of corn and one of wheat.
H. C. K.

POPPY SALE

EACH year the Veterans of Foreign Wars conduct their Buddy Poppy Sale simultaneously throughout the entire country during the week of Memorial Day to raise funds for the adequate maintenance of their relief activities.

Each genuine Buddy Poppy carries a copyright green label which identifies it as the genuine handiwork of disabled and needy ex-service men. The majority are made in government hospitals through an arrangement with the United States Veterans' Bureau.

The first V. F. W. national poppy sale was held in 1922, using French poppies made by women and children of the devastated areas. The following year, with a greater demand, the organization had to resort to poppies made commercially. The present plan of manufacture was developed in 1924 in order to extend the relief afforded by the poppies to those men who were disabled and needy but still capable of this employment, and the V. F. W. Buddy Poppy factory organized, where only those handicapped by war disabilities were employed in putting together the emblems.

This original plan has expanded annually with the cumulative success of the sale, and is recognized by the U. S. Veterans' Bureau as a valuable adjunct to the occupational therapy work in the government hospitals where the Buddy Poppies are made.

"Pullets Lay at 4 months and 12 days"

says Uncle Charlie

HOW soon will your chicks be making profits?
If you are feeding Bull Brand Chick Starter Ration and B-B Growing Ration—the answer is: 4 months and 10 to 12 days.

What Poultrymen Say
Paul A. White of Horseheads, N.Y., writes: "We fed B-B Chick Feeds this season. Had pullets laying in 4 months and 11 days."
E. R. Stiles of Portland, Maine, had White Wyandottes laying at a little over 4 months on B-B Feeds.
The Moyerdale Farm of Liverpool, N. Y., fed their chicks on B-B. They started laying at 4 months and 10 days.

Bull Brand Never Fails
Complete satisfaction with B-B Starting, Growing and Laying Mashes is guaranteed to you or your money back.
Maritime Milling Co., Inc.
Buffalo, N. Y.
B-3
BULL BRAND FEEDS
DAIRY AND POULTRY

The Easy Way to Kill Lice *on* Poultry

No matter how big the flock or how heavy, only a small paint brush, a can of "Black Leaf 40" and a few minutes time for "painting" it on top of the roosts are required to rid an entire flock of body-lice. Do away with old laborious and disagreeable methods of dusting, dipping and greasing!
Paint the Roosts
Just Paint the Roosts with "Black Leaf 40"
About a half hour before fowls perch, "paint" "Black Leaf 40" on top of roosts. When fowls perch upon roosts that have been so "painted", fumes are slowly released that permeate the feathers, killing the lice. The treatment is so easy, effective and cheap that poultry owners need never be bothered by lice on their flocks. Think of the time, labor and expense this method saves! There is no individual handling of fowls. "Black Leaf 40" is sold by poultry supply stores. $1.00 treats 100 feet of roost. Ask your dealer or write us.
Tobacco By-Products & Chemical Corp. Incorporated Louisville, Ky.
Black Leaf 40
WORKS WHILE CHICKENS EAT

Save Baby Chicks

by giving them daily a few grains of Bourbon Poultry Remedy in drinking water or feed. For treatment and prevention of Diarrhoea and a tonic and conditioner in all cases strong and vigorous it is no equal. Money back if it fails to cure any disease of poultry, or to keep them healthy. Broods stay they can't raise them without it. Also cures and prevents blackhead, roup and other ills of turkeys. Half-pint 75c, pint $1.50. At druggists, or sent by mail postpaid.
BOURBON REMEDY CO., Box 5, Lexington, Ky.

HOW TO KEEP Turkeys From Dying
Valuable Turkey Book FREE

Thousands of turkey raisers lost all parts of the United States have found that Raysem takes the fight luck out of Turkey raising. Simply in a stomach and intestinal solution that is guaranteed to positively prevent blackhead. Follow our instructions, use Raysem and you will have turkeys. Large trial size $1.00 postpaid; medium size $2.50; large size $5.00 C. O. D. If you don't get back if you are not satisfied. Order now.
EVERARD-MORRIS CO.
526 Rice St., St. Paul, Minn.


This oak log 16 feet long cut 1,045 board feet of lumber. The log was cut from a forest of virgin timber on the Turk farm in Marshall county, W. Va. It took three teams of horses to haul it where it could be loaded on a truck. William E. Foster hauled this log a distance of 16 miles on a truck to a lumber yard at Moundsville, W. Va. C. B. Allman.

A Fair Field and No Favor

I READ with interest the statement of the Secretary of Agriculture to the House and Senate Committees and the editor's comment thereon. From your standpoint your designation of this as "a strange mixture of fact and fallacy" is fair and logical.

But it all depends on one's viewpoint. You, I take it, are an individualist. So am I. You believe in the doctrine of laissez faire. So do I. You uphold free competition. So do I.

But to have free competition we must have equal rights and opportunities, a fair field and no favor. There must be no special privilege. This is self-evident. Equal rights and special privilege cannot exist together. Each is a denial of the other.

But there is another school of economic thought, the socialistic. The Secretary's statement is sound from a socialistic standpoint. It is a splendid argument for socialism. I never read a much better or cleaner one. And he has a sympathetic audience. Socialism is gaining and socialistic thought is spreading not, perhaps, nominally but actually. The whole trend of legislation for the last quarter of a century or more has been toward a centralized, paternalistic government. It is growing ever more popular. That is what farmers want, what they ask for, what their leaders demand. They may not know it, but they are socialists.

And why not? Our government is largely socialistic now. Laissez faire will not work. Free competition cannot function, for there is no freedom. Special privilege holds and controls the economic field and blocks the way.

The Present Order

I am for justice, for, freedom, for equal economic rights. If we can have that I am content. If we cannot have it I am for socialism. I certainly am not for the destructive, hodge podge, mongrel system now prevailing in which a favored few are exempt from the law of competition, being granted special privileges coupled with government power and authority to exercise them by levying tribute upon the masses, while the rest of us thus plundered and handicapped are left wholly and unreservedly to our fate under unrestricted competition.

Some are able to protect themselves, in a measure, by combining as labor by their unions; but farmers cannot well combine, have no cover, shelter or protection whatever and it is always open season for them. So it is no wonder that we are gradually being driven to bay and killed off by the big game guns. An economic system cannot endure half individualistic and half socialistic any more than the Union could have endured half slave and half free.

I repeat, why should not the government take care of the farmers. It takes care of the public utility corporations by granting them the paramount right of the people, the right of eminent domain, the right to take private property for public purposes. This great power is presumably to be exercised by these corporations for the public good, but is actually exercised by them for their immense private profit. Are these corporations patriotic societies or philanthropic associations. Even so what right have they with government power and authority?

Special Privileges

It gives to banks the constitutional power to issue money that they may profit by the issue of currency and control its volume as their interests may dictate. How this affects farmers was illustrated by the sharp deflation after the world war bringing untold misery, distress and bankruptcy to agriculture.

It bestows upon manufacturers the constitutional power to lay import duties and excises to enable them to squeeze along and amass millions. The government magnanimously lays the duties and imports as directed and the manufacturers joyously collect them and stow them away in their pants pockets. A real protective tariff yields no revenue to the government. It all goes to protected interests.

The government, through our system of law tenure, upholds and fosters law monopoly. Those in possession of our nation's resources, our coal, iron, copper, oil and timber lands, our manufacturing, dwelling, commercial and power sites and transportation terminals are thus protected in their exploitation of the people. Everything that enters into the life of man comes from the land and they who own and monopolize the land hold the people who must live upon and from that land in utter subjection. The monopoly is close and enduring. The deeds read "to have and to hold to them *the* grantees, their heirs and assigns for ever." Thus all the rest of the human race are excluded. [illegible]

Thus we have monopoly of public utilities, bank monopoly (better known as the "money power"), tariff monopoly and land monopoly, all by them favored and given the only equal rights are consigned to ruinous low prices and keen competition. I knocked into a cocked hat.

It is what we have now is the best we can have or all we can have then bring on agony, soup-lines and hurrahs in the cities? I am with the Secretary of Agriculture and for his plans. If the government can do all it has done and is doing for these special interests in heaven's name let it be decent and fair and do something for the farmer.

As I see it the way out is the abolition of all special privilege and the restoration to all men of their natural, God-given right to be the bestowal of equal privileges upon all through socialism. I prefer the former but as things are now going it will probably be the latter.
R. W. Stiffey.

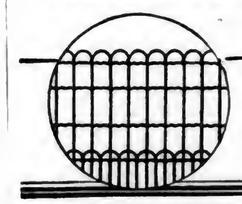


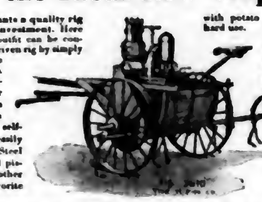
EVERY farm lawn can *and should* be made a beauty spot. The ample space and good soil available make possible a home setting that will be the envy of your less fortunate friends in town.

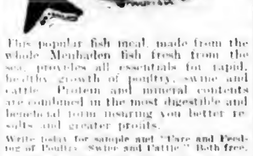
The first and absolute essential to a beautiful farm lawn is a good lawn fence, one that is not only ornamental, but effectively keeps out chickens and all farm animals. This need is fulfilled perfectly with the beautiful—

Pittsburgh Lawn Fence

IT IS the one distinctive lawn fence on the market. Made of heavy wires throughout, heavily Super-Zinced, and lasts at least 75% longer than fences made with twisted strands of lighter wires. The rigid construction keeps the fence permanently neat and erect, and the close spacing effectively bars all animals. The Pittsburgh line of fences also includes hinge-joint and stiff-stay types of farm and poultry fence, all made of special formula steel and Super-Zinced for extra durability. By our process the zinc is so closely bonded to the steel that it will not flake or peel. The "Pittsburgh" brand is a guarantee of satisfaction. Send the coupon for catalogue and name of nearest dealer.


Pittsburgh Steel Co.
710 Union Trust Bldg. Pittsburgh, Penna.
Gentlemen:
Please send me, FREE, your new fence catalogue, farm record book and name of nearest dealer.
Name _____
Address _____

Here is the Ideal Row Crop Sprayer—
For the man who wants a quality rig without too big an investment. Here is a traction driven outfit can be converted into a power driven rig by simply adding the engine wherever desired. A high quality, 100 gallon, high pressure four row rig—easily drawn by two horses. Has a completely enclosed self-oiling pump that is easily accessible—Stainless Steel cylinders, valves, and piston rods. Many other quality features. A favorite with potato growers who give their rigs hard use.

We make a complete line of orchard and crop sprayers, including 2, 3, 4, 6, and 8-row crop sprayer—power and traction driven rigs—combination orchard and crop rigs. Only Mount Gilead Sprayers have fully enclosed pumps, welded steel frames, and vital pump parts of Stainless Steel. Don't buy any type of sprayer before seeing our catalog and prices.
Write for complete description and prices
THE HYDRAULIC PRESS MANUFACTURING CO.
805 LINCOLN AVENUE MOUNT GILEAD, OHIO

Send for Free Sample of
Struven's Fish Meal
and Free Booklet on Feeding

This popular fish meal made from the whole Menhaden fish fresh from the sea, provides all essentials for rapid, healthy growth of poultry, swine and cattle. Protein and mineral contents are combined in the most digestible and beneficial form insuring you better results and greater profits.
Write today for sample and "Care and Feeding of Poultry, Swine and Cattle" Both free.
CHAS. M. STRUVEN & CO.
114-116 N. Frederick St., Baltimore, Md.

BARRON LEGHORN CHICKS
From Large Type Barron English S. C. White Leghorns. Hens weigh up to 7 pounds. Extra quality chicks from large selected stock at $9 per 100—$42 per 500—$80 per 1000. Hatches June 4 11 18 25 or any week in July. Chicks 100% live arrival 24/7. 100% loss replaced. Circular free.
ROBERT L. CLAUSER, Box N Kleinfeltersville, Pa.

PENN'A CHICKS FOR MAY
Have vim and vigor—hatched by men with 18 years experience. Prepaid and 100 per cent live delivery guaranteed. S. C. White and Brown Leghorns, 9c each; Rocks 10c; Reds and Minorcas, 12c; Heavy mixed, 8c; Light breeds, 8c; $70.00 per 1,000. Circular free.
THE PENNA. HATCHERY, Liverpool, Pa.

Klines' Barred Rocks
Healthy stock, Penna. State College pedigree. Strong chicks guar. Summer prices. $12-100, $110-1,000; $500, 5,000.
S. W. KLINE, Box 20, Middlecreek, Pa.

TANCRED STRAIN WHITE LEGHORNS **CHIX $8.50 per 100**
$80.00 per 500. Shipped C. O. D.
Hatches weekly. Prompt delivery. Order from ads.
BROOKSIDE POULTRY FARM, McAlisterville, Pa.

TIGHT BINDING TEXT CUT OFF

THE YOUNG PEOPLE

4-H Members Honored

THE pick of the nation's farm boys and girls will receive recognition from Secretary of Agriculture Arthur M. Hyde in a program broadcast from the National Press Club Auditorium in Washington, D. C., June 22, through a nation-wide network of stations associated with the National Broadcasting Company.

At least one hundred and sixty boys and girls—four outstanding 4-H Club boys and girls from each of forty states in which organized farm club work is carried on by the state agricultural college—will gather in Washington for the third annual national club camp sponsored by the extension division of the United States Department of Agriculture. Secretary Hyde will address them, and honor medals will be presented personally to the members on this occasion which culminates the week of recreation, tours and inspirational lectures arranged for the campers. Others of the more than 700,000 members will listen in at home. Music by the United States Marine Band, orchestra and singing by the host of farm juniors will feature the program.

Watches for Bus

My dog "Tricks", I think, is the most intelligent dog I ever saw. He is very much like a human being.

He is a rat terrier, two years old, and is brown and white. "Tricks", the name which we gave him, was decided very good for his playfulness and sly ways.

He also is very intelligent in playing games, among the games he plays are "hide-and-go-seek, tag and other games."

When we play "tag" he plays with us, he runs after us; when he gets us he expects us to run after him. If we play "hide-and-go-seek" he plays with us. After he plays awhile he gets tired, then he runs where we go and gives us up.

We like it very much for him to bark for his food. He also goes to the pump and waits for us to look at him, then he barks, as much as to say, "Give me a drink of water."

When we are getting ready for school he sometimes plays tricks on us, sometimes he hides our gloves and rubbers. Some mornings we have a few lessons to do; he watches the bus for us, and when he sees it coming he barks.

For all "Tricks'" faults we like him very much, and play with him nearly every free minute. Bernice Beyer.

Montgomery county, Pa.

Jack, the Mule

THE most intelligent animal I have ever known was an old mule.

My father started farming with him. Father bought Jack from a farmer who had a large family of children who had been allowed to drive and ride him even when small tots.

He was very gentle and when I was between three and four years old I made a play fellow of him. Once when he had been turned loose to come to the barn, he stopped where the teams were often tied, and Mother found me with both arms clasped around and my head leaned against his front leg. She snapped my picture and it was printed in The Stockman and Farmer.

Jack soon learned to know I wanted to play with him and would walk up close to a lumber pile so I could reach to get a piece of twine or tar rope to be his halter rope.

Then wherever I chose to lead he would follow, first to water, then to a nibble of grass, sometimes to the corn field to watch the men.

Jack was an earlier riser than I and would come to the yard gate and wait for me mornings, when he didn't have to go in the team.

Once in a while he would get tired of following me so long and would trot off to the meadow and when I would go for him he would throw his ears back and pretend to kick with both feet, lifting them only about six inches off the ground. Never did he step on me or hurt me in any way and after he was too old to work we still took good care of him the rest of his life.

Elna L. Forwood

Howard county, Md.

WHERE ARE THE GIRLS?

OUR prize drawings on this page, with one exception, have been submitted by boys. Perhaps this just means that our girls don't know much about fishing, rather than the fact that the boys are better artists.

Our new contest "When the Dog Caught a Skunk" is open to everybody and we are expecting some good cartoons.

"If I were Teacher I Would——" —but you are to finish the tale. Three prizes for each contest which closes June 1st.

There were so many interesting stories about our pets that it was hard for the Young People's editor to make a decision. The three prize winning letters will be published next week but we knew you would want to read some of the others too and you will find them on this page.

Fisherman's Luck

By Our Artists



Prize-winners who submitted these drawings are—first column: W. E. Larkin, Chester county, Pa.; Aaron Hoffeditz, Franklin county, Pa.; Frank Hartl, Bucks county, Pa.; Edgar Arnold Thompson, Butler county Pa.

Second column: Leonard West, Armstrong county, Pa.; Robert W. McLean, Carbon county, Pa.; Faith Dederick, Crawford county, Pa.; Fred Pollock, Mifflin county, Pa., and John Gall, Erie county, Pa.

Takes His Cap

LAST summer we had a colt. She was the most intelligent animal I ever saw. When I would go down to the pasture she would come and greet me. She would give me her foot to shake. One day a big fly lit on her ear. She took her hoof and brushed it off. When I would sit down she would take my cap off and give it to me. Edward H. Fitzwater.

Garrett county, Md.

LAST WEEK'S PUZZLES

Dates: ... together, docks, piano, wasp, ... cat, coconuts, nightshade, dogwood, ... Wedding Jew, Ragged Robin, ... water plant.

HOW WISE ARE YOU?

1. ... 2. On head; 3—Away from the ... 4. Against the wall; 5—White. ... 6. ... on a slip of paper.

For the Little Folks

The Story of Two Violets

By MRS M K MAMMEL

(Continued from last week)

They ... a long time on ... and finally were ... into a still noisier and hotter ... When ... kind boy at last ... the basket on purple violets on a table ... cool shaded room the little flowers ... shaken and weary, so weary they ... and ... to each other, but ... struck ... far into the protecting ... as they could. Soon, cool ... trickled over them and ... clear down to their roots.

"The poor little things wanted a drink, mother," said the boy. "See how it freshens them up."

He picked up the basket and carried it to a far corner of the room.

"Look, sister, see what we've brought you from the woods."

"Oh, aren't they beautiful," exclaimed a little girl's voice, and a soft little hand reached up to touch them.

The little violets peeped timidly over the edge of the basket and saw a pale, beautiful child lying back in a chair with a poor crippled leg stretched out before her. She had the brightest eyes and the cheerfullest face they had ever seen. Little Miss Violet and Sister Violet suddenly felt very happy that they had been chosen to help this little girl, who couldn't walk, to pass away the long, weary hours.

Hard to Decide

OUR last contest brought in such an avalanche of letters that it took a long time to open each envelope and make the decision for prizes. Papers, you know, were to be graded not only for the greatest number of words, but for neatness and correct spelling.

Those who will receive prizes are: Georgie Morgan, 1,158 words; Verna Mae Gruber, 1,050; Emma Girardi, Carl Mont, Naomi Allender, Lois Ruser and Mary Dewee.

Then we want to give honorable mention to those who worked so hard and sent in such neat papers with over 1,000 words: Luella R. Sander, Jason Koontz, Bertha Goepsen, Olive Traugh, Grace Keller, Ruth Trostle, Jimmie Taylor, James Myers, Mabel C. Shirk, Marie Kim, Grace Speer, Earl Horne, Clara Massey, Viola Wiggins, Dorsey Kessling, Max E. Butchey, Raymond Reed, Willie Lemmon, Ary, Lavon Bevan, Walter ... Eleanor L. Neidig, Margaret Fox, ... K. Hauk, James Carroll, Edna ... Reva Pratt, Esta V. Smith, Mary ... son, Arvilla Myers, Evelyn Velma ... Cracken, Latham Miller, Ada Mae ... Dorothy Brantner, Ruby McCullough, Roger Gwin, Geraldine Smith, Melvin ... Hess and Helen J. Reesler.

Even though you didn't win a prize this time, I'm sure you will all be good sports and try the next contest—and maybe you will be more successful.

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1. King's Lynn, England: Photo shows what is called the most famous—and one of the largest—sheep markets in the world—photographed during a recent auction.

2. Robert Maynard Hutchins, whose appointment as president of the University of Chicago was announced April 25. Although he is but 30 years old, the new president has had extensive experience as an administrator, teacher and research worker. At the time of his election to the presidency of Chicago University he was dean of the Yale Law School. Mr. Hutchins assumes the office at the University on July 1.

3. Roosevelt Field, Long Island, N. Y.: Photo shows Miss Elinor Smith, 17 years old, waving to the crowd of thousands, just after she landed here after establishing a new women's flight endurance record—26 hours 21 minutes 32 seconds—over four hours better than that of Mrs. McPhetridge of Los Angeles. The plucky girl flew a Bellanca cabin monoplane.

4. Some of Uncle Sam's sailors in the Philippines buy native pillows and prepare to take it easy. Photo shows three of the crew of the U. S. S. Pittsburgh on shore leave at Cebu, P. I., photographed with some native pillow-peddlers.

5. The U. S. S. Pensacola, newest of the Navy's fighting fleet, was launched at the Brooklyn Navy Yard by Mrs. Josephine Knowles Seligman, of Roslyn, L. I., whose native city is Pensacola, Fla.

Charles Francis Adams, Secretary of the Navy; James J. Davis, Secretary of Labor, and William Green, President of the American Federation of Labor, who drove the first rivet in the keel, together with numerous other state and city dignitaries were in attendance.

The Pensacola will mount ten eight-inch guns, four anti-aircraft guns and two double torpedo tubes. She will also be equipped with two catapults for launching airplanes.

6. South India holds great Hindu festival. Photo shows the Annual Mylapore Car Festival. The demonstration was held near the temple of Sri Kabaleesawarar during Mail Week.

TIGHT BINDING TEXT CUT OFF

The Little Girl was taken Ill . . .

A Bell System Advertisement



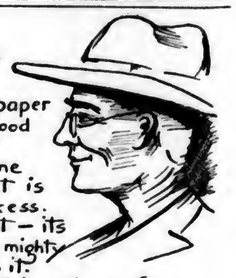
A FARMER'S family in Pennsylvania had guests visiting them from the city—a man, his wife and a young daughter. Suddenly the little girl was taken with a high fever. They rushed to the telephone and called the doctor six miles away. He jumped into his car and came immediately. It developed that if there had been no telephone at hand her life in all probability would have been lost.

The telephone is a dependable aid in any emergency. It summons help in time of fire, accident or sickness. It calls the repair man in case of breakdown. It is never too tired to run errands to neighboring towns.

And whenever there is something to sell, telephone calls will find the best prices. A New York farmer got $20 more on 2000 pounds of hogs by telephoning two other dealers after one had made him an offer. A Colorado farmer got $300 more on a car of cattle by telephoning the Denver market. The telephone pays for itself many times over.

The modern farm home has a telephone.

NEIGHBOR DAVE SAYS—



"They's one thing 'bout flypaper you got t' admire — its good for just one thing, an' it sticks to it. Doin' one thing well an' stickin' to it is one o' th' secrets o' success. Leadclad fence is like that — its just got one job — bein' a mighty good fence, an' it sticks to it. Sticks to it years after th' ordinary fence has rusted, an' blowed away, for th' thick heavy coat o' pure lead is seven times as much as th' coatin' on ordinary fence. Th' life of a fence is in th' coat that keeps th' weather out. I'll tell you about it — just address NEIGHBOR DAVE, P.S. — Write tonight." at The Leadclad Wire Co., Moundsville, W. Va.

PLOWS ROCKY, HILLY LAND

NO BREAK PINS — NO RELEASE HITCHES — NO SIDE HILL HITCHES NECESSARY

Hitch the 16-inch single bottom Ferguson WHEEL-LESS Plow to your Fordson and go into any field that you can plow with horses. We guarantee to plow it, no matter how rocky or hilly it is, or money back! You can't lose. Number can we because the Ferguson always makes good! A great corn borer plow.

Delivered Direct from Factory to You—Price reduced from $98.00 to $69.75 — you save $18.25! Plow shipped complete, set up, ready to put in field. Backed by our guarantee. Order now. Only a limited number will be sold. Write for free booklet "The Turning Point in Power Farming."

FERGUSON-SHERMAN, Inc., P.O. Box F, Evansville, Ind.

Information on 2-Gang WHEEL-LESS Plows on request.

NOW $69.75 (SAVE $18.25) easy terms

Genuine Ferguson WHEEL-LESS PLOW



A Plowing Demonstration

By R. U. BLASINGAME

TO instruct the thirty students taking the power farming course in the Department of Farm Machinery at State College, a demonstration of tractor plowing and other farm operations was conducted on the Pennsylvania State College farm at State College April 23rd. The following manufacturers were represented: Advance-Rumely, DoAll tractor pulling a P & O plow. This tractor can be converted into a two-cylinder by removing the front wheels and attaching the extra cylinder. Fordson pulling the Fordson tractor plow. International tractors were used, Titan and the 15-20. The Farmall tractor, which is now currently known as the [illegible] the country is a general purpose tractor. The Caterpillar Tractor Company had three tractors on the field, a new 10, which is a two-cylinder just recently put on the market, and two Twenty tractors. Two of the 20's were equipped with hand and [illegible] gear lifts. At the end of the field a power clutch raises the plow [illegible] and revolves it on an axis while the tractor is being turned around. In this way the ground is always thrown in one direction thereby avoiding dead furrows and back furrows. This machine has also gained much favor as a 3-furrow tractor plow owing to the fact that it always throws the furrows [illegible] hill.

All Day

The demonstration was carried on all during the day. The students were divided into groups and were given a tractor to the charge of each. They operated them all. In the afternoon, after lunch, Mr. Brown of the International Harvester Company, Mr. Nutting of the Wizard Plow Company, and Mr. Keim of the Oliver Corporation Company talked on plows and their adjustments. The photographic [illegible] to be taken when Mr. Barnes was giving his talk. He stepped on the walking plow and showed the students the location of the center line of draft and asked them to figure out the correct length of the center line of a 14-inch two-horse walking plow. After considerable figuring and guessing the students came to the right answer, which is 38 inches.

Mr. Barnes showed where an eveners for two horses pulling a 14-inch plow should be 38 inches long. He says that he has traveled many miles to correct troubles in plows and sometimes when he arrives at the farm he finds the farmer using an evener which is very often too long, which causes the plow to run incorrectly.

The Killefer System

Immediately following the talks on plows Mr. Kimble of the Killefer Manufacturing Corporation talked on Killefer tools and the Killefer system of [illegible] subsoiling, discing and cover crop disks. This system was developed in California and has gradually been coming eastward. The company has its [illegible] branch house at Peoria, Illinois and now has representatives in Pennsylvania.

Several [illegible] growers in Pennsylvania are using this system of soil cultivation and they feel that it has [illegible] considerable merit. Two of the well-known fruit growers now employing the Killefer system are Dr. E. L. Nixon and Lincoln Wise.

One [illegible] new tool which was used in the demonstration was the Neutang plow manufactured by the Ward Plow Company at Batavia, New York. The Neutang plow consists of two [illegible] one right hand and the other a left hand. At the end of the furrow [illegible] raises the plow [illegible] and revolves it on an axis while the tractor is being turned around. In this way the ground is always thrown in one direction thereby avoiding dead furrows and back furrows. This machine has also gained much favor as a 3-furrow tractor plow owing to the fact that it always throws the furrows [illegible] hill.

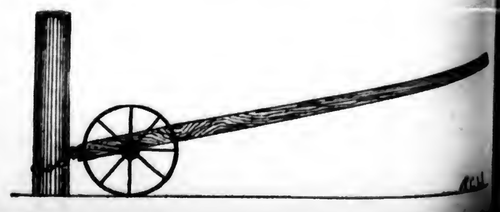
A Practical Post Puller

AN annual spring job is the removal of fences. This consists of replacing broken off or weak posts, driving the most pulled posts back into the ground, putting on new strands of wire, and replacing the old wire. Perhaps during the winter one has planned to change some part of his fence and this work consists partly of removing driven posts, which is a job in itself.

To help in that part of a fence job one farmer has constructed a wheel lever that is extremely portable and with which one man can do the work of two. It was made of two discarded lumber truck wheels, an old [illegible] tongue, and a short piece of log chain with a hook on one end. All of these parts were obtained from around the farm.

The tongue was mounted on the lumber trucks, the wheels being fastened to a short axle of pipe. The piece of log chain was bolted to the short end of the lever. This device is very efficient. —A. C. Wilson.

The superlative of salesmanship seems to be represented by the man who stands on a city street corner with a ten-cent store and sells a ten-cent article for fifteen cents.—Stuff and Nonsense.



CARRYING AMERICA'S FARM PRODUCTS TO THE WORLD



SAILING regularly from Atlantic Coast, and Gulf ports for all parts of the world, the fast freight services operated for the United States Shipping Board provide an ever available outlet for America's surplus farm products.

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Penetrating, soothing and healing—an unexcelled liniment, counter-irritant or blister, for veterinary and human ailments. Large bottle—$2.00. All druggists or direct.

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FARM LOANS under Government Plan . . . OHIO-PA. JOINT STOCK LAND BANK 304 Telford Building Harrisburg, Pa.

In Pocahontas County

By W. D. ZINN



ONE of my real pleasures of late years is going back to counties that I used to know so well and renewing old acquaintances. My last visit to Pocahontas county, was 28 years ago at what is now called Hillsboro. It was then known as Academy. Those were delightful days and I well remember how delighted I was to see it and to mingle with the good citizens of that productive valley.

I have returned to that county many times since I made my first visit and I never failed to see beauty that I had not seen before. The good roads have opened up communities that were hardly known before they were built. As you drive through these counties [illegible] you are impressed with the well kept homes and good barns. The country has the air of prosperity and happiness. Some of the valleys are very rich and the hills are covered with [illegible]

A Lot of Sheep

When I told the county agent Mr. Oliver that the citizens of Pendleton county claimed that they raised more sheep and lambs and wool than any county in the state he got on his ear and said: "We have more sheep in Pocahontas county than any other county in West Virginia." Well, I am not going to decide the question. Let Pocahontas and Pendleton settle this one for themselves. There are a lot of sheep in both counties and they are good ones, for in both counties I found farmers who told me that their sheep ought to be better and that they ought to improve. I am glad that they feel that way for it is true.

The shepherds in Pocahontas county need to grow more legume hay. I know of no better place in the state for the production of alfalfa and no other legume to equal to this as feed for sheep. They have millions of tons of [illegible] rock on their farms or nearby. They have mostly well drained soils and they need to go after alfalfa much harder than they have ever done before. Many of those farmers live 15 and 20 miles from the railroad and it costs a lot to haul lime or tar.

Lamb Improvement

We [illegible] two pig-fat meetings while in the county, one at Hunterville and one at Dunmore. We had the [illegible] of the county agent and [illegible] much interest in the meetings. [illegible] W. Wilson [illegible] the meetings [illegible] the county agent [illegible] the meetings [illegible] the farmers [illegible] the stock [illegible] the sheep [illegible] the wool [illegible] the [illegible] [illegible] treatment for stock [illegible] between breeding time and the [illegible] the sheep in the fall. He advised the scrub ram and he said he [illegible] to treat their flocks better. These lambs improvement [illegible] [illegible] [illegible] fix it the state.

While in the county I was the guest of S. Gibson and his interesting family and were treated royally by them. Mr. Gibson is a farmer who has come up from the bottom by his own efforts. He has a fine farm and keeps it well stocked with good sheep and cattle. I also enjoyed the hospitality of C. M. Sharp and his good wife. They have one of the most productive farms in the valley and are interested in making it still better.

Threshes 37,000 bushels in 31 days!



Mr. Fremont T. Green, of Wolf Point, Montana, writes: "I threshed 37,000 bushels of grain in 31 days, or 312 hours, and my 28 x 44 Rumely Steel Thresher gave no trouble at all. There were no delays on account of it, and it did exceptionally good work in all grains."

* * *

There are three good reasons why one of the various sizes of Rumely Steel Threshers will quickly pay for itself on almost any size farm.

First, it enables you to thresh when grain and weather are just right, thus assuring a high grade and top prices, which sometimes mean 15 to 20 cents more a bushel.

Second, it enables you to thresh early, permitting you to proceed with other farm work.

Third, it gets all the grain, and prevents waste into the strawstack.

The Rumely Steel Thresher has won fame as a grain saver because of the well known Rumely Continuous-Flow Method. It handles a big volume of straw, while ribbed concaves, a flat wing beater, thorough agitation, and special lifting fingers are tossing, shaking, tearing open and raking the straw, thus separating every kernel of grain.

Now is the time to prepare for threshing. Decide to avoid losses in grade and from dockage this year . . . by threshing your own grain.

Write for all the facts, using the handy coupon. Advance-Rumely Thresher Co., Inc., La Porte, Indiana.

Columbus, Ohio Harrisburg, Pa. Bateman Bros., Malvern, Pa.

ADVANCE-RUMELY
Power Farming Machinery

The Rumely Line includes OilPull Tractors, DoAll All-Job Tractors, Grain and Rice Threshers, Combine Harvesters, Husker-Shredders, Alfalfa and Clover Hullers, Bean and Pea Hullers, Silo Fillers, Corn Shellers and Winch Tractors.

Advance-Rumely Thresher Co., Inc.
Dept. AY, La Porte, Indiana
Serviced through 30 Branches and Warehouses

Gentlemen: Please send literature describing the Rumely Steel Thresher.

Name .....

Address .....

"Don't kill 'em chase 'em"

Crows pulled one hill, and said: "Good night!" writes C. H. Barrett, Thetford Center, Vt.

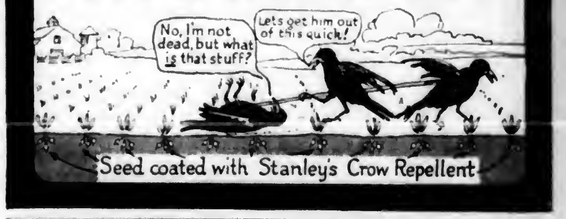
Hundreds of corn-growers write us letters like these: "Had no corn pulled that I could discover." F. G. Vincent, W. Tisbury, Mass.

And we can give you scores and scores of more letters all saying the same thing. Why do you worry about your corn crop, when for $1.00 you can save from 1 to 2 acres of corn for every bushel of seed you plant? "Money Back" guarantee, based on a 20-year record of performance. Large can, enough for 2 lbs. of seed corn (8 to 10 acres) $1.50. Half-sized can, $1.00. If your hardware, drug, or seed store doesn't have it in stock, order direct. Address: Cedar Hill Formulae Co., Box 500-K New Britain, Conn.



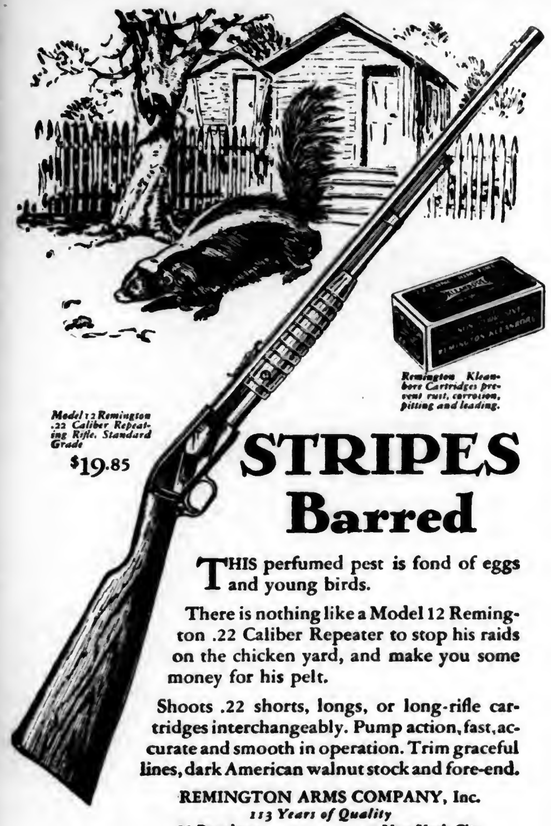
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STANLEY'S CROW REPELLENT



THE ADVERTISEMENTS in Pennsylvania Farmer contain information that is valuable and important. Read them and when answering them mention Pennsylvania Farmer. It will help us and help you.

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Remington Kleanbore Cartridges prevent rust, corrosion, pitting and leading.

Model 12 Remington .22 Caliber Repeating Rifle. Standard Grade $19.85

STRIPES Barred

THIS perfumed pest is fond of eggs and young birds.

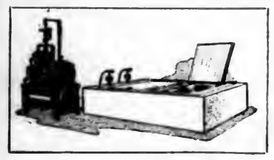
There is nothing like a Model 12 Remington .22 Caliber Repeater to stop his raids on the chicken yard, and make you some money for his pelt.

Shoots .22 shorts, longs, or long-rifle cartridges interchangeably. Pump action, fast, accurate and smooth in operation. Trim graceful lines, dark American walnut stock and fore-end.

REMINGTON ARMS COMPANY, Inc.
113 Years of Quality
25 Broadway New York City

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Dairy Farm Refrigeration

Hand-operated or automatic plants, with either electric or gas-engine drive; all types, using cold water tank or brine system, with or without tubular milk cooler, as desired; makes ice when required.

Write Frick Company

TOO LATE *for some Seeding perhaps* **BUT** *just the* **RIGHT TIME FOR SOYBEANS**

You can plant Soybeans anytime from now until July 1st. Come to Soybeans Headquarters for your seed. Scott's Soybeans are unexcelled for quality and prices are reasonable because of large sales volume.

Write today for prices and Scott's Seed Guide.

O. M. SCOTT & SONS CO., Dept. 407, Marysville, Ohio

SILOS Special Direct from Factory Prices
FAMOUS AUTOMATIC-TAKE-UP-HOOPS
Buy the Best and Pay Less. Order Now and Save Money.
INTERNATIONAL SILO CO., Box H, LINESVILLE, PA.

Farm and Dairy

By L. W. LIGHTY

I WATCHED a pair of wrens select a home on our porch. The male was perched on a limb at a safe distance, while the female went over the inside and outside of the house and then purred that it was all right. Both departed and soon the male came with bug sticks for the foundation of the nest. Evolution may be untrue, but that pair surely acted like folks.

• • •

THE next chicken on the program is as interesting as the first to me. The first dyed me bloodred April 9th, and many dyeds followed all the month. Lilac King, Olive Queen, Dwarf Early, Josephine, The Bride, to April bloomers. The next tall one, Kochia, opened April 30th, the richest purple of them all. May is the great rose month but not the first or May the first peony opens—not it. It is Deutzia. June is the month when the peony in its great glory.

• • •

THE busy home maker may not have the time for a lot of flowers that take continuous care and attention and must be seeded, planted and transplanted often, but there are many others, like peonies, aquilegia, pyrethrum, tritoma, Oriental poppy, climbing roses in many hundreds of varieties have been in our garden for a dozen years with no attention except to keep the weeds out and they promise a greater crop of bloom this year than ever before. These with the hardy phlox give bloom from spring frost to autumn frost in unmatched and endless variety of colors, forms and shapes.

Some varieties of crocus, narcissus, tulips and hyacinth also have been blooming ten years with no attention, but many have disappeared. There are flowers for pleasure and flowers for work. Mine are the pleasure kind, as I find plenty of work at other matters.

• • •

FOLKS not on the farm see many advantages we on the farm never see. What a great enlightenment would follow if we farmers could borrow the city man's spectacles and the professor would borrow our felt boots and overalls.

• • •

SEVERAL farm women folks have written me advocating the abolition of the barnyard. They object to the barnyard odor in the air and on their husbands. What do the men think and say about this matter? Are the women right as usual?

In the farm home transpires semi-annually an uproar called house-cleaning, and I am assured that as long as men folks live there it is needful. But I often see barns that have got no renovation since they were built. Woman scores one here surely.

• • •

TAKE a few minutes in the morning as you start work to inspect the implement and if needed another few minutes to tighten a nut or a rivet or adjust a bearing and save days of delay and a heavy repair bill later.

• • •

WHEN the new celery-cabbage Wong Bok was introduced I urged folks to try it. Many have written me saying it is fine, but one man said it is fit only for cow feed. Well, I never recommended it for cow feed.

• • •

WHAT a calamity it would be if no one could be found to sit on the "Board" to relieve the farmers of $1,000 a month and all expenses! But "statesmen" are very self-sacrificing and doubtless a few will make the sacrifice.

• • •

PASTURE grasses "well grown" often are not eaten for the same reason that rye straw is refused because it is unpalatable and indigestible. It is like folks eating bran and making the kids eat spinach.

When cows begin to root and nose the feed about in the manger and waste there surely is something wrong with the feed. Next you know the milk check will be lame. See to it the cows eat their ration with a relish.

• • •

WHEN I read an article laying down a set of hard and fast rules and a lot of planting and seeding dates I know the writer is no farmer. Salt the advice heavily.

Our grandmothers sowed and planted by the almanac signs and had to hustle to get the work done before the "good sign" was past. That is one reason why they got their work done promptly and made a success in their work.

Today most of us do our planting and sowing between automobile trips and by the time much of it is done I am still pretty strong in favor of the old way. Modern farm relief may help out maybe.

• • •

I NOTE that still thousands of gardens are loaded with the shovel. Horses in a few hours would do the work which the good wife spends many hard days on at the plot were properly laid out. Garden spading is a rank superstition on the farm.

This is not a speech through my hat. I absolutely stopped spading the garden 40 years ago and have had a larger and better garden ever since. Also I had no excuse to hunt up a second wife.

Sweet Clover

Please let me know if there is any danger to cows on sweet clover pasture or fed with sweet clover hay.

V. G. R.

THERE appears to be no danger to cows on sweet clover pasture. There is some danger if they are fed liberally and constantly on sweet clover hay.

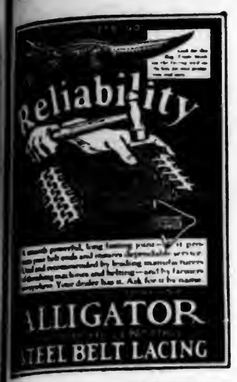
The North Dakota Experiment Station found outbreaks of a new malady on 75 farms. This disease was characterized by the loss of clotting power of the blood. Another case of this sort occurred on the farm of Charles Ash at Woodburn, Indiana. He started feeding his cattle equal quantities of sweet clover hay and silage in November, 1926. In January one animal died to death when it was dehorned, then a number of cattle developed stiff, jerky gaits and numerous swellings appeared along their flanks, backs and necks. Seven out of a herd of eleven were lost.

The Illinois Experiment Station in its 41st Annual Report, recently published, tells about a special study of the moulds on sweet clover that are known to cause a decrease in the clotting power of the blood. The writers state that there is no danger from the diseases mentioned above as long as good, clean, well-preserved hay is fed. They further indicate that it is not entirely safe to feed mouldy sweet clover hay even in small amounts with other good feeds.

It has been found that this disease rarely develops within a month from the time sweet clover hay is fed, but it has been suggested that alternating sweet clover hay every two weeks with some other roughage seems to be the best way of avoiding trouble.

The Illinois investigators do not consider it entirely safe to feed mouldy sweet clover hay even when alternated with good hays every ten to fifteen days, although such practice considerably lessens the danger of serious losses as compared with feeding mouldy sweet clover hay alone.

As far as sweet clover pasture is concerned, no trouble has been reported from its use except in cases where cows have been permitted to graze on tall, rank-growing clover. Sweet clover should, therefore, be pastured early enough to prevent the development of a rank growth. A. A. Borland.



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lightens work
saves time
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Makes Perfect Ensilage
Endures for a Lifetime

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UNADILLA SILO COMPANY
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150 GALS. MORE MILK PER COW!



Rib Stone Concrete Stave Silos soon pay their cost. No shrinking, swelling, rotting, rusting, drying and sour silage. Rib-Stone silos are of strength & construction done perfectly. Guaranteed tight for all normal purposes by one of America's oldest and most responsible concrete companies. Guaranteed against defects in material and workmanship. Guaranteed against defects in material and workmanship. Guaranteed against defects in material and workmanship

Farmer's Business Letter

PECULIARLY, the marketing of all classes of meat animals was later in April. The net production of meats during the month is indicated in the federal slaughter figures that have just become available. They cover all inspected slaughter in the United States. For the month, beef slaughter showed an increase of 0.3 per cent over April last year, calves a 5 per cent increase, sheep and lambs a 21.0 per cent increase and hogs a 9.1 per cent increase. That April was much out of line with the rest of the year is indicated by the totals for the first four months of the year. Here we find a decrease of 2.5 per cent in cattle slaughter, compared with the same four months last year, 3.3 per cent decrease in calves, 11.2 per cent decrease in hogs, and an increase of 2.3 per cent in the slaughter of sheep and lambs. How it happened that the month was marked by such large decreases in all classes of stock is something of an enigma to the trade.

Hogs Jolted Again

The hog market got another jolt this week, the average price for the week at $11.05, showing a loss of 25 cents below the close it was under that, compared to a week ago. Receipts were ample, eleven markets having 445,000, against 506,000 last week and 503,000 the same week last year.

Hogs have been cutting at a loss to some time, packers have big stocks not all besprized, slaughter in April was large and there was further accumulation of provisions. This combination of conditions has served to introduce a decidedly weak tone into the market. There can be no doubt but that packers would like to see the hog market at least a dollar higher to let them out on their inventories, but conditions are against them. Where a good year was predicted for them, now there is much doubt. May is well along and usually there is a spirt in marketing in June.

Small packer competition is giving the big packers a worry run for their money. Some of those western "interior" packers have been invading the Chicago market with their fresh and cured products and capturing a lot of trade.

The five big packers in the hog market today are two big packers, small packers, shippers and interior packers whose are located on terminal markets. There may be a fight on between any two of them at any given time. Drivers play a big part in their maneuvers. Thus it is difficult to do more than guess at what is happening in the trade from day to day. This situation explains the wide daily fluctuations, but of course has nothing to do with the general downward swing of the market during the past two weeks. It will take light runs to put back into the market the strength it has lost.

Lambs Improve

Lambs closed the week a little higher, but sheep, particularly ewes, were lower. The lamb market improved all week, with top shorn lambs selling at $14.90, against $16.50, for top wooled lambs last week. Most all lambs are shorn now. Receipts for the week at 76,000 were about a thousand smaller than last week, and about normal for the season.

The run this week included 40,000 California springers, against 30,000 last week and 20,000 the same week last year. The California supply is coming out earlier this year, due in part to dry weather. The run this week also included 15,500 Colorado lambs, this number comparing with 40,000 three weeks ago. The lambs are about out of this feeding section.

April marketing of sheep and lambs was large. During the month seven markets received a total of 1,040,520 head, that figure being the largest for the month on record, and comparing with a range of from 560,420 to 802,724 for April during the past nine years. According to government reports the number of sheep in the country in 1925 was 38,112,000 (census), and the estimate the first of this year was 47,171,000. It is the general observation that sheep production has been undergoing expansion the past few years. The April marketing may be the first substantial evidence of it.

The Lamb Crop

A government report on the season's lamb crop admitted an error in an earlier calculation that the springers would come later than usual. They have, in fact, come earlier.

The general average condition of the early lamb crop about May 1 this year was not as good as on May 1 last year, the lower condition in the northwestern and Pacific coast states more than offsetting the much higher condition in the southeastern states, the report said. Range and feed conditions in the western early lamb areas during April were generally unfavorable for the development of the early lambs, with the weather likewise unfavorable in many sections because of low temperatures. In the southeastern states pasture conditions during April were mixed good and in the early lambing areas of the corn belt they were above average.

Supply of early lambs in May and June at eastern and middle western markets will probably be larger than last year. The increased supplies from the southeastern states, due to the larger crop and earlier movement, are expected to offset the probable reduced supplies from California and Idaho during the months. Supplies of grass fat sheep and yearlings in May and June most likely will also probably be scarce what there was last year.

Steady Cattle Trade

Fat cattle started opened higher this week, moved at mid-week and closed about steady with a week ago. Top steers sold at $15 for both yearlings and heavies, the same as last week, and the week's average at $13.60 compared with $13.65 last week and $13.75 a year ago and $11.10 two years ago. There was a little net decline on the non-end of the market, with common cattle 25 to 50 cents lower. Receipts were moderate 47,000 head, against 47,000 last week. 47,000 the same week last year and 57,000 the same week two years ago.

Cattle receipts at the seven leading markets showed an increase over the total in April, 1928 and were also larger than in April, 1927. During the past nine years there have been five smaller April runs. The total in April this year at 653,818 compares with 628,620 in April, 1928, and with 678,450 in April, 1927. Lady fall and early winter stocker and feeder movement to the country was less than a year previous. Whether or not this generous April run means fewer cattle to come later on remains to be seen. Last year there were 666,000 cattle at seven markets in May.

Crop Report

The May crop report est mated a yield of 595,225,000 bushels of winter wheat, a lower figure than was expected. The average private estimates was 618,000,000 bushels. The harvest last year was 579,000,000 bushels, and the ten year average 540,000,000 bushels. Average abandoned was 2,758,000, or 0.4 per cent leaving 40,467,000 acres for harvest compared with 36,179,000 acres harvested last year and a ten year average of 25,243,000 acres. Abandonment last year was 25.1 per cent and the ten year average 10.5 per cent.

A rye crop of 44,567,000 bushels is suggested by the government as compared with 41,760,000 bushels harvested last year and ten year average of 34,293,000 bushels. Yield per acre is 13.8 bushels against 12.1 bushels harvested last year and an average of 13.6 bushels ten years average.

Conditions of oats in northern states is 78.7, against 87.5 last year and ten year average of 84.1. Barley 77.1 against 87.3 last year and ten year average of 84.1.

The condition of the hay crop is 87.8, against 79.1 last year and ten year average of 88.1. Stocks on farms May 1 were small, 11,126,000 tons, against 17,880,000 tons last year, and 12,807,000 tons ten year average.

Pastures presented a condition of 86.9, against 71.3 last year and 83.4 as the average.

Congested Wheat Markets

Terminal elevators are loaded with wheat everywhere and the congestion is such as it can possibly be. A report from Montreal says that there are 76 ships in that harbor unable to unload wheat and more are on the way. Crews are dismissed on arrival and the vessels left in charge of others. Elevators at the head of the Lakes are full. The cut in freight rates in the country has not helped the situation, and wheat prices have been declining steadily, other grains going down in sympathy. What is needed is a market for wheat abroad, and that will come but at what price is a worry to those who have their money invested in the cereal.

Wheat is more than 40 cents under the high time of the crop season and about 30 cents under a month ago while corn has lost about a dime in the last four weeks. The corn crop is promising and much old wheat remains to be disposed of. It is a situation that looks not bright for the producer in the near future.

Farmers' Railroad Fails

Fifty farmers, who bought the Fox & Illinois Union Electric railway operating between Yorkville and Morris, Ill., two years ago asked that their ownership of the road be nullified. A receiver has been appointed to operate the road. The railroad is 25 miles long and is said to be sold for junk in July, 1924 when the farmers on the line asserting it was then only means of outlet for grain and other goods purchased the road for $60,000. Previously the railroad had made only $8.55 above operating expenses in seven months. The farmers still need the road according to its president but the competition of the hard road and the automobile truck has robbed the line of all customers except the summer group.

Watson.

Chicago, May 11, 1929.

Proposed Tariff Rates

THE new Hawley-Smoot tariff bill was presented in the House last week. It contains important increases on sugar, corn, wool, beans, onions, tomatoes, milk, cheese, dressed meat, flax, hemp, hops, beef, pork and lamb, shingles, lumber, bricks and other commodities.

Among the items left unchanged are potatoes, nuts, rye, wheat, flour, apples, dates, fish, cattle on the hoof, white potatoes, oranges, lemons, raisins, prunes, peas, beets, including sugar beets, and tobacco.

The more important agricultural items included in the tariff are given below. Even the complete schedule would cover several pages of this paper lack of space prevents the publication here of any except the following:

Commodity	Rate	Rate Present
Raw wool, lb	34	31
Cattle, under 1,050 lbs., lb	1½	1½
Cattle over 1,050 lbs., lb	2	2
Fresh beef and veal, lb	6	2
Fresh lamb, lb	7	2
Fresh pork, lb	5½	1
Hogs, lb	2	¼
Sheep and goats, head	83	4
Heifer, lb	12	1
Dressed calf	5	2
Fresh milk, cwt	2½	1
Sour cream, milk, lb	12	5
Cheese, lb	7	5
Rice, lb	1½	½
Macaroni, vermicelli, noodles and other like articles	3½	2
Commercial meal or corn, lb	1½	1
Corn, bu	25	8
Beans, cwt	1½	1½
Peas, cwt	1½	1½
Potatoes, cwt	1½	1½
Potatoes, sweet, cwt	1½	1½
Onions, lb	½	½
Tomatoes, lb	½	½
Cucumbers, lb	½	½
Cabbage, lb	½	½
Lettuce, lb	½	½
Celery, lb	½	½
Asparagus, lb	4	2
Spinach, lb	½	½
Kale, lb	½	½
Mushrooms, lb	10	5
Olives, lb	3	2
Grapes, lb	½	½
Raisins, lb	2	1½
Prunes, lb	2	1½
Peaches, lb	1	½
Pears, lb	1	½
Plums, lb	1	½
Cherries, lb	2	1
Currants, lb	2	1
Figs, lb	2	1
Dates, lb	1	½
Pineapples, lb	1	½
Bananas, lb	1	½
Lemons, lb	1	½
Limes, lb	1	½
Oranges, lb	1	½
Grapefruit, lb	1	½
Cocoanuts, lb	1	½
Walnuts, lb	5	2
Almonds, lb	5	2
Filberts, lb	5	2
Pecans, lb	5	2
Peanuts, lb	2	1
Chestnuts, lb	2	1
Pistachios, lb	5	2
Brazils, lb	2	1
Cocoa beans, lb	1	½
Cocoa butter, lb	1	½
Cocoa paste, lb	1	½
Cocoa powder, lb	1	½
Chocolate, lb	5	2
Sweet chocolate, lb	5	2
Milk chocolate, lb	5	2
Confectionery, lb	5	2
Soup containing meat, lb	5	2
Soup not containing meat, lb	5	2
Linseed oil, 4 lbs. make a gallon	2.1	1
Common bedding ticks, $1.25 per lb.	12	5
Shingles, 20" or taller, m	2.5	1
Poultry, lb	6	3
Boxes, chicken, ea	9	3
Dead poultry, chickens, ducks, geese and guineas	6	3
Turkeys	10	3
Eggs in shell, doz	10	3
Eggs, preserved, lb	9	3
Eggs, dried, lb	15	3
Corn	25	8
Rice, lbs	1½	½
Wheat, bu	42	30
Buckwheat, cwt	35	1
Barley	30	1
Oats	15	1
Apples, bu	25	1
Apples, dried, lb	2½	1
Berries, lb	1½	1
Berries, dried, lb	2½	1
Berries, preserved	25% ad val.	1
Cherries, lb	2	1
Walnuts, lb	5	2
Walnuts, shelled, lb	15	5
Grass seeds:		
Alfalfa, lb	3	1
Alsike clover, lb	3	1
Crimson clover	3	1
Red clover	3	1
White clover	3	1
Sweet clover	3	1
Orchard grass	3	1
Timothy	3	1
Hairy vetch	3	1
Mushrooms, dried or prepared	20% ad val.	10% ad val.
Peppers, canned or otherwise, lb.	2½	1
Squash, lb	1	½
Maple sugar, lb	7½	2

To help cane growers, a duty of 2 cents per pound has been placed on raw sugar testing by the manufacturer a 96 degree centrifugal. The duty on other classes of this character is only one-half of one cent per gallon. Cane growers have asked for a duty on Black strap molasses of ten cents per gallon.

The proposed decrease includes a reduction of three cents a pound on raw sugar against a present rate of 2.2 cents, and 1.76 cents on Cuban raw sugar, against a present cut rate of 1.76 cents.

The refined world sugar rate recommended is 5.5 cents a pound, against a present duty of 2.2 cents, and 1.81 cents on Cuban refined, against 1.81 cents at present. The exportation of Philippine sugar would be curtailed.

No change was made in the present rate. Among important commodities remain on the free list are:

Hides, leather, boots and shoes, staple cotton, gut, turpentine, rosin and some dealers believed that prices had reached the bottom. Receipts during the first four days of the week were much heavier than last week, and despite the unfavorable weather conditions in producing sections indications show that production is increasing rapidly. There was a larger percentage of culls than heavier in the receipts.

The egg market in Philadelphia was less active but prices held steady. Conditions generally showed but little change from last week. Nearby white eggs were irregular in quality but prices held steady at 32½@33c per dozen. Desirable mostly mixed colors brought 31@32c. A few storage packed cars sold at 32c but stock showing weight and uniform grading was held at 31@31½.

Fancy selected nearby hennery white and brown eggs were firm on the New York market with brown eggs in particularly good demand. The average prices obtained during the week for hennery white eggs was from 33½@34c per dozen. Receipts continued light as compared with last year but heavier shipments are expected when weather conditions become more settled. Nearby white eggs ranged from 28@29c per dozen, browns from 31@32c and mixed colors from 28@31½c.

The New York **dressed poultry** market was steady with light receipts from both nearby and western sections. Fowl sold at 30@31c per pound according to weight and quality, broilers brought 47@55c and chickens 26@32. Live poultry prices showed but little change. Trading was rather slow with increased receipts of broilers. Leghorn broilers were quoted at 25@28c. Red broilers at 35@45c and Rocks at 45@50c. Leghorn and colored fowl were quoted at 45@50c.

W. R. W.

WEEKLY WOOL MARKET REVIEW

Boston, May 10. Practically no improvement has been reported on the wool market during the past week, says the U. S. Department of Agriculture Market News Service. Prices on some types have shown a weakening tendency. During the early part of the week, dealers had numerous inquiries from manufacturers on 56s and 58s, 60s strictly combing wools, but no sales of any volume were closed. Some of the new early western original bag wools have arrived on the market but no activity on these wools has as yet been reported.

Prices on fleece wools are about steady, with those quoted for the previous week. Scattered sales were reported on the 64s and finer delaines at prices in the range of 40@46c, in the grease, but the volume was only moderate. Inquiries were more numerous early in the week on the 56s and 58s, 60s strictly combing wools and sales were restricted to moderate quantities. The 48s, 50s and lower grades were slow.

Domestic Wool Quotations
Grease Basis, Ohio and Similar

64s, 70s, 80s, (fine) strictly combing	40@41c
64s, 70s, 80s, (fine) French combing	37c
64, 70s, 80s, (fine) clothing	35@36c
58s, 60s, (¼-blood) strictly combing	43@46c
58s, 60s, (¼-blood) French combing	42c
58s, 60s (¼-blood) clothing	40@41c
50s, (⅜-blood) strictly combing	46c
50s, (⅜-blood) clothing	43c
48s, 50s, (¼-blood) strictly combing	45c
48s 50s, (¼-blood) clothing	43c
46s, (low ¼-blood) strictly combing	42@43c
36s, 40s, 44s, (common and braid)	40c

Produce Market Review

THE potato market following two weeks of firm and advancing prices developed considerable weakness in practically all sections of the country. This condition affected both the new and the old crop. There were a number of reasons for the weakness. Some of these were increased shipments of new potatoes, the beginning of the shipping season in South Carolina and the fact that the demand in the cities was not sufficient to keep supplies closely cleared.

Dealers worked carefully to avoid accumulations and lowered their prices to encourage more free buying, but in spite of these things truck holdings became heavy and it was evident that the price level was too high. The weather is affected not only by actual or concrete conditions such as supplies but also by the belief on the part of buyers and sellers. It is sometimes all really impossible to state the reason for an advance in a decline in prices. Often it is practical to point out some of the things which have an influence.

Pennsylvania round whites sold at $1.25 to $1.35 per 120-pound sack in Philadelphia during the latter part of the week compared with $1.50 to $1.60 last week. Part of the drop was due to the weaker market and another share to the poorer quality of the offerings. This is indicated by the fact that Maine Green Mountains contained to sell at $2.10 per 120-pound sack. Florida Spaulding Rose sold at good prices and brought mostly $6.75 per barrel, while last week prices were quoted ranging around $7 to $7.50.

Asparagus.—Receipts of asparagus from Maryland, New Jersey, Pennsylvania and Delaware were lighter during the latter part of the week and the market improved. Earlier in the week liberal receipts with a considerable proportion of white stock rendered the market weaker. Weather conditions were largely responsible for the lighter receipts since in this section we have had one rainy and day alternated with a cool, cool, rainy day and that does not develop good asparagus.

Winds have been high and in sections where soils are light they have dried off quickly after the rains and the wind and blowing sand have caused much crooked and irregular shaped grass to be offered. In spite of the adverse conditions there has been a larger percentage of green asparagus on the market than last year and the grading and packing has shown an improvement. This is particularly true with the New Jersey offerings.

One interesting feature is that Pennsylvania asparagus has not brought its usual premium over stock from other sections. For the past five years Pennsylvania grass has sold at a premium of 5c to 10c per bunch, as it was the only strictly green asparagus available. This year with three other states producing green asparagus Pennsylvania has lost this advantage but its product continues to sell as high as that from the other sections.

Large green asparagus brought $3.50@4.75 per dozen with a few sales of exceptionally fine stock bringing $6.00. Medium sold at $2.75@3.50 and small at $2@2.50. Asparagus showing considerable white ranged from $1 on small sizes and culls to $3 for large.

The sweet potato market was rather quiet but prices of good stock were higher. New Jersey yellows ranged from 75c to $2.75 per bushel in New York depending upon quality and condition. In Philadelphia New Jersey yellows brought $1.25@1.50 per ½ bushel and $1.75@2.50 per bushel.

The movement of strawberries from the Eastern Shore sections to motor truck is heavy and on Saturday, Philadelphia received over 11,000 crates in this way. The market has fluctuated considerably from day to day and even during the day. On some days the early receipts brought as much as $1 more than later arrivals, but on a few occasions when buyers were expecting heavy receipts the early arrivals were lower than later arrivals, since later receipts were not as heavy as were anticipated. The consumer demand has been good since the quality of the berries has been quite satisfactory and retail prices have been rather reasonable. At the close of the week Eastern Shore berries sold at $3.50@5.50 per 32-quart crate with most sales at $4@5.

Better supplies were in excess of the demand at practically all Eastern markets and the prices dropped sharply. Prices were at the lowest point since August, 1927. Buyers lacked enthusiasm and restricted their purchases, while receivers were willing sellers and dropped prices daily in order to keep supplies cleaned up. On Saturday the market showed more firmness

LIVESTOCK

Cattle

CATTLE receipts were light on the Pittsburgh market Monday of this week, only about 20 carloads being on sale. While demand was not excessive it was sufficient to make a fairly active market with prices generally steady to stronger. Yearlings were rather scarce and the market on them was steady to a shade higher. Top on yearlings was $14.25, which was paid for a load of fat Herefords averaging 779 lbs. Other steers were about steady. One load of thick long-fed 1,240-pound steers brought $14.00, while others of quality in this class but carrying a little less finish went at $14@14.25. Bulk of the steers and yearlings went at $12@14.25, useful fleshy steers at $13.50@14. Fair light butcher steers at $13@13.50, and plain and common light kind around $12@12.50. Heifers were not numerous and sold at about steady prices, or $13.50 for a few fat ones of quality and $9.75@11.25 for common to good kind. Cows were mostly steady on the basis of $8@10 for fat cows with well finished individuals up to $11. Canners and cutters went mostly at $6@7.75. Bulls were plentiful and rather slow sale at steady prices. Best heavy bulls brought $11 with best heavy fat at $10.25 and the bulk of medium bulls at $8@10.25.

Choice grain-fed steers, 1,250 lbs. or over	$13.75@14.50
Good to choice	13.00@14.25
Fair to good do	12.00@14.00
Plain heavy steers	11.00@13.50
Choice handyweight steers	13.25@14.00
Good butcher steers, 1,050 to 1,150 lbs.	13.75@14.00
Fair to good do	13.00@13.75
Medium to fair, do	13.00@13.50
Common do	12.25@12.75
Good light butcher steers	13.50@13.75
Fair to good light steers	13.00@13.50
Common to medium, do	12.50@13.00
Inferior light steers	10.00@12.00
Heifers	Nominal
Stockers	Nominal
Choice heavy bulls	10.25@10.75
Choice handy butcher bulls	10.50@11.00
Good handy bulls	10.00@10.50
Fair to good bulls	9.75@10.25
Common to fair bulls	9.00@ 9.75
Inferior bulls	8.00@ 9.00
Choice fat heifers	13.25@13.50
Good to choice heifers	12.50@13.25
Fair to good heifers	10.50@12.00
Common to fair heifers	9.00@10.00
Choice fat cows	10.50@11.00
Good to choice fat cows	10.00@10.50
Fair to good cows	9.00@10.00
Common to fair cows	7.50@ 8.50
Canners and cutters	6.00@ 7.00
Fresh cows, calf at side	50.00@150.00

Monday's Representative Sales
Steers

No.	Wt.	Pr.	No.	Wt.	Pr.	No.	Wt.	Pr.
22	1240	14.50	1	1150	14.40	8	1207	14.25
14	1100	14.25	4	1177	14.25	23	779	14.25
17	1286	14.15	19	1193	14.10	11	1092	14.10
21	1182	14.00	21	1176	14.00	6	1077	14.00
5	1163	13.75	10	952	13.75	7	1088	13.65
3	876	13.60	3	1066	13.50	20	1027	13.40
6	941	13.40	4	910	13.25	2	910	12.85
8	1004	12.50	3	977	12.50	4	925	12.50
11	867	12.25	7	911	12.00	12	813	10.75

Hogs

Thirty carloads made up the supply of hogs. Demand was good and the market active and 10@15c higher, good handyweights going at $11.85@11.90 and heavies around $11.40@11.65. Packing sows were a quarter higher, selling at $9.50@10.25. Light hogs were on a $11.50 basis for those of quality.

Heavy wts., 250 lbs. or over	$11.40@11.65
Heavy mixed	11.85@11.90
Medium wts., 180@200 lbs.	11.85@11.90
Heavy Yorkers, 165@180 lbs.	11.85@11.90
Light Yorkers, 125@150 lbs.	11.10@11.50
Pigs, 100@100 lbs.	10.50@11.00
Roughs	9.50@10.25
Stags	7.00@ 8.50

Sheep and Lambs

Receipts of sheep and lambs amounted to 15 carloads. Lambs sold at about steady prices, but sheep were weak to lower. The bulk of good to choice lambs of last week's crop brought $14.25@14.75, while ordinary shed stock sold at $8.50 down. Most spring lambs went at $17@18.

Good to best wethers	$ 9.00@9.25
Fair to good wethers	8.50@ 9.00
Good mixed	8.00@ 8.50
Fair to good, do	6.50@ 8.00
Common to fair	5.00@ 6.50
Inferior sheep	3.00@ 4.00
Good to best lambs	14.50@14.75
Medium lambs	11.50@13.00
Culls and common	7.00@10.00
Early lambs	15.00@18.00

CHICAGO
Cattle

Chicago, May 13.—Sixteen thousand head made up the cattle supply. The market was strong with top at $15.

Common to fair yearlings	$11.50@12.50
Fair to good yearlings	12.50@13.50
Good to choice yearlings	13.50@14.25
Choice to prime yearlings	14.25@15.00
Common to fair steers	11.50@12.00
Fair to good corn-feds	12.00@13.00
Good to choice corn-feds	13.00@14.00
Choice to prime corn-feds	14.00@15.00
Common to good cows	7.75@ 9.75
Good to prime cows	9.75@12.00
Heifers, common to good	9.00@12.00
Heifers, good to prime	12.00@14.75
Canners and cutters	6.00@ 7.50
Inferior light bulls	9.00@10.00
Bologna bulls	9.00@10.00
Fair to choice butcher bulls	9.75@12.00
Stockers, common to fair	10.00@11.25
Stockers, fair to good	11.25@12.00
Stockers, good to choice	12.00@12.75
Fancy yearling stockers	12.75@13.25
Stocker and feeder heifers	
common to choice	8.75@11.00
Stocker and feeder cows	7.75@ 9.00
Feeders, common to fair	10.25@11.25
Feeders, fair to good	11.25@12.25
Feeders, good to choice	12.25@13.00
Fancy selected feeders	13.00@13.75
Milkers and springers	90.00@125.00
Common to best vealers	10.50@15.00

Hogs

With 34,000 hogs on sale the market was a dime higher. Top hogs brought $11.40.

Heavy butchers, 250 lbs. up	$10.70@11.05
Mediums, 225 to 245 lbs.	10.95@11.30
Lights, 190 to 225 lbs.	11.05@11.30
Selected, 160 to 190 lbs.	11.25@11.40
Mixed packing, 270 to 350 lbs.	9.90@10.25
Heavy packing, 350 to 500 lbs.	9.70@10.00
Roughs, 300 to 500 lbs.	9.50@ 9.65
Stags, subject 70 lbs. dockage	9.00@10.00
Pigs, best grades	9.25@10.75

Sheep

Receipts amounted to 17,000 head. Market strong.

Wethers, all ages	$ 6.00@10.50
Yearlings	7.75@12.25
Western ewes	4.75@ 7.00
Native ewes	4.25@ 7.00
Fed western lambs	12.75@14.90
Native lambs	9.00@14.75
Feeding lambs	12.00@13.75
Native spring lambs	13.00@17.00

Wooled stock $1 to $2 above foregoing quotations.

Stock Movement

	Cattle	Hogs	Sheep
Receipts this week	40,000	105,332	89,201
Last week	43,801	145,957	77,081
Year ago	43,265	115,037	78,089
Shipments this week	12,645	21,161	30,407
Last week	12,586	25,504	16,917
Year ago	12,536	27,999	28,052

Farm Conditions

Potter Co., Northern Pa.

May 7: For weeks it has rained here nearly every day. Snow fell on peat and plum trees in full bloom and the snow was followed by frosts. No gardens planted or grain sown here yet. Low lying fields too wet to be plowed. Dirt inside the worst we have had in years. The recent advance in potato prices is welcomed by Potter county growers and many potatoes are being sold at 40c per bu. M. C. Smith.

Cambria Co., Central Pa.

May 8: Cold, wet weather is delaying seeding. Flint injured by frost, but extent of damage cannot yet be determined. Considerable plowing yet to be done, especially in low ground. Nearly everybody seems to be buying baby chicks and brooders. Professional potato growers are planting the usual acreage.

S.

CONSIGNMENT SALE

Fifty Registered

HOLSTEIN CATTLE

at the

VULCANITE FARMS

on the concrete highway between Phillipsburg and Bloomsburg, one mile east of Phillipsburg,

TUESDAY, MAY 28th, 1929

Eleven O'clock Daylight Savings Time

Fresh cows, springers, heifers, heifer calves, yearling bulls and bull calves. All carefully selected from choice herds, noted for production and individual excellence. Accredited or under supervision sixty days retest. Choice consignment of about twenty-five from the high record herd of Mr. Frank H. Ussler, Stewartsville, N. J. Also high-class ones from Twin Brook Farm and Brill Farm. Other breeders are represented by some of the best. Terms of sale cash, although credit may be given if arranged with consignors before sale.

THE CONSIGNMENT SALE CO.,
Stewartsville, N. J.

CATTLE

BEECHWOOD SHORTHORNS

BULL CALVES
of Merit at Attractive Prices.
C. C. LEWIS, Point Pleasant, W. Va.

D. S. POLLED HEREFORDS.—A fine selection Cows, heifers, bulls. Come or write
CHAS. D. GILL, Millersport, Ohio

REGISTERED HEREFORD CATTLE. Breeding cows, heifers and young bulls for sale. A high class herd of Woodford breeding.
FRED J. BROWN, DuBois, Pa.

HEREFORD BULLS.—Yearling bulls, the pick of our herd. Ready for service and priced to sell.
GEO. O. COCHRAN, Dawson, Pa.

BUCK & DOE RUN VALLEY FARMS
Hereford Cattle—Poland-China Hogs—Hampshire Sheep—Draft Horses.
THE SAINT AMOUR COMPANY, Martinsville, Penna.

Angus Cattle at reasonable prices
Write BAYARD BROS., Waynesburg, Pa.

Miscellaneous Produce

Philadelphia

Eggs. Fancy, 31@32c; seconds, 28c@29c.
Butter. Creamery, tubs, 92 score, 45@47c; 90 score, 44@c.
Poultry. Fowls, 32c@38c; broilers, 26@45c; old roosters, 18c@19c; pigeons, per pr., 35c@50c.
Apples. U. S. No. 1, per bu., nearby, Baldwins, Winesaps, Paragons, $1.75@2; fancy, $2.25.
Strawberries. N. C., 32-qt. crate, Klondikes, $4@4.50.
Asparagus. N. J., Del., & Md., doz. bunch crates, green, large, $1.50@4.75.
Beans, snap, Fla., ¾ bu. hmpr., green, $1@2.50.
Cabbage. S. C., ½ bbl., hpr., 50c@75c.
Cucumbers. Fla., ⅔ bu., $2.25@2.50.
Mushrooms. Nearby, 3-lb. bskt., 80@1.25.
Lettuce. California bohrg. crates, 4 to 5 doz., $2.50@4.
Onions. Texas crate, yellow U. S. No. 1, Bermudas, $1.40@1.50; yellow boilers, $1.15.
Potatoes. Pa. round whites, per 120 lbs., $1.25@1.50; Fla., new stock, per bbl., Spaulding Rose, U. S. 1, $6.50.
Sweet potatoes. N. J. ⅝ bskt., yellow, $1.25@1.50; Md. and Delaware, yellows $1.75@2.
Tomatoes.—Fla., choice to fancy, $2.25@4.25.
Radishes.—Nearby, bu., 50@$1.
Rhubarb. Nearby bunches, 10@3c.

York

Butter.—Country, 45@50c; separator, 55@60c.
Eggs. Fresh, per doz., 29@30c.
Poultry. Hens, per lb., 27@32c; Leghorns, dressed, $1.25@1.50 each; heavy, $1.50@2.25.
Vegetables. Potatoes, 60@90c per bu.; cabbage, 3@3c per head; lettuce, 8@15c bbl.; spinach, 15@15c ¼ pk.; celery, 8@15c stalk; onions, green 5@8c bunch, asparagus, 10@12c per bunch; rhubarb, 5c bunch; radishes, 5@8c per bunch.
Apples. Per bushel, $1.50@2.75.

Strawberries. Shipped, 36@50c box.

Baltimore

Butter. Creamery tubs, 46@48c; rolls and dairy prints 34@35c; packing stock, 31@32c, delivered, 40@44½c.
Eggs. Md. Pa. nearby fresh clean offl., 29@29½c; western fresh, 29@29½c; southern 28½.
Live poultry. Hens and Pa. fls and over, 33c; small to medium, 28@32c. Leghorns, 26@29c. Guineas young, 1½ lbs or over, each 75@$1.10; roosters, 18@20c; ducks, 25@28c; pigeons pair, 35@40c; squabs, 20@30c.

New York

Butter. Creamery, higher than extras, 46@48c; extras, 43@c; firsts, 42@44c; seconds, 39@41c.
Eggs. White eggs mixed colors and state extras, 31@32c; extra firsts, 30@31c; firsts, 29@30c; seconds, 26@28c.
Poultry. Live, lc higher, fowls 32c; broilers, 38@42c; ducks, 26c; turkeys, 15@20c.

Pittsburgh

Butter.—Creamery, prints, 62 score, 49½@50c; tubs, 48½@49c; local tubs, 46@47c.
Eggs. Fresh, select white, 32@34c; brown, 30@32c; current receipts, 29@30c.
Poultry. Heavy hens, 32@34c; Leghorns, 26@31c; broilers, 43@47c; roosters, 18@20c; ducks, 30@32c; geese, 20@22c; pigeons, 40@50c per pair.
Potatoes. Per 150 lb., sack U. S. No. 1 Mich. Rurals, $1.75; Penn'a Whites, $1.75; Maine Green Mts., $2.50.
Apples Bu. bskt., U. S. No. 1 2½-in. N. Y. Baldwin, $2.25@2.35; fancy, U. S. No. 1, N. Y. Baldwin 2¼-in., $3.75@6.
Asparagus. Del. & Md., doz. bunch crates, $4.50@5.00.
Lettuce Ohio hothouse, 10-lb. basket, $1.75@1.85.
Mushrooms. Pa. 3-lb. basket, $1.25@1.50.
Cucumbers. Ohio hothouse, 2 doz., $1.75@2.00.
Spinach. Virginia and Md., bu., $1@1.25.
Kale. Va., bu. bskt., 75@90c.

CASH GRAIN

Chicago, May 13.—The following prices ruled here today: No. 2 yellow corn, 88@88½; No. 2 mixed corn, 86c; No. 2 white oats, 41@41½c; No. 3 red, [illegible]

TIGHT BINDING TEXT CUT OFF

BABY CHICKS

EXTRA QUALITY CHICKS FROM BEST breeding flocks only. Better than the average hatchery chick. Heavy laying profit producing White and Brown Leghorns, Black Minorcas, Barred and White Rocks, Reds, White Wyandottes and Assorted. $12 per hundred up. Prepaid parcel post. 100% live delivery guaranteed. 16 per chick books order. Balance C. O. D. Illustrated circular free. Pennsylvania Farms Hatchery, Inc., Box 35, Lewistown, Pa.

REAL PROFITS from quality chicks. We cull our flocks rigidly, set only large eggs. Use large, vigorous males from pedigreed flocks of from 180 to 250 egg record, which assures you the utmost in quality and livability. White, Buff, Barred Rocks and R. I. Reds, $12. Leghorns, $13. Heavy Assorted, $10 per 100. 5% discount on orders received three weeks in advance. Circular. Fairview Heights Hatchery, Blanchester, Ohio.

WHITE LEGHORN HENS and MALES now half price. Thousands of eight weeks old pullets. Also baby chicks and eggs. Trapnested, pedigreed foundation stock, egg bred 25 years. Winners at 20 egg contests. Records to 329 eggs. Catalog and special price bulletin free. 1 ship c.o.d. George B. Ferris, 980 Union, Grand Rapids, Mich.

CHERRY HILL S. C. White Leghorn Chicks from my personal supervised breeders on our farm. They are truly larger, more uniform, more profitable producers of white shelled eggs than you will find elsewhere at such reasonable prices. Circular free. Cherry Hill Poultry Farms, Wm. Nace, Prop., McAlisterville, Pa.

SPECIAL SUMMER SALE OF BREEDING Cockerels, Tancred Strain S. C. White Leghorns, Pennsylvania State Certified Flock, officially blood tested flock. Only males from trapnested 260 to 314-egg dams head our matings. Free booklet. North Poultry Farm, McAlisterville, Pa.

BABY CHICKS from 100 per cent Pure Tancred Strain direct. Maryland State certified and blood tested two and three year old hens and pedigreed sires from 300-egg matings for 15 years. Leghorns on both sides. Also breeding stock. Guaranteed quality. Waldhof Farm, Chesapeake, Maryland.

PENNSYLVANIA STATE SUPERVISED CHICKS at Utility Prices. Barred Rocks, $12.00; White Wyandottes, White Rocks, $13.00; White Leghorns, $10.00; Heavy Broilers, 25 percent Rocks, $9.50. 500 lots 50c per hundred less. Lincoln War Hatchery, Chambersburg, Pa.

CHICKS.—9c. From Pure Barred English White Leghorns. Our large, trapnested birds will produce profitable broilers and heavy winter layers. Free Catalog. Reference, Farmers State Bank. Willnecker Leghorn Farm, Box N, New Washington, Ohio.

EXTRA QUALITY.—4 breeds Leghorns, Reds, Rocks, Wyandottes. Our 100-acre Breeding Farm, system of management, equipment and experience assure you a more profitable chick. All breeds State tested. Hall Brothers, Box 61, Wallingford, Conn.

REDUCED PRICES Buchey Super Quality Chicks from inspected free range stock. Reds, White Wyandottes, White Barred Rocks, Giant Black Minorcas, Anconas White, Brown Leghorns. Booklet free. Low prices. Pure Breeds Buchey Bros. Hatchery, Dept. H, Bergton, Va.

CHICKS C. O. D.—100 Rocks or Reds, $12.00; Leghorns, $10.00; heavy mixed, $10.00; light, $8.00. Delivery guaranteed. Feeding system, raising 95% to maturity free. C. M. Lauver, Box 45, McAlisterville, Pa.

SUNNYFIELD EXTRA LARGE Single Comb Black Minorcas, exclusively. Chicks, Eggs, Stock. Extraordinary layers. Lay exceptionally large white eggs, two matings, low prices. Catalogue. Sunnyfield Minorca Farms, Grampian, Pa.

REGAL DORCAS WHITE WYANDOTTES. Eggs, Chicks, Stock. 258-Egg Record Ledger North American contest, Winter layers. Excellent type. Fine matings. Low prices. Catalogue. Keiser's White Acres, Grampian, Pa.

AMERICAN MOTTLED ANCONAS.—Record Layers. Lay large white eggs. Extra large type. Exceptional markings. Fine matings. Low prices. Catalogue. American Ancona Farms, Grampian, Pa.

BARRED ROCKS from Standard Bred trapnested stock. Eggs $8.00-$10.00, 100 Chicks $15.00-$18.00, 100, 100% delivery guaranteed. Wood Round Poultry Farm, McAlisterville, Pa.

CHICKS from heavy-laying strain Barred Rocks. 10c; Mixed, 8c. 100% arrival guaranteed. Circular free. R. J. Ehrisman, Box 59, McAlisterville.

BEAVER'S QUALITY Large Size Tancred Barron English Single Comb White Leghorn Chicks, from my own flock, $8.00 for June. E. L. Beaver, McAlisterville, Pa.

CHICKS from free range flock. Barred Rock 10c; S. C. White Leghorns, 9c; Heavy Mixed, 9c; Light, 7c. Montow Hatcheries, Selinsgrove, Pa.

KERLIN'S WHITE LEGHORNS direct, $12.00 per 100. Barred Rocks, $13.00. Spidler's Farm, Bellefonte, Pa.

DUCKLINGS and GEESE

12 MAMMOTH TOULOUSE GOOSE EGGS $6.00 postpaid. $25.00 per 50. From large old breeders. Valuable Instructions with each order. Satisfaction guaranteed. Hatch early for size. Highland Farm, Sellersville, Pa.

WHITE PEKIN DUCKS.—Eggs and ducklings reasonable. Flocks headed by mammoth 8 to 10 pound drakes. Catalog free. H. A. Souder, Sellersville, Pa.

MAMMOTH PEKIN DUCK EGGS for hatching, ten cents each delivered. J. G. Kunzi, Atglen, Pa.

PUREBRED MAMMOTH PEKIN DUCKLINGS. Free circular. Diamond Duck Farm, Upper Sandusky, Ohio.

EGGS

REDS, ROTH COMBS.—Eggs, $1.50-15; $3.00-50, postpaid. Bred to win and lay, 30th year. Circular free. Line Roberts, Tuttenham, Ohio.

GOLDEN BUFF ROCK HATCHING EGGS 15, $1.50, postpaid. William H Shaffer, Farmington, Pa.

JERSEY GIANTS.—15 eggs, $1.25, postpaid. Wiley Haugh, Irwinville, Pa.

PET STOCK

PEAFOWL, Pheasants, Bantams, Pigeons, Birds, Rabbits. Free Circular. John Haes, Bettendorf, Iowa.

LADDERS

EXTENSION LADDERS for every purpose. 12 to 60 foot, light, strong and durable. Descriptive circulars, prepaid freight prices, prompt service. Pre Patton, Jewett, Ohio.

CORN HARVESTER

RICH MAN'S CORN HARVESTER, POOR Man's Price—Only $25.00 with bundle tying attachment. Free catalog showing pictures of harvester. Process Co., Salina, Kans.



The good bone and rugged conformation of this type of mare are passed on to the mules. She weighs 1,450 pounds.

Mule Production

WHAT is a good "mule mare"? I have often been asked that question. I have often been asked what mare to breed to produce a good mule. I have been asked what mare to breed to produce a good mule. I have a strong dash of the so-called "hot blood," a big mothering-bred or saddle-bred mare. The argument is that if the mare is cold blooded the mules will inherit too much of the jack's sluggish disposition and be slow.

Out here in Kansas we have not found it so. Some of the best mules that we have ever raised in Kansas have been the result of using a big mare of quality conformation with good bone and body with an equally good jack. A poor mare of a poor jack makes a bad combination. A really good, big, drafty, salable mules are expected.

We have found that a good draft mule should as far as possible possess the same points as a good draft horse, and have bred to that end. Some truly wonderful mules have been bred here and sold at top figures, some as high as $1,000 per span, from registered Percheron and Belgian mares, mated with one of our good big prairie-bred jacks. These prices except in very rare cases are past, but good young spans of sound mules, in good hair and flesh, ready to go out and do the job are still selling at public and private sales for from $250 to $400.

The pictures tell the story. This nice blocky, heavy boned mare is the mother of the equally good pair of young mules. They are three and four years old and the owner recently refused $400 for the pair. Their sire is a big rugged jack.

The mare weighs about 1,400 and has the good feet and bone so essential to a good serviceable mule. The mules weigh about 1,300 pounds and are only in fair flesh. Mares like this one are becoming hard to find, this one is mouth mouthed and meet all the rest are likewise. A good young drafty filly is not at all common and as it takes good mares to raise good mules, good mares will become better property right along. David Grau.

Livestock Venture

MORE than one hundred years ago a group of Welsh settlers near Granville, Ohio, organized a cooperative livestock marketing venture. Their first attempt was with hogs which were driven to Sandusky, where the animals were slaughtered and packed, and the pork then shipped by boat to Montreal. An agent of the organization went along to sell the product but realized only $1.25 per hundredweight, a sum too small to yield a profit.

Many other early efforts to sell livestock cooperatively are recorded in the Bureau of Agricultural Economics, United States Department of Agriculture, in addition to the cooperative importation of breeding stock, and cooperative driving of stock to distant markets. It was not until after the turn of the twentieth century, however, that the cooperative marketing of livestock began to assume a place of real importance in the nation's livestock industry. By the year 1920, there were approximately 1,000 such associations, and on January 1, 1929, there were 2,017 associations listed by the Bureau of Agricultural Economics. It is estimated that the livestock cooperatives now handle the business of 500,000 shippers and of an annual business of approximately $600,000,000.

The cooperative method of handling livestock is not a panacea for all the ills that beset the livestock industry, but it has proved a valuable method of meeting some of the problems of marketing. Cooperative livestock marketing associations have been successful in many cases in reducing the cost of marketing, in improving the quality of the product, in securing a more stable market, and in securing a more equitable distribution of the returns from the sale of livestock. Cooperative livestock marketing associations have been successful in many cases in reducing the cost of marketing, in improving the quality of the product, in securing a more stable market, and in securing a more equitable distribution of the returns from the sale of livestock.

Tattoo Method

TATTOOING as a means of identification of livestock is not new. It has been used for many years in the United States Department of Agriculture, and is described in the Department's bulletin No. 1,000, entitled "Tattooing Livestock for Identification." The method is described as follows:

"POUNDS of lamb per ewe is the best test of the ability of a particular lamb producer," is the conclusion of a report on Minnesota's first lamb production contest. A large percentage of twins and of lambs saved was found to be a weighty matter in influencing final profits. Other things are essential, but they all center around the number and quality of lamb per ewe at market time.



Three and four-year-old mules weighing 1,350 pounds each. This kind bring $300 to $400 a pair.

Livestock Notes

FORTY-FIVE THOUSAND horses were slaughtered in Montana last year. These horses were sold to stock concentration feeding yards, and mustangs for stable work had been abandoned by ranchers.

DURING the past year 75 pure bred beef bulls were placed with range cow herds in Georgia. The bulls were southern bred. Beef cattle improvement has been handicapped in Georgia by the presence of the cattle fever tick.

RANCHMEN in Texas are reported as paying more attention to the production of feeder lambs, feeling that the lamb business is as profitable to them as wool sales.

RENEWED interest in horse breeding is noted in Maryland where exhibitors are enrolled on the state colt club's point contest. Some of this interest is due to the big-tech demonstrations and pulling contests, which always draw large crowds.

DAIRY CATTLE

Public Sale

on Thursday, May 23, 1929, at Sheboygan, W. Va., of Registered Jersey cows, heifers, bull and bull calves. Two granddaughters of Maple Lawn Jersey Farm.

MAPLE LAWN JERSEY FARM

TWO RICHLY BRED, thrifty, registered Jersey bull calves, 3 months old. Accredited herd. W. F. McSPARAN Harrisburg, Pa.

Jersey Heifer Calves For Sale. Sired by Majesty's Raleigh 262151. Herd fully accredited and tested May 30th. Write for prices. Bone Farms, Troy, Pa.

Two Guernsey Bulls Service age, from R. of M. dams, tested T. B. and Abortion. Write for prices and descriptions. WM. A. DERSTINE, Selinsgrove, Pa.

REGISTERED GUERNSEYS for sale, by one of the oldest and largest breeding herds in Pennsylvania. Herd accredited. Address BUCK HILL FARM, Pittsburgh, Pa.

GUERNSEY BULL CALVES. Two type and color bred sons of Walcroft Ruby King Jacquelyn. Dam's records 8,000 lbs. or better. Write for prices. William Baumgartel, Box 83, Bernville, Pa.

Guernsey Bulls and Heifers, registered. Tuberculin tested. Langewood Breeding Association, Rosedale Farm, R. 2, Box 63, Carnegie, Pa.

BROWN SWISS BULL CALVES or YEARLINGS. Sired by Imported Dual Purpose Bull. Dam Chanter 1 Tiredline, R. 5, Somerset, Pa.

HORSES

HORSES Registered Belgians Young stallions and mares. Write fully or better still come and see. LYTIMIDE FARM, Boerne, Texas

PERCHERONS Three-year gray stallion. One-year gray stallion. Others at reasonable prices. Write or call. Wm. A. Reid Oxford, Chester Co., Pa.

SWINE

CHESTER WHITES. Pedigreed big type boars and gilts. Immune from cholera. Mail orders only. Satisfaction guaranteed. Beech Creek, Pa.

REGISTERED IMPROVED CHESTER WHITES. Good ones. Write today, only not big to ship. Prices reasonable. GEO. N. RUPPRECHT, Mallory, R. 1

Chester White Pigs Property raised on shed floor. Choice immune. E. J. MUNCE, Chambersburg, Pa.

CHESTER WHITES. Pedigreed big type boars and sows, all ages. 12 sows farrowed this spring. Choice gilts bred for fall farrow. Immune from cholera. Prices right. GREENFIELD FARMS, Pa.

REG. SPOTTED POLANDS.—Pigs 1 month old, either sex, express paid on orders of three. Order from this ad. Pedigree with each pig. A. M. KENNEL, R. 2, Honey Brook, Pa.

BERKSHIRE PIGS, 8 weeks old, registered, $12 each. Immunized and Hogan double treated. Ready to ship. Ready for breeding. G. E. Tanger, York Springs, Pa.

—REGISTERED HAMPSHIRE PIGS— Big, growthy, registered pigs, 8 weeks old, \$12 each. Immunized and Hogan double treated. Ready to ship. Ready for breeding. G. E. Tanger, York Springs, Pa.

J. J. FAILING, R. 1, Shippensburg, Pa.

DUROCS Tall boars and gilts, bred for September and October farrow. Immune, registered, tattooed, not akin. Thorndale Farm on the Ohio, Marrietta, O.

100 Feeding Pigs Immune and Hogan double treated. Ready to ship. INDIAN CORN HOG FARM, Dublin, Pa.

O.I.C's Registered. Type, quality. Spring Pigs, both sexes. Immune. Registered. C. H. BELL, Millersburg, Pa.

POULTRY

AYLESBURY and ROUEN DUCKS. Also geese. Eggs, baby ducks from Imported stock. SHALLENBERGER FARMS, Ickesburg, Pa.

Special Fall Prices on high class breeding Toulouse Geese, Ducks and Guineas; write your wants for mating list. Pioneer Stock Farm, Tiffin, O.

KEEPING UP

Readers of Pennsylvania Farmer can't afford to miss a single issue. Watch the label date of your paper and don't let your subscription expire. We stop papers promptly at expiration unless you renew.

TURKEYS

12 MAMMOTH BRONZE TURKEY BIG postpaid. Fertility guaranteed. Instructions with each order. Breeders Highland Farm, Sellersville, Pa.

TURKEY EGGS From our Prize Mammoth Bronze, Bourbon Red, White Holland and Narragansett. Special prices. Eastern Ohio Turkey Farm, Bellaville, Ohio.

"GOLD COIN" Mammoth Bronze Turkeys from prize winners. Mrs. Samuel Owen, Ohio.

MAPLEWOOD FARM MAMMOTH BRONZE Narragansett, Bourbon Red eggs. Walter Jones, Wiedlawn, Va.

BOURBON RED TURKEY EGGS, $10 E. A. Doman, Cameron, W. Va.

SEEDS AND NURSERIES

FROSTPROOF CABBAGE and ONION Plants. Copenhagen Market, Ballhead, Wakefield, Succession, Flat Dutch, Tennessee Red, Bermuda, Yellow Globe Danvers. 500, $1.00; 1,000, $1.50; 5,000 $6.50; 10,000 $10.00 expressed. Tomato plants, 100, $1.00; 500, $4.00; 1,000, $7.00 prepaid. Frostproof Pepper and Sweet Potato plants, 100, $1.50; 500, $6.00; 1,000, $11.00 expressed. Field grown Tomato plants, 100, $1.50; 500, $5.00; 1,000, $9.00 expressed. Transplanted Tomato plants, 100, $1.50; 500, $5.00; 1,000, $8.00 prepaid. Frostproof Cabbage plants, 100, $1.50; 500, $2.50; 1,000, $4.00 prepaid. Field grown Transplanted Tomato plants, 100, $1.50; 500, $5.00; 1,000, $9.00 expressed. Frostproof Cabbage plants, 100, $1.50; 500, $2.50; 1,000, $4.00 prepaid. Frostproof Pepper and Sweet Potato plants, 100, $1.50; 500, $6.00; 1,000, $11.00 expressed. Transplanted Tomato plants, 100, $1.50; 500, $5.00; 1,000, $8.00 prepaid

CHRYSLER MOTORS
STANDARDIZED QUALITY

All branches on the same tree, all growing out of the Chrysler root principle of standardized quality

CHRYSLER IMPERIAL
CHRYSLER "75"
CHRYSLER "65"
DODGE BROTHERS SENIOR
DODGE BROTHERS SIX
DE SOTO SIX
PLYMOUTH
DODGE BROTHERS TRUCKS, BUSES *and* MOTOR COACHES
FARGO TRUCKS *and* COMMERCIAL CARS
CHRYSLER MARINE ENGINES
All Products of Chrysler Motors

Team-Work!

IN THE great forces united in Chrysler Motors there is a singleness of purpose that is at once unique and inspiring—and which explains the surpassing character of Chrysler Motors products in all price fields from the lowest to the very highest.

Between all units of Chrysler Motors there is a complete unity. It is a case of team-work in *everything*—in research, in engineering, in purchasing, in manufacturing, in financing.

The great group of Chrysler Motors properties operate as *one*—in purpose and in practice—under one central management and under the personal leadership of Walter P. Chrysler.

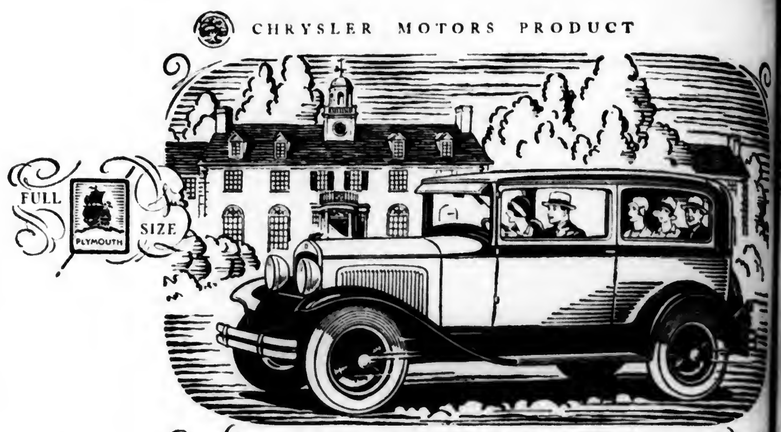
All members of the group share alike the untold advantages and savings resulting from this unity of thought and effort. There is a mutual helpfulness, for example, in the fact that there is, throughout the group, a constant interchange of ideas.

All efforts are bent toward the same goals of *higher* efficiency, *better* quality, *increased* volume, *lower* prices—to render better public service to the individual buyer of every Chrysler Motors product.

Thus, team-work plays a real part in making and keeping Chrysler Motors products incomparably ahead of all others—in performance, in style, in quality and in value.

CHRYSLER MOTORS
BETTER PUBLIC SERVICE

CHRYSLER MOTORS PRODUCT



THE FULL-SIZE TWO-DOOR SEDAN, $675

New Beauty, *New* Comfort and *New* Smoothness

Beyond comparison among low-priced cars

THE improved Plymouth is today exhibiting new standards of performance, economy, comfort and beauty entirely beyond comparison in the field of low-priced cars.

$655.00 and upwards f. o. b. factory

Chrysler engineers have created many new refinements in Plymouth's famous Chrysler "Silver-Dome" type engine. These include longer stroke and an increase in piston displacement; a heavier crankshaft; larger interchangeable bearings; larger connecting rods; a newly designed system of full-pressure lubrication. These and a number of other improvements have accomplished in the *full-size* Plymouth a remarkable type of performance, comfort and economy, heretofore unlooked for in a low-priced motor car.

Now, more than ever, is Plymouth brisk and flexible in pick-up. Now, more than ever, is Plymouth smooth and quiet through all gears and all speeds. Now, more than ever, Plymouth is a joy in performance, as it is in comfort, quality and low upkeep.

The moment you step inside the improved Plymouth you are aware of exceptional comforts. In addition to *full-size* roominess, Plymouth has self-conforming seat cushions of lounge-chair restfulness.

Plymouth's new performance is a revelation which every Plymouth dealer in America is eager to demonstrate. Everybody who has ever a passing interest in what is happening to promote automobile progress, should see this remarkable car.

Above all, we ask you to drive it, confident that you will confirm our own high opinion of its new briskness, swiftness, smoothness, comfort and economy.

Come see the improved *full-size* Plymouth in all the glory of its new Springtime coloring. Come see how it sparkles and shines in the showroom—and take one out and see how it also sparkles and shines in action.

* * *

Coupe, $655; Roadster (with rumble seat), $675; 2-Door Sedan, $675; Touring, $695; De Luxe Coupe (with rumble seat), $695; 4-Door Sedan, $695. All prices f. o. b. factory. Plymouth dealers extend the convenience of time payments.

PLYMOUTH—product of Chrysler engineering and craftsmanship—has been so named because its endurance and strength, ruggedness and freedom from limitations so accurately typify that Pilgrim band who were among the first American Colonists.

PLYMOUTH
AMERICA'S LOWEST-PRICED FULL-SIZE CAR

U. S. AGR'L EXPT STATIONS
MAY 24 1929
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PENNSYLVANIA FARMER

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Established 1877

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PENNSYLVANIA STOCKMAN *and* FARMER

May 25, 1929



Old Friends

Philadelphia ***Pittsburgh*** ***Harrisburg***

TIGHT BINDING TEXT CUT OFF

Up-to-date Farmers fight the crow with STANLEY'S CROW REPELLENT

Mix it thoroughly with the seed corn and plant it at once. No waiting for it to dry. And it positively will not cost the planter 50 cents per bushel. It won't injure the seed. Won't kill birds or animals. BUT it WILL keep them out of your fields, absolutely. It WILL save you all loss of time and expense in having to replant. It WILL let you get 4 bushels of corn where now you are lucky getting only 2. Because no crows, pheasants, larks, blackbirds, moles, gophers, chucks or squirrels will touch any seed corn that has been coated with Stanley's Crow Repellent. And thousands of corn-growers, who have been using it for years, will gladly testify that it does all we claim for it. Money back guarantee. Large cans, enough for 2 bu. of seed corn (4 to 12 acres) $1.50. Half-sized can, $1.00. If your hardware, drug or seed store doesn't have it in stock, order direct. Address Cedar Hill Formulae Co. Box 500-R New Britain, Conn.

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Farm Facts and Fancies

By MAYA AGEE

A

A Controlled Situation

We would not have the world turn back to the old way. Resting on entirely selfish plane one can see that he owes a large part of worth while things in modern life to the progress made in industry. Expert management of labor and capital making use of discoveries and invention, gives us what we would not be without on almost any farm. Dependence on hand labor in most industries gives labor a control of the situation such as it has not enjoyed. I am inclined to think that all of us are the worse off if labor remains as powerless as it was before it was the particular factor in production. As it is, we have the fact and it will continue.

Reduced Hours of Labor

I have heard men say that the solution to farm difficulties lay in the reduction of hours of labor for all farmers. They reasoned from what has occurred in industry. Labor, without overproduction, was distributed among more persons by reducing the working day from twelve hours often to eight, to seven in some cases now, and probably we are on the way to six hours.

It is a thing that does not yield to any argument, a trend made possible in all lines of production dependent chiefly on hired labor. Over against that we again set the fact that food production is due so largely to the labor of the farmer and his family that the cost of hired labor does not fix the price of the product.

It is idle to expect the individual farmer to cut his labor hours to six or eight, or any other number, when he sees himself dependent on himself and in competition with millions of others. We may say that he should join in such limitation, but the saying does not get us anywhere.

Physical Difficulties

We sometimes hear it said that the hours of labor on the farm will not be cut down to those in industry because the nature of the work would not permit. The weather, seasonal rushes, the care of livestock, and all that, make the statement sound much in a way, but the fundamental reason is that the man on his own farm will continue to do the work he is able to do, regardless of time limit, because the work needs to be done, and the money for hiring is not plentiful. He sees only that he is dependent on his efforts, and to him the obvious thing is to do what needs badly to be done. It is just as well to see the situation.

I confess to a little disappointment in the farm relief legislation. It is not

Ways of Living

I have been reading Emerson Hough's "The Covered Wagon", going as a picture of the great trek of farmers and others to the Northwest in the late forties and along with the novel have been studying an investigation made by a great public service corporation of the East into the changing methods of living as they affect the demand for heat for cooking in the home.

The contrast shown in two attitudes toward life is interesting. Those [illegible] western farmers left crowded [illegible] and they headed farther west. In the area served by this great corporation the people are moving into apartments or into single small houses in suburban areas and the bakers, the cannery, the restaurant and the laundry do a large part of the work formerly done in homes.

The picture stands today half way between those pioneers who needed [illegible] to make them comfortable and those today who pack themselves together in close quarters to save [illegible] and comfort. He is on sure [illegible] ground [illegible] while he pays in some [illegible] advantage there is [illegible] that he has the advantage. [illegible] possible for a boy it is a good thing to live where he can throw a stone as far as he is able without danger of hitting a neighbor.

Why Not Diversify?

W[illegible] complaining about [illegible] prices of farm crops. Do [illegible] and take the market for [illegible] demand? Does [illegible] a surplus of substance make poor [illegible] poor demand make [illegible] prices. Would it not be better [illegible] to put some of our efforts to each of [illegible] every kind of farm crops?

If we were to plant some corn, [illegible] potatoes, some wheat, some oats, some grass, some truck crops and have some fruit might it not be better? If we were to keep some poultry, some cows, some hogs, some horses and some sheep, it possible so as to have something to sell at different times, might we not get in on some good market and not be an entire failure? John B. Shaw



Farm Practice

By W. D. ZINN

Effect of Nitrogen

I AM wondering w[illegible] who have been [illegible] teachers in agricult[illegible] a serious mistake [illegible] the importance [illegible] on growing crops.

Yesterday I [illegible] orchard where [illegible] ammonia was [illegible] trees, applying [illegible] a tree. This application [illegible] about five weeks [illegible] under the trees is [illegible] inches higher and [illegible] while the grass [illegible] and exposed to the [illegible]

Last year, as I have previously stated, the corn in front [illegible] of the garden at one end was very yellow and much shorter than the [illegible] corn. I applied sulphate of ammonia to the yellow corn and in one week the corn at that end was just as green as the other and in three weeks it was [illegible]

We are told by our best authorities that it is not the lack of moisture or dry weather that causes our corn to turn yellow but the lack of nitrogen and I am inclined to believe they are right.

If I could show my readers that by spending a dollar for nitrogen to be applied to timothy meadows they would get three dollars in return at harvest time many of them would spend the money. Farmers have told me that they have done even better than this. Suppose my reader try this in a small way and then [illegible] know for themselves. It will not be too late for a week or two yet. The sulphate of ammonia or [illegible] should be scattered when the grass is dry. In West Virginia we [illegible] with many farmers as to get [illegible] enough to feed their stock. It is quite easy where there is a [illegible] to double the production [illegible] by a heavy application of commercial fertilizer. I mean an application of 300 pounds superphosphate and 100 pounds sulphate of ammonia or 125 pounds of nitrate of soda per acre.

• • •

When to Cut Timothy

ON page five of the Pennsylvania Farmer of April 27th Prof. R. B. Dustman of the W. Va. Experiment Station gives some figures about the contents of timothy hay at the different stages of its growth that every farmer should ponder. Dr. Dustman perhaps would not have his readers take these figures too seriously, for they might not be borne out in a feeding test. However, it looks as if we have been losing by allowing our hay to get too ripe.

There is another side to the question and that is when the hay is matured it contains more weight, in this way part of the loss in percentage of crude protein would be regained. The timothy analyzed as follows. Before heading, 10.5 per cent crude protein; early bloom, 7.2 per cent; late bloom, 6.5 per cent; nearly ripe, 5.9 per cent. If we want to feed sheep, calves or cows I am wondering whether we would not better cut our timothy twice and thus secure the greatest possible amount of protein. I am going to guess if we do we will find that a greater amount of the hay will be digested.

• • •

A Good Man Gone

A TELEPHONE message from one of his sons conveys to me the sad intelligence that my good friend Robt. Darnell of Upshur county, W. Va., is no more. I have never had a better friend. He was one of the best farmers of his county, a kind of citizen of whom friends were proud, a faithful church member and a man who was ever ready to do a kind deed. He will be greatly missed in his county, his community, his church and most of all in his home. A few more years and most of my friends will be on the Other Side.

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NESHAMINY GARDENS

By R. P. KESTER

I WAS surprised the other day on examining the peach trees to find that many of the blossoms had set fruit. Whether they will go on and make fruit remains to be seen. If they do I shall be less nervous hereafter when we have a long, cold March and April when fruit is in blossom. The cover grass sown the first of April is doing nicely. But oats, wheat and rye do well in cool, moist weather.

* * *

Another thing that is proving paradoxical is the way in which the asparagus has been producing. According to rule it should be small and of slow growth. As a matter of fact, we never had asparagus to produce so well nor grow so large. We were prevented by wet weather from getting it rolled at the usual time. No cultivation whatever has been given. Its success must be due to the fact that it is not rolled up, and that what warmth there is easily penetrates to the roots. But whatever the reason, we are cutting the finest asparagus we ever had, and have been cutting it longer for the time of year.

* * *

Very few in this section have been willing to risk planting sweet corn, even if they have the ground ready. The temperature of the soil is too low for germination and there is no sign yet (May 9) of its getting warm enough. Even in the higher altitude of Clearfield county we used to try to plant corn on the tenth of May. Seed which does not begin the normal processes of germination within a reasonable time after being put into the soil will soon rot. But cold nights and excessive evaporation tends to cool the soil.

* * *

On May first of last year, and the same date two years ago, we got 500 baby chicks at Neshaminy Gardens. Seldom if ever have I known of greater success in raising baby chicks than Albert achieved with both these lots. Each year 97 per cent were raised to maturity, and each year the pullets became good layers. As a matter of fact, the poultry business was a success from start to finish.

But we have bought no baby chicks this year. More than that the 250 pullets were sold some time ago, so that we now have no chickens at Neshaminy Gardens. And thereby hangs a tale. To satisfy those who have been interested to know how we are doing this year, I shall explain.

For five years previous to taking charge of the work on the farm two years ago, Albert, the son-in-law and father of the two little boys, was an executive employe of a telephone company with offices in Philadelphia. This year when the company re-districted the country and started a new division in Trenton, Albert was solicited to head a new department. Because of his education and his experience the offer was such that he could not afford to refuse it. We urged him to accept, and, while they still live in their new home at Neshaminy Gardens, he is not raising chickens or produce. The man who worked for us last summer and did good service is head man now, plus the advice and assistance of Mrs. Kester. As for myself, I try to keep informed, and in touch with the work, but most of my time is occupied in my various newspaper activities.

* * *

This is the second time that industry proved too strong for agriculture. Four years ago Howard, our son, was redrafted into commercial work after spending one summer at farming. This is typical of the fact that he liked farming and rural life. He, also, could not afford to retire.

This explanation is not made with any intention of parading personal or family affairs, but merely to make known to inquirers the cause of the changes that have occurred in our working forces. I find that a great many people are interested in the happenings on Neshaminy Garden acres, possibly, because I have succeeded in doing what I wished to do—get the touch a human touch.

* * *

But the changes here are typical of the changes which are occurring all through agriculture. Industry and commerce offer inducements to capable men and women greater than agriculture can muster. For at least ten years this has been going on. But in spite of the dwindling number of farm people, the total amount produced is still more than enough to supply the market at profitable prices in many lines. This is due to the better systems practiced and to the use of modern equipment. Except to the family affected, there is no disruption from the fact that people are dropping out of farming into something else.

Friendly Talks

By Edgar L. Vincent

ON ONE of my little journeys about the farm I found a pretty bird's nest right in the heart of a thorn bush. I could not help admiring the wisdom and forethought of the mother bird in choosing such a prickly place in which to lay her eggs and rear her fledglings. No enemy of bird folk would be very apt to attack that bush so set about with thorns. Even though he might be sure that the delicious morsels for which he was looking were in the nest, he would not care to run the risk of tearing his own flesh on those thorns.

Somehow I got to thinking about that thorn bush and the thoughtfulness of the bird in relation to the home life of our farms. Do you know, our boys and girls are not safe anywhere near the world these days! Wherever they go they are likely to be attacked by enemies. Some of these foes wear very fine clothes and speak a most seductive language. And often they get into our homes when we least expect it, and before we know it our dear ones have been stained, marred and it may be ruined forever.

And our boys and girls are our dearest treasures. Well may every father and every mother ask, "How can I protect my children from the enemies of their souls?" And while I do not think it would be wise or best to hedge them about with anything like the thorns which guard the hillside nest of the birds, still it surely is a fact that some how we need to safeguard our homes against the dangers that menace them.

We need to make our homes the happiest and most attractive places in all the world, and I am not sure but that would be the best means of protecting them from enemies that press in from every side. Surely a good home, a home where love holds sway, is protected from most of the evils which threaten the home life of our day. And that protection we can give our homes. Can we do anything better?

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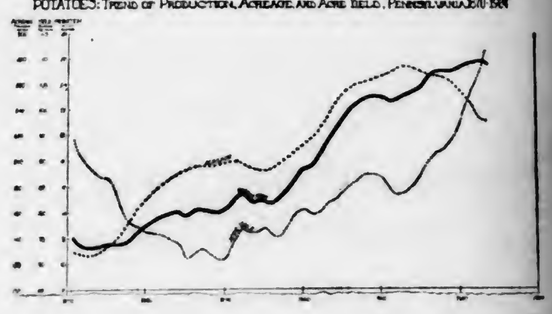
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Progress in Potato Production

POTATOES: TREND OF PRODUCTION, ACREAGE AND ACRE YIELD, PENNSYLVANIA 1870-1920



The above chart reveals many interesting points regarding the trend of potato production in Pennsylvania. Of greatest significance, perhaps, is the line showing the trend in acre yield. Between 1870 and 1885 the acre yield dropped from 94 to almost 70 bushels. Reasons given for this drop include the lack of tillable virgin soil, the depletion of fertility in the older soil, the introduction of the Colorado potato beetle and low prices. During the period from 1885 to 1910 almost 20 bushels were added to the average acre yield, probably due to the increasing use of commercial fertilizer and the partial control of insects and diseases.

The phenomenal increase in acre yield since 1913 is undoubtedly due to the efforts of county agricultural agents and others in aiding farmers. Improved cultural practices, the use of better seed, the application of more and better fertilizer and more frequent and thorough spraying have resulted. Significant is the fact that since about 1913 there has been a tendency for potato acreage to decline without a corresponding decrease in total production due to the increase in acre yield.

PENNSYLVANIA farmers have increased their average annual production of potatoes approximately 80 per cent during the past 40 years, with an increase of less than 25 per cent in acreage devoted to the crop. This accomplishment has few equals in the entire agricultural history of the Commonwealth. It spells the success of a long, difficult battle with insect pests, plant diseases and exhausted soils.

The potato situation in Pennsylvania even 30 to 40 years ago was far from encouraging. For an entire ten-year period, centering around 1880, the average acre yield was less than 70 bushels. Soils exhausted from 100 to 200 years of ceaseless cropping and the ravages of the Colorado potato beetle—a new pest for which control measures were still ineffective—were probably the outstanding reasons for this low acre yield. Low prices and increasing competition from other potato growing states undoubtedly added to the depression of the period.

Increased Yield per Acre

Allegheny, producing between four and five times as many potatoes as are being produced in the county at the present time, was the leading potato growing county 40 years ago, with Bucks second and Erie third. Lehigh, now regarded as taking the leading role, ranked seventh 40 years ago with a yield slightly above the average for the state. Only one county—Philadelphia—had an average acre yield as high in those days (average 1880 and 1890 census figures) as the average for the entire state during recent years.

In view of the foregoing, it is noteworthy that the average acre yield in the various counties for the period from 1923 to 1925 indicates that not a single county is now producing potatoes at a rate as low as the state average 40 years ago. Such a state-wide accomplishment in increasing acre yields is phenomenal. Several counties, even during the 1923-1925 period, were producing potatoes at the rate of more than 140 bushels per acre, the lowest average acre yield for a county being 83.1 bushels for Cameron.

The statistics of 40 and 80 years ago emphasize the fact that local demand was a far greater factor in limiting potato production in a given area than is the case today. The per-capita production for the entire state in the period from 1880 to 1890 was about three bushels and, except near large centers of population, the production apparently rather closely corresponded to local consumption.

Decreased Acreage in Recent Years

The per-capita production of potatoes in Pennsylvania today is approximately the same as 40 years ago, the important difference being that greater specialization has come about with the result that certain counties now produce the crop greatly in excess of local requirements.

A significant fact, and a tribute to the efficient methods of the vast majority of potato growers is that the average acre production today meets the annual food requirements of approximately ten more persons than the average output of an acre 40 years ago, assuming, of course, the same annual per-capita consumption—three bushels. Furthermore, if potatoes were being produced in Pennsylvania today at the same rate per acre as 40 years ago, it would require on the average approximately 100,000 more acres of land to produce the 25,884,000-bushel crop (average 1923-1925) than was actually required.

The relationship between potato production and population in Pennsylvania is worthy of note. During the past 15 years the increase in acre yield of potatoes alone has more than offset increasing demands due to the growth of population. In fact, the total acreage planted to potatoes has been less in the present ten-year period than in either the 1910-1920 or the 1900-1910 periods and yet the total production has been maintained very close to the rate of three bushels per capita due to the substantial increase in acre yield.

It is easy to overestimate the increasing demand for potatoes in the future due to the growth of population. An increase each year of between one and two bushels in average acre yield of potatoes in Pennsylvania will take care of the normal increase of population within the state without an increase in the average acreage planted to the crop. This means that if Pennsylvania farmers continue to increase acre yield of potatoes at the rate at which they have done so during the past 15 years, they can easily continue to meet the requirements of the consumers within the state for at least 15 years without any noticeable expansion in acreage. This assumes, of course, that local farmers do not plan an aggressive extension of their market into nearby states.

G. F. J.

◇

What Is Your Pasture Worth?

HAVE you ever tried to estimate just how much your pasture contributes to your net annual income? Here are some rather illuminating figures, based in part on farm management survey records and in part on cow-testing association figures and calculated to the basis of a twenty-cow herd.

You may be disposed to challenge some of the amounts or valuations used in this statement. Go to it. You can't hurt my feelings. Substitute your own estimates for your own farm and see if you can get away from the conclusion that most dairy farmers in the great wholesale milk producing regions get by at the end of the year by virtue of the profit derived from their pastures.

That being so, and pastures notoriously getting poorer year by year, isn't it about time to give a little serious thought to the problems of maintenance and improvement? It is pretty clearly evident that the dairy farmer wouldn't get by without his pasture unless he got a good deal higher price for milk, and it is not generally believed that he will get a materially higher price with shipment from more favorable competing regions so comparatively easy.

If you live in Southeastern Pennsylvania, probably the word "pasture" calls up a picture of well-sodded land which is more broken and hilly and probably more stony than the tillage land but otherwise essentially just as productive. That is the right concept of permanent pasture.

If you live in some of the "hardscrabble" hill counties probably the word "pasture" calls up a picture of thin-sodded, precipitous hillsides, barren ledges, hilltops where the soil is so thin that five days without rain constitute a drouth, small "onsets" of good sod spotted here and there and large areas producing little except moss, ferns, golden-rod, berry bushes and brush of one sort or another. That is not the right concept of permanent pasture.

Doubtless it was profitable in pioneer days to put sure such waste land long enough to crop out its virgin fertility; but it is not profitable to continue to pasture it after its fertility is gone or to attempt to restore and maintain its fertility.

Probably the idea that all land which is not either tillage or forest is pasture has done more to discourage attempts at pasture improvement than any other one thing. Revise that concept, abandon the hopeless areas and concentrate on the better areas and pasture improvement does not look like such a hopeless proposition. J.B.A.

Six Pasture Months

58,266 pounds milk @ $2.10		$1,223.69
Feed cost		
Use of 120 acres pasture, worth $10 per acre		
Interest on investment	$72	
Taxes	10	
Fencing	30	
Barn feeding [illegible] grain @ $50	247	349.00
Income over feed cost		$874.69

Six Winter Months

45,320 pounds milk @ $2.70		$1,223.64
Feed cost		
42,000 pounds hay @ $15	$324.00	
120,000 pounds silage @ $7.50	472.50	
20,000 pounds grain @ $55	550.00	1,346.50
Income over feed cost	Deficit	$122.86

PENNSYLVANIA FARMER

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Volume 180 No. 21 — Established 1877

WHY?

"IT would be impossible to produce a world surplus (of food products) over a series of years," says a Senator in defense of the debenture plan. If this be true, why create a subsidy to care for the surplus? If the facts be otherwise, why create a subsidy to encourage a greater surplus?

ON THE HIGHWAY

A READER asks what precautions must be observed by those who are compelled to drive their livestock to and from pasture over hard-surfaced roads. There is no legislation on the subject, nor are there any rules of the Highway Department or any court decisions. Those who live on state highways are entitled to use them for livestock. The only suggestion necessary applies alike to owners of livestock and to drivers of motor vehicles—be careful.

NOT SO BIG

WHILE some folks are talking about big business, and about making over agriculture into big units, it may be well to remember that most manufacturing establishments are still comparatively small. The average number of workers per factory in 1927 was only 44, showing an average increase of only five persons since 1914. That does not look as if everything is going into the hands of a few in manufacturing. Nor does the fact that nearly 150,000 plants employ 20 persons or less. Big agriculture is likely to be even slower in developing than is big manufacturing.

CONSUMER RESISTANCE

CONSUMER resistance is the cause of many checks in the markets for all commodities. It has been felt recently in livestock markets, particularly in lambs. Consumers balked at the price, there was no shortage of material, and the natural consequence was a bad break. Those who are counting on extremely high cattle prices this year may find that consumer resistance is figuring in the market for the bulk of the crop. Beef is bound to be dear as long as all the by-products of cattle are cheap, and somewhere consumers will consider it too dear to buy freely. Nobody knows just where such a line will be drawn but it is wise to foresee it and not expect too much.

BABIES AND SCORE CARDS

THE wide use of the score card in recent years raises a question as to the origin of this means of measuring ability, development or approach to perfection. It has been claimed that score cards were first used to judge babies, but this is denied by a western professor, who states that the credit belongs to John A. Craig who in 1890 devised a card to aid in teaching animal husbandry at the University of Wisconsin. Whoever created the score card performed a worthy service, for it is used to advantage on everything from cattle to communities, and from weeding to general intelligence, but we believe an interesting and illuminating experiment would be to apply it to the baby judges and give the babies a rest.

A FARM ADVANTAGE

ARMOUR & CO. summarize the studies made on the cost of producing beef cattle. There are no conclusions which apply generally and few which apply even to certain areas, but some of the figures given are interesting to the man who thinks of raising cattle on the farm. Among these are the percentages of calves produced in range herds. 43.4 per cent for controlled range and 33.9 per cent on the public domain. Farm herds can do a great deal better than that as a rule and better than the highest range figure, 63.7 per cent. Some of the cheap lands in farming territory should be raising something, feeder cattle and lambs for instance, which have sold at comparatively high prices for years and promise to do well in the times just ahead.

UNVEILED COWS

VISITORS at this year's National Dairy Exposition will appreciate an action recently taken by the classification committee, which is that animals are to be unblanketed each day from 9 a. m. to 5 p. m., subject to the discretion of the superintendent of the cattle department. The inability to see animals not in the show ring has been the cause of frequent caustic comment on the part of visitors, who if they express their approval of the change as warmly will delight the show management. Judging will start on Tuesday, October 15, at the Exposition's new home in St. Louis. It is not too early for dairymen in this part of the country to start planning to attend.

DEBENTURE PLAN PASSES

LAST week the Senate, with a vote of 54 to 33, passed its farm relief bill, carrying the debenture plan. Since the House passed a similar bill but without the debenture provision the matter is now in the hands of the conferrees, who are expected to eliminate it. With the demise of the equalization fee, the debenture plan appears as the most enjoyable bone of contention. It is not the heart of the farm relief proposal, but it gives legislators an opportunity to exercise their oratory for the benefit of folks at home and to air their love for the farmer to the extent of many pages in the Congressional Record. That love would look fully as sincere if it were divorced from an apparent willingness to sacrifice the chance of relief legislation for the privilege of keeping alive an issue.

WHO SHOULD SPECULATE?

THE request of a reader to show just how speculation functions in our system of marketing is not an easy one to grant in limited space. At the start we may observe that every person who buys or holds a commodity for a higher price is a speculator as is every person who agrees to deliver it later at a specified price. The farmer who holds his grain for a higher price is speculating just as surely as he who buys in hope of an advance or sells for later delivery in expectation of a decline. The differences among them are differences of degree and method, not of principle.

Now we come to a question which is fundamental in modern marketing systems. Who should do the speculating? Commercial experience has answered that question by decreeing that speculators, rather than producers, dealers, processors, manufacturers and distributors, should do it. In handling such a crop as wheat, for example, who should do the speculating? Or who should assume the risk of future prices? And who should insure against that risk? These are vital questions. Let us answer them.

Modern marketing systems are based on the experience that risks can be carried best and cheapest by those whose business it is to carry them. That is why we have insurance companies. A speculative market for wheat is a kind of informal insurance company so far as those who need insurance are concerned. It is evident that if an elevator man can sell for future delivery to a reliable buyer the grain he is buying he has insured his price. He knows just what he can pay for that grain because he knows the costs of handling it. Knowing the price he will receive, knowing the costs, he is dealing with certainties and is not speculating. And the man who deals with certainties can afford to do and actually does business on a much narrower margin than he who must make allowance for all the risks of the future. The same thing is true of the miller who buys the wheat for future use, of the baker who buys of the miller, or of any one who can take advantage of a certainty as to future supplies and costs instead of risking the many uncertainties of them. So we see that assured future prices mean economy and stability to all concerned in the business.

Somebody must carry the risks of the future, however. Somebody must be ready to buy whenever the elevator man wants to insure his future price. Somebody must be ready to sell whenever the miller or the exporter wants to insure his future price. Otherwise such insurance would be impossible, and the elevator man or the miller must have a wider margin. In other words the producer must accept less and the consumer must pay more. The speculators who are always ready to buy and to sell, and thereby permit the others to insure their future price, are the speculators, the men who make the opportunities whereby all the rest may do business with certainty and consequently with economy.

Our correspondent may decide for himself whether it is better to have speculation by comparatively few who make a business of assuming risks, insurance by the many who should avoid risks, and narrow margins in the business; or whether it is better to make every man in the business carry his own risk with the wider margin necessary to cover his risk. For without speculators and markets for "futures" every buyer or elevator, every miller or exporter, every one concerned, must take his own chances and must be paid for taking them.

So the question is not merely whether we are to have speculation or no speculation. It is who is going to speculate, the comparatively few who make a business of it or the very many who are engaged in other business.

THE DEADLY BULL

SINCE January 19th of this year we have reported 17 accidents caused by bulls, seven of them fatal. We are aware that this is not a complete list, as we are frequently reminded that not all such cases are reported. Such a reminder comes this week from a friend who sends us the account of the death of Otto Market, a farm hand working near Sauk Center, Wis., last month. Mr. Market was found in a dying condition, battered gates and other evidences of a struggle telling the story, as no one witnessed the assault. Is it ever safe to handle a bull alone?

ALTHOUGH the National Guernsey Sales at Trenton on May 16 did not quite reach the $2,000 average of last year, probably as fine a group of individuals were consigned to the sale this year as any year in the past. The 74 animals sold for $80,960, an average of $1,229.18. Fourteen bulls were sold at an average of $1,046.45.

Langwater Eastern King, a nine-year-old bull owned by Wm. H. Williams, Lyon Mountain, N. Y., topped the sales when sold to R. E. Locke of Cresco, Mich., for $7,000. This outstanding and popular individual was bought by Mr. Williams several years ago for $3,000, the record price for a Guernsey. From Pride's Ingarose, a heifer consigned by F. Harping of Wisconsin, brought the highest price of the cows when purchased by R. Saltonstal of Boston.

Pennsylvania breeders were the heaviest buyers, 12 individuals going to Pennsylvania farms. The buyers were: Dr. Thomas E. Branson, Fellowship Farms, Ancelma; Geo. C. Klauder Peiffer, M. Kennel & R. F. Huston, Downingtown; R. Austin, Newtown Square; Mrs. Henry R. Rea, Secaucus; Charles E. Patton, West Grove; B. D. Miller, Honesdale, and R. J. Austin, Newtown Square.

Nine animals were bought by the following New Jersey breeders: J. H. Stoddard, Montclair; Henry W. Leeds, Westville; Louis J. Treuman, Mantua, and John Fricken, Belle Meade.

At the Coventry-Florham Fourth Annual Sale of Guernseys the following day 48 animals brought $54,245 an average of $1,130. Langwater Emir, a bull calf consigned by John S. Ames of Massachusetts, brought top price at the sale when sold to N. J. Cooper, Centerville, Mich., at $4,125. Pennsylvania and New Jersey Guernsey breeders were again heavy buyers, 13 animals being brought to Pennsylvania and eight to New Jersey. Pennsylvania buyers were: H. E. Sheldon & Roy J. Huetsman, Pittsburgh; Benjamin Fenton, Phillipsburg; Dr. J. T. Branson, Ancelma; J. Albert Marshall, Kennett Square; Thos. W. Sterling, Buckingham Valley; R. D. Miller, Honesdale, and Mrs. Chas. Davis, Berwyn.

J. D. Stoddard, Montclair; J. L. & A. T. Loree, West Orange; H. W. Leeds, Westville; Gordon Hall, Cranford, and Alvin R. Smith, Allentown, were New Jersey buyers. Wm. A. Hill of Rockville, Md., was the only purchaser from Maryland.

Alvin R. Smith, who is a New Jersey calf club boy, bought a bull calf at the sale for a future sire for his small herd of pure-bred Guernseys. The calf, Rock Spring Cassella's Sheik, was consigned by William A. Hill of Maryland and was bought by Alvin at $250. About five years ago Alvin bought a calf from Gordon Hall, Cranford, and entered a calf club. Later he purchased Sunnybrook Paymaster, a calf club calf, for his herd sire and has been building up an enviable Guernsey herd. We can safely predict that this club boy will go far as a Guernsey breeder.

* * *

OCTOBER 1, one month earlier than usual, is the date set for the opening of the three New Jersey egg-laying contests this year. Earlier hatching and the fact that pullets from early-hatched chicks begin laying nearer October 1 than November 1 brought about this change.

Another change increases the number of pens in each entry from 13 to 15 individuals, and to count the ten high birds of the 15 entered as the pen's score for the week. Heretofore, two birds were designated as "regulars" with the result of the contests and their records constituted the pen's total irrespective of the scores made by the "reserves". Records of the latter counted only when death of a "regular" made a substitution necessary.

Replacements from those in the original entry of 15 birds cannot be made except during the first two weeks of the competition.

* * *

A SOUTH JERSEY Poultry Federation was recently organized by Atlantic and Cumberland county poultrymen in an effort to have more voice in poultry affairs of the state. It is expected that the other South Jersey poultrymen will unite with this organization so that the South Jersey poultry industry, which is about 70 per cent of the entire state, may be represented as a unit.

Plans are being made to run a tour of South Jersey poultrymen to Asbury Park for the annual meeting of the State Poultry Association in October.

* * *

THAT farm labor prices in New Jersey are high is known to all farmers in the state, but it is interesting to note that in comparison with the average prices in the United States New Jersey farmers pay 14.5 per cent higher wages.

According to figures compiled by the State Department of Agriculture, hired farm labor prices reached their peak in 1920 when they were 153 per cent higher than the pre-war period. In 1921 farm labor dropped slightly but since that time it has risen steadily and in 1927 was only 23 per cent lower than the peak year.

High priced farm labor is accounted for by the fact that New Jersey farmers must compete with the many industrial centers for their labor. This in a measure tends to even up the advantage of easy access to markets in these industrial centers.

* * *

BECAUSE "all work and no play makes Jack a dull boy" plans are being made for summer camps for 4-H Club members of Warren, Morris, Monmouth and Ocean counties. A combined camp at Columbia is being held for the Warren and Morris boys from June 25 to 29. Monmouth and Ocean county club boys will attend a joint camp at Allaire from June 30 through July 4.

* * *

THE Fourth Annual Conference of Poultry Investigators of the northeastern states was held at New Brunswick on May 16 and 17. Poultry research workers from 12 states met here each year to discuss their problems in an effort toward better coordination of poultry research.

* * *

THE New Jersey tomato crop is likely to be late this season as early plantings were damaged by storms in some sections, while rainy and unfavorable weather conditions prevented plantings in other sections. Many growers are two weeks behind and it is believed that there will not be many tomatoes moved before the first of July. The acreage is larger than last year according to reports of present estimates.

New Jersey Farm Comment

By G. W. HARRIS

AGRICULTURAL students from a number of New Jersey high schools will visit the Philadelphia fruit and vegetable market on May 23. The students will see the Pennsylvania, B. & O. and Reading Terminals to see how produce from competing sections is handled. They will visit the Dock street market where the majority of the truck receipts from nearby states is handled and it is likely that they will go through the wholesale poultry markets. This market trip is conducted to more fully acquaint the students with marketing conditions affecting the sale of farm produce. They will have the opportunity to see New Jersey produce offered and to compare its price and quality with goods from competing sections.

* * *

COLD weather and rains have delayed the white potato crop in New Jersey. Some fields show a good stand of healthy plants, while others are rather spotty. Warmer weather should bring them along in good shape. Growers report but little rot and taken generally the stand is good.

* * *

A FARMERS' market is planned for Camden in the near future. The Camden Chamber of Commerce and the state and county agricultural officials recently held a meeting to determine whether such a plan would be feasible. All indications are that such a market would be a success and would give New Jersey growers another outlet for their crops.

* * *

A NEW fast freight has been scheduled by the Central Railroad of New Jersey that will cut an hour and a half from the run from the producing sections near Bridgeton to New York. This new service will begin May 27. The new schedule will give the producers until 12:25 to load their produce and have it in Jersey City before nine o'clock. This will enable growers to pick and pack their crops in the morning and have them delivered in New York within 12 hours. This improved service it is believed will be an improvement over the motor truck system and is likely to draw many shippers.



Jacob S. Wile, a well-known potato grower of Montgomery county, Pa., believes in using power machinery to lower his labor and production costs. This year he is using a heavy sub-soiler on several acres of his 80-acres of potatoes. The heavy plow point of the tool enters about two feet into the soil and breaks up the hardpan without turning the sub-soil to the surface. The soil is torn up about every four feet so that drainage may be improved.

Here Mr. Wile is sub-soiling a low spot in a field to drain it without the need of tile or open ditches. This type of machine is comparatively new in the East but is in common use in the West.



South Jersey market tomato growers have experienced unusual weather this year for the setting of plants. Good days have been followed by cold, rainy days with high wind. Frosts made necessary resetting of several fields.

Early plants are spotted in cold frames and when ready for the field are hauled there in two-wheeled carts where they are set in trenches.

Fire Control Methods

THE Hainesport fire company and Number 4 pumper from the American, Mt. Holly, demonstrated at the farm of H. D. Cutlin at Hainesport, Burlington county, the probability of having an adequate supply of water on the farm that is readily accessible to the pumpers.

Mr. Cutlin is fortunate in having a never-failing spring and a number of drain tile outlets that open out on a low piece of ground along the hard surface road between Hainesport and Lumberton. With the idea of fire protection in mind, Mr. Cutlin built a small dam with an overflow trough extending out to within a few feet of the road.

Two pumpers threw their hose into the overflow trough and for over an hour, through four leads of hose, pumped over a thousand gallons of water a minute on an imaginary fire, adjacent to Mr. Cutlin's farm buildings.

Fire chiefs from Mt. Holly, Moorestown, Hainesport and Masonville were in attendance, to observe the test being made.

The matter of having an adequate supply of water on hand will be readily appreciated by farmers. Because of the unavoidable delay in getting a pumper at the scene of the fire, it is all the more necessary why firemen should have facilities so that they can start throwing several streams of water on a fire in as short a time as possible after they arrive. In other words if buildings and property are to be saved, a lot of water is wanted quickly. Farmers who have running water on their farms would do well to visit Mr. Cutlin's farm, located about three-quarters of a mile from Hainesport on the Lumberton Road, to see just how he is equipped for fire fighting purposes.

L. R. Smith.

MANY nearby farmers attended the better corn demonstration which was held recently on the farm of Mr. E. H. Allen between Seaford and Laurel, Del., and conducted by County Agent L. R. Snyder. This demonstration was of great importance to the farmers near Laurel due to it being in line for the county corn and product show which no doubt will be held in Laurel this year.

It was pointed out that possibly from 25 to 30 per cent of the corn crop is a total loss and that probably three-fourths of this loss is due to the ear, root and stalk rots, which in common are called "corn root rots". It is believed that this can be checked by the use of better seed corn. K. P. T.

TIGHT BINDING TEXT CUT OFF



Wheat on the Broadbalk field of the Rothamsted Station. This plot receives a complete fertilizer, including a heavy application of nitrogen. This is the 86th consecutive crop of wheat, and the yield averaged 35 bushels per acre.

Glimpses of Farming in Europe

England

By H. R. SMALLEY

TO the great majority of Americans England is the most interesting of European countries, for it was the English colonists who settled on the Atlantic Coast from Massachusetts to Georgia 200 to 300 years ago who determined to a large extent the kind of country the United States was to be. I should like to have spent a month in England, Scotland, Ireland and Wales, but had to be content with a few days in the south of England.

The one big fact that impressed itself on us is that the agriculture of England is entirely different from that of the Continent, in that England is distinctly a livestock country; in fact, 82 per cent of the improved land in Great Britain is devoted to pasture or to the production of forage crops. One is also impressed with the careful way in which pastures are handled and with the liberal fertilization that is supplied.

The high spot of our whole trip was our visit to the Rothamstead Experiment Station, where some of the experiments have been in progress since 1843. These old experiments have had a profound influence on fertilizer practice throughout the world, particularly in America. It is also interesting to recall that the first superphosphate ever manufactured was made by Sir John Lawes on his Rothamsted estate, and that he called it superphosphate and not acid phosphate.

The old continuous culture plots with wheat, barley and mangolds have demonstrated that high yields can be maintained with chemical fertilizers, provided that the three essential plant foods are supplied in sufficient quantity.

The grass plots which have been fertilized since 1856, on lands in grass 300 years, show striking differences,—1,000 pounds per acre without treatment, 2,600 pounds with minerals alone, and 4,800 pounds with minerals plus heavy nitrogen fertilizing.

We spent one whole day on a motor bus trip to Oxford, the old University town, and to Stratford-on-Avon, the home of William Shakespeare. In driving about England, or anywhere else in Europe for that matter, an American tourist is impressed by the scarcity of automobiles. There are no traffic jams or parking difficulties. I honestly believe that I have seen more good autos in many county seat towns on a Saturday afternoon than I saw in London or Paris or Berlin. Most people in Europe simply can't afford to own and run an automobile. But they certainly do ride bicycles, thousands of them.

We visited a typical livestock farm near London where we saw a fine herd of pure-bred dual-purpose Shorthorns. On this farm, which is owned and operated by a Scotchman named McIntosh, we had an opportunity to learn some of the usual fertilizing practices first hand.

Potatoes ordinarily receive 800 to 1,000 pounds per acre of fertilizing materials equal to a 5-10-5 analysis, but many successful commercial growers use a ton to the acre of 5-7-10. Sugar beets are fertilized with about a ton to the acre of 5-7-8; turnips and swedes receive 800 pounds per acre of 3-12-6, and mangels 800 pounds of 0-8-6 at planting and a top-dressing of 100 to 200 pounds of nitrate of soda. Pastures are usually given a fall application of dissolved bone, basic slag, or superphosphate and potash. The amounts vary greatly, but the total will average 500 to 700 pounds per acre. Some farmers apply only phosphate.

The new system of pasture management, involving the use of minerals plus heavy nitrogen applications and rotating the pastures, is still in the demonstration stage but is gaining in favor with British farmers. The plan is being pushed vigorously by the nitrogen producers and promises to increase greatly the carrying capacity of pastures that are already far ahead of our own here in the United States. Under the new system the usual application of phosphate and potash fertilizers is made in the fall and followed during the next spring and summer with about four applications of 100 to 150 pounds per acre of sulphate of ammonia or other nitrogen carrier. The pastures are divided into six or eight fields and the stock moved from one to the other rapidly enough to insure a supply of grass never more than four or five inches high. At this stage it is rich in protein and highest in feeding value. Numerous trials indicate that the pasture season can be extended a month or more and carrying capacity increased two, three or even four fold. Mr. McIntosh had tried the new system and was well pleased with the results.



Pure-Bred Southdowns on the McIntosh Farm

English farmers in recent years have increased their use of potash and have shifted from the use of a special "complete fertilizers or, as they are called in England, compound mixtures.

Some General Observations

Very naturally, I tried to glean something from European agriculture that I might pass on to American farmers. In general, Europe excels in yield per acre, due to the use of large amounts of commercial fertilizer and to the soil conservation methods employed. I feel clear and sure I am not indebted to the utmost. I observe close and personal, but aside from the crops that require a great deal of hand labor, it bears little relation to acre yield. By this I mean that harvesting wheat with a cradle, or cutting hay with a scythe adds nothing to the yield.

On the other hand, American farmers excel in the use of machinery, thereby making possible a very high production per man. With its land so always [illegible] and labor is dear. A larger use of fertilizer, which is sure to come, will enable American farmers to produce crops with still less labor per bushel, or pound, or ton.

All land in Europe is utilized either for forest, for pasture, or for crops. Ordinarily, but not always, the best land is in crops, the second best in pasture, and that which is unfit for crops or pasture is in forest. The forests usually belong to the state or local governments, and timber is cut only under careful supervision. They are made to yield the largest possible returns through protection against fire and careful planting and management. A comprehensive federal and state reforestation program [illegible] much marginal land [illegible] a distinct benefit in this country.

[illegible] pressed by the pictures in all of the [illegible] whether in Switzerland at 6,000 feet above [illegible] and six yards below [illegible] acres of the best [illegible] the eastern half of [illegible] should be fertilized [illegible] that its carrying capacity [illegible] doubled.

[illegible] of legume roughly necessary to an [illegible] livestock industry. [illegible] all acreage of legumes [illegible] acreages of our type [illegible] which is perhaps the [illegible] dairy section in Europe. [illegible] pasture consist almost entirely [illegible].

[illegible] is not a limiting factor [illegible] to use heavier applications of fertilizer on the better [illegible] soils, but the less productive [illegible] to pasture or to pasture and forage crops.

English News Letter

By an English Correspondent

[illegible] agricultural show [illegible] at Ipswich England [illegible] pedigree stock breeders [illegible] with hopes of a [illegible] and agriculture [illegible] small interest [illegible] the opportunities [illegible] pedigree herds to [illegible] able to make [illegible]

[illegible] breeders who [illegible] England this [illegible] and wish to [illegible] said advise them [illegible] particular breed they [illegible] when they need [illegible] every effort to [illegible] season's lambs.

[illegible] one of the [illegible] shows organizers [illegible] the coming General [illegible] May 30th. Now [illegible] organizers must [illegible] show date if possible [illegible]

Agriculture's Position Today

[illegible] past the serious [illegible] caused great [illegible] agricultural bodies. [illegible] English National [illegible] Union only quite recently [illegible] matter to the [illegible] whole expressing [illegible] grievance [illegible] the farmer for the [illegible] seems granted in the rating relief [illegible] and the postponement of these reliefs [illegible] be as from April 1st instead of October 1st.

It is a serious matter for urgent [illegible] schools when it is known that [illegible] small place such as the British Isles [illegible] land since 1923 in the plow [illegible] acres—something over 1,000,000 acres [illegible] The exemptions from rates on agricultural land and buildings given in [illegible] Budget statement [illegible] amount to something like £2,[illegible] for England and Wales for the [illegible] year April 1st to September 30th.

The second reading of the Bill [illegible] before the House recently to give effect to Mr. Churchill's Concessions to [illegible] culture by celebrating by six months [illegible] total exemption from rates on [illegible] agricultural land and buildings. Sir George Courthope, M. P., himself a farmer, expressed thanks to the Chancellor and stated that the farmers regarded as a long deferred removal of an unjust burden. He also stated that he was convinced that in some districts and most branches of agriculture there will be definite recovery going on. The process, however, must be slow, because the depression had been so severe and there were at the present time a good many agriculturists who were not really solvent.

The second reading was carried without a division.

To those Americans who frequently visit the country and are doing so [illegible] (Continued on page

The Farm Home

Strawberries

By GERTRUDE S. STEWART

STORES of stands [illegible] been flooding the [illegible] and we are [illegible] pool of them. [illegible] rake from every [illegible] or touch, we must [illegible] recipes are more highly [illegible] And if there is one simple [illegible] in the shortcake art [illegible] personally it is the [illegible]

• • •

Strawberry Rice

Two cups strawberries, three-fourths cup sugar, two cups boiled rice, two eggs, one-fourth teaspoon salt. Crush berries slightly, mixing with half the sugar, and place them in bottom of buttered baking dish. Beat egg yolks and sugar, add rice, and pour this mixture over the fruit. Add vanilla to the well-beaten egg whites and frost over the dish. Bake in a slow oven until merely browned. Mrs. J. D. Harding.

• • •

Strawberry Whip

Two tablespoons gelatine, two cups water, one quart strawberries, two tablespoons either lemon or orange juice, one cup sugar, four egg whites, well beaten. Add gelatine to water and dissolve over fire. Crush berries with sugar and fruit juice and add to gelatine. When cool, add very carefully to the beaten egg whites. Beat well, heap into your prettiest serving glasses and garnish with whipped cream.

Mrs. J. D. Harding.

• • •

Strawberry Cream Pie

One quart berries, one and one-half cups milk, pinch salt, one cup sugar, two tablespoons flour, one tablespoon butter, two eggs. Heat milk in double boiler. Blend salt, flour and sugar with the beaten egg yolks and a little milk. Stir into the hot milk and cook until thick. Cool slightly, and pour into baked crust lined with the crushed berries. Cover with meringue made of the egg whites and a bit of sugar. Brown slowly for about twelve minutes.

Mrs. Edward L. Weaver.

• • •

My Prize-Winning Preserves

Fresh picked berries are cleaned and [illegible] with equal measure sugar. Let stand until [illegible] collect. Cook fast about six or eight minutes, using just a few at a time. A clear mild product results. My prize marmalade is made exactly the same way, crushing the berries before adding sugar. J. M. S.

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Strawberry Cream

One package strawberry jello dissolved in one pint boiling water. When cool and beginning to set, whip until light and frothy. Add one cup whipped cream and one cup crushed berries. Blend well, and chill in mould. Serve with more berries and cream.

M. L. B. Z.

• • •

Strawberry Jelly

Eight cups strawberry juice, 12 cups sugar. Bring these two ingredients to a boil quickly. Then add one and one-half cups commercial pectin, and boil for one and one-half minutes—vigorously, rolling boil. Set aside to cool. Then pour into glasses and seal at once with hot paraffin. Wonderful color and flavor.

Mrs. J. Z., Jr.

• • •

Berry Butter

Four cups berry pulp cooked with three cups sugar until desired [illegible] ness. This is our best liked spread, and it is easily made. Wash the perfect berries thoroughly. Put through fruit press or sieve without cappine. Stems and caps do not go through. M. B.

• • •

Strawberry-Pineapple Jam

Four and one-half pints crushed strawberries, two pints pineapple, ground or crushed, seven and one-half pints sugar, one pint water. Mix well together and boil hard for twelve minutes, or long but a small quantity at a time. Pour at once in jelly glasses and cover with paraffin. Mrs. H. G. Baker.



Making Strawberry Jam

My Best Vacation

IT is often a problem for farm folks to plan a real "get away" and have a vacation. Our city cousins do not have such a problem. They are granted heavy wallfuls with rest and recreation, a complete change.

With us it is different. In winter the stock needs our care and the children are in school. In summer there is all [illegible] and [illegible] always [illegible]

[illegible] in the [illegible] country [illegible] and every [illegible] are having them. How about [illegible] have a vacation. Did you have a real [illegible] one to cuddle under modern conditions? Tell us about it. Maybe the family reaps [illegible] each [illegible] or perhaps you can [illegible] several at a time.

However you do it, the plans you use may help some one else and we invite you to share them with our readers. Write a snappy story about your best vacation and send it to us before June 5. Neather rules to [illegible]

[illegible] gold cloth will be given as reward to those sending in the [illegible] Make it short and snappy, to help us with sending in that step-saving [illegible] as we are really [illegible] for room. Send letters to Home Department, [illegible] Lancaster, Penna.



A Combination of Spring Goodies for the Provident Housewife

Lest We Forget

By HEPSY NEFF

DECORATION DAY becomes more and more a day of sorrowful memories. Not only the myriads of precious lives cut short are before our eyes but along with these come shadows forms from Bunker Hill, Valley Forge, Gettysburg, San Juan Hill, Manilla, the Argonne and more places than we have time to list, where the "last full measure of devotion" has been paid by men in defense of their homes and liberties. Nor is the end even yet in sight. Today, more than thirty thousand disabled men are in our hospitals, more or less helplessly existing and many of them trying to find some measure of relief in making poppies for Decoration Day. When we know that the poppies now being offered for sale come from these weary hands, often needing the small returns brought by their sale, we shall buy more freely.

But for us neither buying poppies nor keeping Memorial Day sacred is enough. While our own short history has fewer periods of war than that of any other time or place the day has come for new considerations and preventive measures. Our best minds are leading us in that direction. But back of our leaders must stand solid ranks of common citizens, intelligent and large minded enough to see the hopeful as well as the hindering conditions that we face.

As we stand together this year shall we not realize more keenly than ever that "all we are brethren," from the shores of the Arctic to the shores of the Mediterranean? Who knows how far our century of neighborliness has made possible the leadership which last August offered the Pact of Paris renouncing war as a means of settling differences of nations to representatives of European countries and in one day received the signatures of fifteen nations.

Now a pact is not a contract which may be enforced by law but an agreement, a covenant between honorable men and honorable nations whose word was as good as their bond. There was a fine significance lying back of the choice of Paris as a meeting place for this eventful task. Yet this fact may help keep a distance between many of us and the greatest event of a century. Perhaps this Memorial Day will bring that simple and wonderful covenant again to our attention.

Not a Word Changed

May we ask all who read this page to clip and hold as most precious the following words which our Secretary Kellogg wrote so beautifully and advocated so wisely and kindly that not a single syllable of its less than seventy words was changed and that it stands today a peace pact above a large and growing list of signatures of the nations of the world.

Here it is in full:

"Article I. The high contracting parties solemnly declare in the names of their respective peoples that they condemn recourse to war for the solution of international controversies and renounce it as an instrument of national policy in their relations with one another.

"Article II. The high contracting parties agree that the settlement or solution of all disputes or conflicts of whatever nature or whatever origin they may be which may arise among them shall never be sought except by peaceful means.

Is it any wonder that the whole world rejoices, today, because of this peace pact?

———o———

Every bedroom should have cross-ventilation.

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Careful planning cuts down time in preparation of meals.

• • •

To save time in making custards, scald the milk before adding to egg.

TIGHT BINDING TEXT CUT OFF

Danger of Infection

Among Baby Chicks

Success in raising baby chicks is dependent upon proper care and management. Readers are warned to exercise every sanitary precaution and beware of contaminated drinking water. Baby chicks must have a generous supply of pure water. Drinking vessels harbour germs and ordinary drinking water often becomes contaminated and may spread disease through your entire flock and cause the loss of half or two-thirds your hatch before you are aware. Don't wait until you lose half your chicks. Take the "stitch in time that saves nine." Remember that in every batch there is the danger of some infected chicks—danger of diarrhea in some form and other loose bowel and intestinal troubles. Don't let a few chicks infect your entire flock. Give Walko Tablets in all drinking water for the first two weeks and you won't lose one chick where you lost dozens before. These letters prove it:

Mrs. Bradshaw's Remarkable Success in Raising Baby Chicks

"Dear Sir. I see reports of so many losing their little chicks, so thought I would tell my experience. I used to lose a great many of the little downy fellows from bowel troubles, tried many remedies and was about discouraged. As a last resort I sent to the **Walker Remedy Co., Dept. 500, Waterloo, Iowa,** for their Walko Tablets for use in the drinking water of baby chicks. I used two 50c packages, raised 300 White Wyandottes and never lost one or had one sick after using the Tablets and my chickens are larger and healthier than ever before. I have found this Company thoroughly reliable and always get the remedy by return mail." —Mrs. C. M. Bradshaw, Beaconsfield, Iowa.

Never Lost One After First Dose

Mrs. Ethel Rhoades, Shenandoah, Iowa, writes. "My first incubator chicks, when but a few days old, began to die by the dozens. I tried different remedies and was about discouraged with the chicken business. Finally I sent to the **Walker Remedy Co., Waterloo, Iowa,** for a box of their Walko Tablets to be used in the drinking water for baby chicks. It's just the only thing to keep the chicks free from disease. We raised 700 thrifty, healthy chicks and never lost a single chick after the first dose."

You Run No Risk

We will send Walko Tablets entirely at our risk—postage prepaid—so you can see for yourself what a wonder-working remedy it is when used in the drinking water for baby chicks. So you can prove—as thousands have proven—that it will reduce your losses and double, treble, even quadruple your profits. Send 50c for a package of Walko Tablets (or $1.00 for extra large box)—give it in all drinking water and watch results. You'll find you won't lose one chick where you lost dozens before. It's a positive fact. You run no risk. We guarantee to refund your money promptly if you don't find it the greatest little chick saver you ever used. The Pioneer National Bank, the oldest and strongest bank in Waterloo, Iowa, stands back of our guarantee.

WALKER REMEDY CO., Dept. 500
Waterloo, Iowa

BABY CHICKS

FROM HEAVY LAYING FREE RANGE FLOCKS

	25	50	100	500	1,000
S.C.W. & Br. Leg.	$3.00	$5.50	$10.00	$47.50	$ 90
S.C. Rocks & Reds	3.50	6.50	12.00	57.50	110
S.C.Buff Orpingt'ns	3.50	6.50	12.00	57.50	110
Wh. Wyandottes	3.50	6.50	12.00	57.50	110
Assorted Chicks	2.75	4.50	8.00	37.50	70

100% prepaid safe delivery guaranteed. Order from this ad or write for circular.

J. N. NACE POULTRY FARM Richfield, Pa. Box 3.

S. C. W. Leghorns, $9.00-100. Barred Rocks, $11.00-100. White Rocks and Reds, $12.00-100. Tan Reds, $8.00-100. Add 50 if less than 100 lots. My chicks are all from good culled stock. I pay postage. Special prices on large orders. Circular free.
JACOB NEIMOND, Box 4, McAllisterville, Pa.

Chicks, Barron Eng. Wh. Leghorns 8c

White Leghorns 7½c; Barred Rocks 10c; heavy mixed 8c; light 7c. Reduced on large orders. 100% guaranteed. "New Circular Free." Full and Assorted delivery.
TWIN HATCHERY, McAllisterville, Pa.

Chick Prices for May deliveries. S.C. Leghorns, $9.00, 100; Barred Rocks and Reds, $11.00, 100. Heavy mixed, $10.00, 100; Light mixed, $7.00, 100. 100% live arrival guar. Circular free.
Penn's Creek Hatchery, Selinsgrove, Pa.

The Joy of May

WHAT joy to step outside the house into the fresh and fragrant spring air to sow the garden seeds and plant the first plants! To watch the little chicks in their first happy days, and keep both eyes on the turkey hens that should "bring now to their nests."

How happy we are to grant the children that longed for request to bare their toes to the warm mother earth, and push the baby out in her buggy for a nap in the golden morning sunshine!

Oh it's May, and I can again take my place in church after having been shut at home all winter by bad roads. Many birds are mating and house-building in my front yard trees, our own abode is taking on new paper and fresh coats of paint.

It's May and everywhere life is in tune with the mighty Maker in glorifying this old world and I'm glad to be a farmer's wife in May.

• • •

I'm setting out a hundred everbearing strawberry plants, so that I can give the family shortcake enough in future seasons. A dozen everbearing red raspberries are all set in a row so that we may have "treat" pies more often, and a packet of Washington asparagus seed is ready to help provide that long hoped for asparagus bed.

• • •

Each year a new flower is my role. Last year it was that lovely tower few, and this year it is California giant orange zinnias.

• • •

I discovered the other day that wall paper cleaner does excellent work on soiled window shades. Mrs. C. L.

Looking Toward the Barn

Prize Letter

I AM doing that very thing tonight as I write, and the sight is not a bit pleasant. There are ratters and tin lying in all directions, for the recent wind-storm visited us with a vengeance. The barn has no roof, and is minus some other parts, too.

Temporarily, our four horses live in the chicken house, the cows stay out all the time, and three young calves frolic about in the hog pen.

But just the same, there toddles little Freddie, not quite two. He sees no spoils, for he is on his way to the apple tree, where there are two jolly swings. Florence, the five-year-old sister has a gift swing, but the little fellow is safe in his home-made one.

An old chair, minus its top parts, is turned upside down. The four legs fashion the swing sides, and the front "rung" is removed. Here comfortably and in safety, he can swing high and low.

And while I've been telling you this, they have shifted the scenes, and are now see-sawing. Mother made the teeter tatter, too. She used an idle tile and a good plank. How they laugh and shout with glee! No bought toys give half so much amusement!

Mrs. F. S.

MEMORIAL DAYS

We watch the khaki columns march
the street
To martial music, wild and sad,
that stirs
The air of May; the war-drums
throbbing beat
We follow up the graveled path
where firs
Cast shadows on the mounded hill-
side; there
We pause to scatter flowers on
heroes' graves,
To leave our flags, to join in hymn,
and prayer,
"Taps" from a distant bugle softly
waves.
And slowly, then, our homeward
way we thread;
"Again Memorial Day is past," we
say,
But they, they with their silent
soldier-dead,
O, every day is their Memorial Day.
M. S. McCreary.



Do You Sew?

No. 2802. Attractive Wash Frock. Designed in sizes 16, 18 years, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 36 requires 2⅝ yards of 35-inch material with ⅝ yard of 35-inch contrasting and 4½ yards of binding.

No. 2789. It's Decidedly French. Designed in sizes 2, 4 and 6 years. Size 4 requires 1½ yards of 32 or 35-inch material with ⅜ yard of 36-inch contrasting.

No. 3394. Popular One-Piece Tyke. Designed in sizes 10, 12, 14 and 16 years. Size 12 requires two yards of 32-inch material with ⅝ yard of 32-inch contrasting. Embroidery pattern No. 706 (blue or yellow), 15c extra.

How to Order

Write your name and address clearly. State number and size of each pattern. Price 15c each, two for 25c. Our Fashion Magazine will help in preparing your wardrobe. Copy alone 15c; with a pattern only 10c. Address Pattern Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Replace Linens Each Year

I NEVER let my household linens get to the place where as my neighbor told me "they were all worn out, and we have no money to replace them." Each year I buy a small lot of everything.

When a tablecloth begins to look thin, I buy a new one for steady wear and use that one only occasionally. The new sheets and pillow cases are put into steady use, and the soft thin ones given quite long vacations.

No one feels the expense of buying one or so of each a year, but to be sure, if all were needed the same week, there are plenty of us who would repeat that same plaintive tune, "no money to replace them." Mrs. J. W. Kendall.

Memory Lives in a Garden

I WISH every one of our Pennsylvania Farmer women could have a "Memory Garden". Flowers thrive well when they are to remind us of our friends. Seeds, plants, slips and cuttings may be had from one's friends, and if carefully arranged with others from seed houses and nurseries a lovely effect is bound to result.

Such a garden is within the reach of every one. One of my friends has a beautiful plan of using in her memory garden favorites of her dear ones who have "gone on". Here she sows seeds of flowers they loved best. Truly such a garden is a lovesome spot.

Gladys Beebe.



"The hot water's gone!" Never mind—Fels-Naptha also washes beautifully in cool or lukewarm water! For Fels-Naptha is good golden soap, blended, by our exclusive process, with plenty of naptha. The naptha and soapy ends working together loosen even stubborn dirt and wash it away, giving you clean, sweet home-washed clothes without hard rubbing. Whether you use a tubful of hot water or only enough to take the chill off, remember that...

Nothing can take the place of

FELS-NAPTHA

ORDER FROM YOUR GROCER TODAY



Kill Rats Without Poison

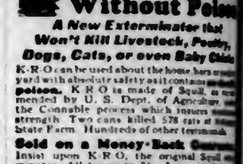
A New Exterminator that Won't Kill Livestock, Poultry, Dogs, Cats, or even Baby Chicks

K-R-O can be used about the home barn or poultry yard with absolute safety as it contains no deadly poison. K-R-O is made of Squill, as recommended by U. S. Dept. of Agriculture and the Connable process which insures uniform strength. Two cans killed 578 rats at Illinois State Farm. Hundreds of other testimonials.

Sold on a Money-Back Guarantee

Insist upon K-R-O, the original Squill exterminator. All druggists, 75c. Large size (three times as much) $2.00. Direct if dealer cannot supply you. K-R-O Co., Springfield, O.

K-R-O
KILLS-RATS-ONLY



Just Paint it on the Roosts

Before Brooding
Only a small paint mop and a can of "Black Leaf 40" needed. While chicks are roosting, Tobacco dust penetrates the feathers, killing lice. Economical handling of birds. Ask your dealer for

Tobacco By-Products & Chemical Corp., Inc., Louisville, Ky.

"Black Leaf 40"
Kills Poultry Lice

Save Baby Chicks



by dipping them daily in a solution of Tourton Poultry Lice Killer. Use in drinking or feed. For prevention of diarrhea and bowel troubles and roundworms. Helps chicks strong and vigorous to withstand the usual. Money back if it fails to cure any disease it claims to help or to keep them healthy. Use as directed six days per week and if chicks do not thrive as we claim it will be returned to you. Also cures or prevents blackhead, gapes and other troubles of turkeys. Pint $1.50. At druggists, or send to us for it.
BOURBON REMEDY CO., Box 6, Louisville, Ky.

BROWN FENCE Less Than

Direct from Factory
Before you buy Farm or Poultry Fence, Gates, Steel Posts, Barb Wire, Roofing, Paint, Stoves, Heaters, Furnaces, Separators, Tools, Chicks or Brooders, get my new low prices. Write today.

Free Cut Price Catalog

See how much my Direct-From-Factory prices save you. Quality guaranteed. 80 hour service.
THE BROWN FENCE & WIRE CO., Dept. 2900, Cleveland, Ohio

Cuticura SOAP
For Cleansing and Purifying

BARRON and WYCKOFF

S. C. White Leghorn chicks for May 1 and later, $10.00 per 100, prepaid and safe delivery guaranteed. Our 19th year. Circular free. If baby chicks are wanted, write us.
THE PENN'A HATCHERY.

Neighbor Poultrymen

By H. C. KNANDEL

IT does one a lot of good to see how others perform tasks similar to our own. Last week I took an eleven-hundred-mile trip into New York state and Ontario, Canada, with a group of seniors as students in poultry husbandry from The Pennsylvania State College. Obviously, only the better farms were inspected. Leaving State College early Monday morning, a stop was made at Towanda, Pennsylvania. Here the hatchery owned and operated by P. T. Kistler, a graduate of The Pennsylvania State College, was inspected. All eggs are incubated in electrical machines and the chicks are reared in brooders in battery brooders.



Mr. Kistler has developed a very fine business on the poultry basis of so-called "started chicks" that is chicks three weeks of age are sold by the thousands. By following this practice the purchaser is well protected against mortality, which usually occurs during the first three weeks. An old building once used for the manufacturing of boys is now an immense brooder house. The incubators are operated in a building in the very center of town.

Within City Limits

Strange, isn't it, how times change? There is a man operating a large hatchery and raising thousands of chicks within the city limits. His ability, ingenuity and knowledge have made him an asset to the community and a credit to himself.

The next stop was at Cornell University, Ithaca, New York. The poultry work at this institution has for years been regarded as some of the most important in the United States. With a corps of twenty instructors and investigators much work is possible. Breeding and nutritional problems are the chief lines of investigation followed.

After enjoying the customary Sunday chicken dinner, we hied ourselves to the saltest beds in New York state. No six-dollar room in America's finest hotel could compare with that dollar a night rate at the tourist's home.

The following morning the great American hen again played her part by furnishing good, fresh eggs for breakfast. These together with bacon, pancakes and all the side dishes to be familiar to country folks set us off to a good start.

Outside of Ithaca about four miles is a farm owned by Fred Myers. Some 1,000 layers are kept and the necessary young stock reared each year to renew a part of the flock. The most interesting thing about this farm is the ease with which the work is done and the small amount of labor involved. An old barn with a wing or two added has been transformed into a double-decker poultry house. Double doors permit a team to enter and the litter is placed on the manure spreader and taken to the fields.

No Dropping Boards

No dropping boards are used. A board one foot high encloses an area beneath the roosts. It is in this space that the droppings accumulate. Each morning a few forks of straw are thrown into this pit. Once each two or three weeks the droppings are removed. Fresh straw is added for litter once every two or three weeks and the litter removed once yearly. Labor on this farm is not going to waste.

Through cooperation with his neighbors, Mr. Myers buys feed in carload lots, thus effecting a great saving. His poultry superintendent is paid a definite salary plus a percentage of the profits, about six per cent. Not a bad arrangement. The plan must be acceptable to both parties, as they have been working together since the business was started eight years ago.

Winding about the Finger Lake section of New York state, the next stop was made at Odessa. Here in a little town of a few hundred population 75,000 laying hens may be found. Eggs from these hens are shipped to New York City.

One of the most interesting farms was the one owned and managed by Allen H. Baldwin. His birds like those of many other southern were infected with intestinal parasites. In order to overcome this situation he followed the plan as recommended by the Pennsylvania State College and is now rearing his stock in confinement. A prettier flock of 8,000 youngsters you would not find. None of his chicks has been on the ground. All of them are kept on hardware cloth floors. The droppings pass through the wire and every three or four weeks the frames are raised, the droppings are removed and the floor disinfected. Birds with known records are to be found on this farm, for trapnesting and pedigreeing are part of the everyday chores.

• • •

When Mating Geese

Will you let us know if three geese hens are too many to one gander during the season for hatching? A. E. S.

IT is generally conceded that it is not wise to mate more than three or four geese with one gander. Some grower raisers prefer to use only one gander for two geese. In the case of the Chinese goose a larger mating may be employed. It is always well to mate the geese early in the fall so that good fertility may be secured in the spring.

• • •

A Growing Mash

Please send me a good formula for young chicks growing mash.
Clinton E. Walker.

THE following rations are suggested for the feeding of baby chicks from hatching time to maturity:

First eight weeks—37 lbs. corn meal, 15 lbs. bran, 15 lbs. middlings, ten lbs. alfalfa leaf meal, two lbs. bone meal, one lb. salt, 15 lbs. buttermilk (dried), two and one-half lbs. fishmeal, two and one-half lbs. meat scrap.

Eight weeks to maturity—Add ten lbs. ground oats to ration, making total of 110 lbs.

Scratch grain, eight weeks to maturity—100 lbs. wheat and 100 lbs. cracked corn.

Add one pound of cod-liver oil at time chicks are two weeks of age. Feed scratch grain when chicks are eight weeks of age. Feed whole corn beginning the 14th week.

This ration should give good results. Be very careful to make sure that the chicks eat nothing but wholesome food. I would suggest that you feed everything in hoppers, both the scratch grain and the mash.

• • •

Examine Turkeys

I would like to know what makes my turkey gobbler act as if he has a bump in his neck. It seems to come up and he tries to swallow it back. I lost a turkey that was like this last year.
J. B.

IT is quite possible that your turkey gobbler is affected with canker. I would suggest that you open the beak of the turkey, remove the canker-as patches and paint the sores with tincture of iodine or a two per cent solution of mercurochrome. Apply the mercurochrome or iodine every day until the sores heal.

It will be well for you to feed your turkeys on a moist feed during this period.
H. C. K.

BIRTHRIGHT OR POTTAGE?



YOU'VE nursed them through those first trying six weeks, but don't let up now.

Don't forget that the growing period determines their laying qualities. Don't use ordinary feed. Don't sell their birthright for a mess of pottage.

The eight pounds of growing mash every bird eats must build the bone, frame and constitution which makes profitable egg production later on. If the growing mash fails to do this the error can never be corrected.

Which will your birds get—an ordinary mash that varies—retarding the growth one time, over-stimulating it another—or LARRO? Will it be a mash that must necessarily lack quality in ingredients because it is cheap—or one that gives every bird its birthright—the urge to lay?

Eight pounds of growing mash—the cost is trivial—but "laying capacity" from which your profits come, depends on it.

THE LARROWE MILLING COMPANY
DETROIT, MICHIGAN



Larro

FEEDS THAT DO NOT VARY

Chick Starter	Growing Mash
Chick Grains	Growing Grains
Egg Mash	Scratch Grains



NATIONAL "SUPERBRED" CHICKS

100,000 Chicks for Delivery in June

	50	100	500	1,000
S. C. White, Brown, Buff Leghorns	$ 5.25	$11.00	$52.50	$100.00
Barred & White Rocks, Reds	6.75	13.00	62.50	120.00

Light Mixed, $9.00 per 100. Heavy Mixed, $10.00 per 100. Also White Wyandottes, Black and White Minorcas, Anconas and Blue Andalusians. Send for our Catalog and price list. We guarantee 100% live delivery. Member International Baby Chick Association.
NATIONAL CHICK FARMS, Box 404, MIFFLINTOWN, PENNA.

ERLAY CHICKS

Ohio Accredited Leghorns—Rocks—Wyandottes—Rode Island Reds. Leghorns Will breed selected females mated to sire pedigreed cockerels from official R. O. P. hens producing from 280 to 300 eggs. Rocks—British Columbia Breeding with high egg production. Wyandottes—From stock bred in Canada's best breeders. Reds—Heavy Layers—Excellent type and color. Every chick Ohio Accredited. Highest awards at Ohio Baby Chick Fair. Write for literature today.

ERLAY POULTRY FARMS, Box 2, Delaware, Ohio
F. G. Kelsey A. L. Everitt

TIGHT BINDING TEXT CUT OFF

HUBER'S RELIABLE CHICKS
Chicks 8c and Up
Per 100 Mo... made with Huber's R-h Bl. & Wh. Rocks, R.C.R.I. Reds, Barred Rocks, White Rocks, Buff Orpingtons ... Light Brahmas ... Anconas ... Leghorns ... Columbian Wyandottes, Wh. Minorcas ... Buff Minorcas ... Special White Leghorns, Bl. Minorcas ... Rose & Single Comb R.I. Reds ... Wh. & Bf. Leghorns. Assorted 25 50 per 100. Light assorted 25 50 per 100. Heavy assorted 25 50 per 100. ... Mixed ... Hatches every week. Order direct from this ad. 20% Special White Leghorns, Bl. Minorcas ... Rose & Single Comb R.I. Reds ... Wh. & Bf. Leghorns. Assorted 25 50 per 100. Light assorted 25 50 per 100. Heavy assorted 25 50 per 100. ... Mixed ... Hatches every week. Order direct from this ad. 20% Assorted 25 50 per 100. Light assorted 25 50 per 100. Heavy assorted 25 50 per 100. ... Mixed ... Hatches every week. Order direct from this ad. 20% Assorted 25 50 per 100. Light assorted 25 50 per 100. Heavy assorted 25 50 per 100. ... Mixed ... Hatches every week. Order direct from this ad. 20%
HUBER'S RELIABLE HATCHERY, N. Main St. FOSTORIA, OHIO

CLIMB ABOARD OUR CHICK SPECIAL.
SATISFACTORY CHICKS
S. C. Wh., Br., Bf. and Bl. Leghorns, Sheppard's Anconas ... Barred Rocks, Wh. and Bf. Rocks, Buff Orpingtons, R.C.R.I. Reds, Bl. Minorcas ... Harron Wh. Leghorns, Wh. Wyandottes, Bf. Minorcas ... Rose & Single Comb R.I. Reds ... Wh. & Bf. Leghorns. Assorted 25 50 per 100. Light assorted 25 50 per 100. Heavy assorted 25 50 per 100. ... Mixed ... Hatches every week. Order direct from this ad. 20%
Ex. Qual. Wh. & Brd. Rocks, Reds, Buff Rocks & Wyckoff Wh. Leg. Wh. Min. 7.00 9.50 18.00 35.00 160
Heavy Mixed 50 lbs. 100 $11.50 ... 500 $55, 1,000 $105. Light Mixed 50 $7, 100 $13; 500, $62.50; 1,000, $85. Black Giants 130, 120 Wh. Pekin Ducklings 28c each. 100% Live Delivery Guaranteed. Bank References. Chicks Not ... FREE
The NEW WASHINGTON HATCHERY CO. Postpaid to Canada
BOX D, NEW WASHINGTON, OHIO Member I. B. C. A.

Chicks C.O.D. $1 Down
Let us ship you our chicks, $1 with order, balance C. O. D. Our chicks are from some of Ohio's best flocks that have been carefully culled for type, color and egg production. 100% live arrival. Prices Delivered 25 50 100 500 1000.
S. C. White, Buff and Brown Leghorns and Anconas ... $5.25 $10.00 $17.50 $ 90.00
Barred, White, Buff, R. C. and S. C. Reds ... 6.25 12.00 22.50 110.00
Buff Orpingtons, W. Wyandottes, S. L. Wyandottes and Partridge Rocks ... 6.75 13.00 25.00 120.00
Heavy Mixed, 100; B. J. Giants, 15c per chick. Order direct or send for illustrated circular.
EMPIRE HATCHERY, Box 70 COLUMBUS GROVE, OHIO

HILL SIDE CHICKS Will Ship C. O. D.
Special Tancred Strain ... 9.00 per 100
S. C. W. Leghorns ... 10.00 per 100
Barred Rocks ... 10.00 per 100
Owens Strain Rocks ... 10.00 per 100
Light Mix ... 8.00 per 100
Heavy Mix ... 9.00 per 100
Special prices on large lots.
Less than a hundred, add one cent a chick.
T. J. ENRENZELLER, Prop.,
United Phone Box 11, McAlisterville, Pa.

BABY CHICKS
From Free Range Selected Flocks
Prices on 25 50 100
S. C. White Leghorns ... $2.50 $4.50 $ 8.00
Barred Plymouth Rocks ... 3.00 5.50 10.00
Send no money, just mail your order. We ship C.O.D. and guarantee live delivery of chicks.
HINGOVILLE POULTRY FARM, Box 306, Hingoville, Pa.

BABY CHICKS Order direct from this ad and save time
Prices Delivered 25 50 100 500 1000
White and Brown Leghorn $2.75 $5.25 $10 $47.50 $ 90
Anconas & Black Leghorn 2.75 5.25 10 47.50 80
White and Barred Rocks 3.25 6.25 12 57.50 110
Columb. Wyan. & R. I. Reds 3.25 6.25 12 57.50 110
Heavy mixed broilers 3.00 5.75 11 52.50 100
Light mixed broilers 2.25 4.25 8 38.75 75
Full count and quality guaranteed. Catalog free.
For Greater Profit Ulsh Poultry Farm & Hatchery,
Hatchery Chicks Box F, Port Trevorton, Penn'a

Penn'a State "Supervised" CHICKS
Flocks inspected by officials from the Penna. Dept. of Agri. Our 19th year—established 1910. Get our low prices on Reds, Rocks, Leghorns and Minorcas. Member I. B. C. A.
Catalogue free. THE KEYSTONE HATCHERY.
(The Old Reliable Plant). Richfield, Pa.

ValleyViewChicks
25 50 100
Tancred Strain Wh. Leghorns, $3.25 $6.00 $11.00
S. C. W. Leghorns ... 3.00 5.50 10.00
R. Rocks & R. I. Reds ... 3.50 6.50 12.00
Heavy Mixed, $10.00; Light Mixed, $8.00
500 lots 1c less, 1,000 lots 1c less. Free range 100% live delivery guaranteed. Circular.
VALLEY VIEW POULTRY FARM,
M. J. Ehrenzeller, R. 2, McAlisterville, Pa.

Quality Chicks at Low Prices
PRICES FOR JUNE AND LATER
Variety 100 500 1000
United Strain Leghorns ... $7.50 $36.00 $70.00
Barron or Wyckoff Leghorns ... 8.00 37.50 75.00
Special Leghorn Wyckoff only ... 9.00 42.50 85.00
Barred Rocks ... 9.00 42.50 85.00
Mixed Chicks ... 7.00 34.00 65.00
L. E. STRAWSER, McAlisterville, Pa.

CHICKS Pure bred, Blood tested free range breeders. Leghorns, Anconas, Sc. Rocks, Reds, Hvy. Wyandottes, Orpingtons, Minorcas, Hvy. Black Giants, 16c. 100% live delivery. Valuable Chick Manual Free.
SEIDELTON FARMS, Washingtonville, Pa.


WHITE WYANDOTTES
Chicks, Eggs, 2-4-6 weeks old and older. Special price cockerels and pullets. Big Type Heavy Layers. A. P. A. Certified. Large Catalogue.
Sherman Bowden, Box 1958, Mansfield, O.

WHITE LEGHORNS ... $7.00 a hundred
Brown Leghorns ... 7.00 a hundred
Black Minorcas ... 10.00 a hundred
Turkeys ... 10.00 a hundred
Mixed chicks, $6.00 & $8.00 for light and heavy.
ECLIPSE HATCHERY, Fort Trevorton, Pa.

PUREBRED BARRED ROCK CHICKS
$10.00 per 100, $90 per 1,000. Heavy mixed, $8.00 per 100. Prompt service. 100% live delivery guaranteed.
CHAS. F. EWING, R. 1, McClure, Pa.

ADVERTISING is the modern intelligencer. It keeps you informed, advises you of new things, suggests new uses for articles you already own, and prepares you today for wise and useful purchases tomorrow.

"Pride o' Niagara" CHICKS
1200 Breeders Trapnested on our own Breeding Farm. Foundation stock mated to R. O. P. Pedigree Males. 1,000 satisfied customers. Every Chick a credit to its name. Leghorns, Reds, Rocks, Wyandottes, Orpingtons, Anconas, Minorcas, Black Giants, Pekin Ducklings. WE GIVE FULL SATISFACTION ON EVERY ORDER. Get our catalog.
NIAGARA POULTRY FARM
Box 25 Ransomville, N. Y.

CHERRY HILL CHICKS
S. C. W. Leghorns—Wyckoff Strain ... 100
S. C. Everlay Brown Leghorns ... 10.00
Barred Rocks & R. I. Reds ... 11.00
Heavy Mixed ... 9.00
Light Mixed ... 7.00
Top prices per chick in 500 lots. 1c less in 1,000 lots. For less than 100 chicks add 2c. 100% live arrival guaranteed. Parcel post prepaid. Bank reference. Order direct from this ads or write for free circular.
CHERRY HILL POULTRY FARM,
Wm. Nace, Prop., Box P, McAlisterville, Pa.

RAISE YOUR CHICKS
Give them Wacker's Chick Tablets at the eater, from the start. Stops White Diarrhoea, Gasps and other chick diseases. Don't trust to luck to fair weather.
STOP THAT ROUP
Wackers Roup Tablets positively stop roup in your chicks drinking water.
Either tablets 600, $1.00—300, $2.00—state which. C. O. D. Orders Postage Extra FREE Booklet on Poultry Raising
Wacker Remedy Co., BOX 187 "A" CAMDEN, N. J.
Ex-Sure Fit's WACKER'S of Camden, N. J.

FOR GREATER PROFITS Hatchery Chicks
CHICKS FROM JANUARY TO SEPTEMBER, 1929
Barred and White Rock, White Wyandotte, Rhode Island Reds, White Leghorns, Anconas and heavy mixed. Our flocks have been culled by Mr. Lloyd Baker a graduate of Pennsylvania State College, also having several years practical experience. Write us your wants.
L. R. WALCK HATCHERIES
Dept. G. Greencastle, Pa.

BARRED ROCK CHICKS
A Big modern Breeding Farm and Hatchery devoted exclusively to the production of
BARRED PLYMOUTH ROCKS
HARVEL POULTRY FARM. GEORGETOWN, DEL.

BROILER—RAISERS
SHIPPING CRATES LOANED FREE
SHIP YOUR LIVE BROILERS and other poultry to New York's Oldest, Live Poultry House, Est. 1882. We are bonded commission merchants. Birds fed; returns made daily. Highest prices. Our outlet is unlimited. Inquire about us. Write for quotations, crates, tags, shipping instructions and Holiday Calendar. Folder F-7.
KAKAUR POULTRY CO., Inc.,
West Washington Market, New York City.

FERRIS STRAIN WHITE LEGHORN CHICKS
Our breeders are large birds; long, deep, rectangular bodies. Selected for size, type and egg production.
$10 per 100; $47.50, 500; $90, 1000
JUNIATA POULTRY FARM, Box P, Richfield, Pa.

Chicks from Blood-Tested Stock
Pennsylvania Supervised Flocks.
Shipped C. O. D. Free Circular.
Sunnybrook Poultry Farm, New Berlin, Pa.

CHICKS Tancred strain, W. Leghorns, $8.00 per 100 from our own free range flock. Our breeders are selected for size, type and egg production. Will ship 1st D. Circular.
Meadow View Poultry Farm, McAlisterville, Pa.

TANCRED STRAIN WHITE LEGHORNS CHIX $8.50 per 100
$10.00 per 500. Shipped C. O. D.
Hatches weekly. Prompt delivery. Order from adv.
BROOKSIDE POULTRY FARM, McAlisterville, Pa.

Poultry Problems

Poor Hatches

Our chickens ... not hatching. The eggs are fertile but the chicks ... the shell dries on the chicks and they die before they get out of the shell. We sprinkle the nests before hatching. Would the fact that we have a rooster with ill luck affect the hatching of the eggs? Chas. Bair.

WHEN chicks hatch with a shell membrane attached to them it usually a sign that either the eggs are weak or that insufficient moisture has been supplied. In hatching with hens the practice is sometimes used of placing sod under the nest to get a sufficient moisture to be supplied.

As a general rule we would find that 31 females ... male are ... many. I am sure I have ... obtained if you ... two males ... to 20 females ... the ... of the lighter ... and 12 for ... the case of the ... we find ... H. C. L.

Egg Bound

I have a two-year-old Barred Rock which started her last ... some time ago. Don't know ... she laid ... and then laid in the same ... one now goes to her nest ... the same time every day ... pass any egg. Mrs. E. W. S.

YOUR turkey hen is either egg bound or is an internal layer. Investigate the possibility of broken eggs in the body cavity of the turkey, and if so attempt to remove them. Apply vaseline to your finger, insert it in the vent and if the eggs are broken attempt to remove all particles of the shell.

If the turkey hen is egg bound, that is if the eggs are intact the only possible means of removing the eggs is to break them within the body and then remove all parts. This is a very delicate operation. H. C. K.

To Preserve Eggs

Can you give me some information on preserving eggs? Will a combination of three gallons water ... quart salt and one pint slacked lime do? If it will, how is it made and how long will it keep eggs? Charles Harper.

MANY preparations are used in the preservation of eggs, but water glass for home use is the most satisfactory.

Earthen-ware crocks should be used as containers. Only fresh infertile eggs should be preserved. The crocks should be thoroughly washed and sterilized with boiling, hot water. Every effort should be made to see that the crocks are absolutely clean.

Nine parts of water, which has been boiled and later cooled, should be added to one part of concentrated water-glass. Water-glass ... be purchased ... A small ... drug store.

The ... should be placed in the ... with the large end ... slightly ... by the nine parts of water ... part of water-glass ... over the eggs, ... eggs will be covered with the solution to a depth of at least two inches. ... Lastly cover ... H. C. K.

Round Worms

I have 200 young Barred Rock chickens ... have round worms and are badly affected. They are now 13 weeks old. We have not had chickens on ... Two years. We have ... and disinfected. I ... every day. We did ... 12 foot yard, but ... ing around on the ... plan to move to one ... spring. I examined ... birds died and ... these round ... Wm. I. Shafer.

INTESTINAL parasites cause severe losses in poultry. Until science can find a method of successfully combating these parasites I believe the best plan is to move the birds so that they will not become infested. Many medical preparations are now on the market and after the best solution of your present trouble.

The very fact that your birds are running over the farm is proof that your soil is infested with intestinal parasites. It would seem that the best solution to your problem would be to treat your birds on ground on which fowls have not roamed for a period of several years or else rear them in confinement. H. C. K.

About Washing Eggs

Wash and ... boards every day, ... houses and roosts clean and ... hens out ... every day. In doing ... the eggs get dirty and ... wash them. The chicks hatched from washed eggs get common diarrhea and white diarrhea. Could we sterilize the water we use for washing the eggs with acid chloride and avoid this trouble?

I DON'T think that the practice of washing eggs is a very good one ... the water removes a seal or coating on the shell, the object of which is to protect the contents from outside ... tion. It would seem to me to be ... better to keep the breeders ... when the ground is muddy, letting ... out late in the afternoon after the ... have been collected for the day. ... case you consider it desirable to ... eggs, using some disinfectant, I ... vise you to write to the company ... ing the product for advice. R. L. S.

Maple Production in Erie County



Maple production is a profitable business on Highland Farms in Erie county, Pa., owned by T. E. Burrows and Son. When this picture was taken in March they had 2,900 buckets up. The trees are scattered over several woodlots, comprising an area of about 160 acres. About 90 per cent of the product is sold in 50-gallon drums for shipment to Vermont. C. R. Addison.

Baby Chicks
CUT PRICES NOW
Chicks are hatching lively ... so we ... well ... and ... Breed ... Leghorns ... Barred Rocks ... White Rocks ... Buff Rocks ... Reds ... Light Mixed ... Heavy Mixed ... Order from this ad. Also state ... chicks ... from this ad.
The Old Reliable
LINESVILLE HATCHERY, Linesville, Pa.

STRICKLER'S SUPER-QUALITY CHICKS
High Egg Production Bred. Healthy, Vigorous
... are the Tancred Harron English S. C. ... Leghorns. R.O.P. 314-316 egg line matings. ... Reds and chicks are extra hardy and ... These quality pure chicks ship ... express. Free delivery ... and ... prepaid anywhere ... Live ... guaranteed ... 100 per cent. ... Rocks, Barred Rocks ... per 100 ... Ducklings ... per 100. ... Ducklings ... per 100. ... Ducklings ... per 100.

THE YOUNG PEOPLE

Pal Wins First Prize

EVERYBODY knows that the dog is the most intelligent and affectionate of all animals, but I believe our German police dog, Pal, is more than that.

He was eight weeks old when we bought him, and after a few days we noticed that he already knew every member of the family. Like all other puppies he was very playful, but when an outsider would try to pet him or pick him up, he would growl and back away from them. One day when Pal was about ten weeks old my brother was playing with a ball and it rolled away from him. The pup ran after it and brought it back to him. Since then he has learned to play ball in many ways. We had a special ball for him to play with and he would take it to the top of a bank and roll it down, then go after it.

As we lived in the city until the dog was two years old, we had to have him in the house most of the time for fear that he would get run over. When he wanted to go out he would go to the door and bark twice, but at night he would go slowly to my mother's bed without making a sound. He seemed to know we were all sleeping and he didn't want to wake all of us. He would put his head on mother's pillow and move it about till she heard him. He has done the same ever since.



Pal

Knows What They Say

We have a small aluminum pan to feed him in, and after each meal mother gathers the left-overs for him. He waits patiently until the meal is over and then brings his pan to mother and puts his head on her lap and looks up to her begging. And any time my mother goes away from the table without first feeding him he will go after her and bark, and then run toward the table as if to say, "you forgot something." When we lived in town he would go to the gate and take the paper from the newsboy and bring it in to us. One day the boy was ill and his father delivered the papers, and Pal refused to take the paper until my mother told him to take it. At night he sleeps upstairs. In the evening when he wants to go to bed he will go to the foot of the stairs and bark slowly to attract our attention, and will turn his head toward the stairs, will turn his head towards the stairs, meaning, "May I go to bed?" If we say, "All right, you may go up," he will go. But if we say, "No, you can't go up yet," he will curl up on a rug at the foot of the stairway.

He wrestles with my brother. He can tear off every stich of clothing my brother has on without even making a scratch on him, and all the time he is snarling and snapping so very realistically that if you wouldn't know he was playing you'd think there would be little left of my brother when they were through.

A Help on Washday

He likes to go every place we go and is always ready to help. If we carry fire-wood he will carry a piece too. On wash-days he is always ready to take the clothespin bag out to the line, and back again. In case he isn't there to do it, when he comes back he will smell the bag and look very disappointed.

If I say I am going to gather eggs, he will go for the egg basket, and if I say I'm going to milk the cows he will go toward the milk pails. If I mention going to take the cows in from the field he will run for a stick and bring it to me, then he will jump and bark as if to say, "Let's go." It is remarkable the way he understands.

If we go anywhere that he isn't to go along, all we have to say is, "Pal, you can't come along, you have to stay home." And although he is greatly disappointed, he always anxiously awaits to go along. He obeys. We don't have to lock him up. He curls up on the porch rug and waits till we come back.

There are so many more things he does that I could write a book about him, such as jumping over fences, ropes, through hoops playing ball and goosey, hideums, us our slippers, etc. As we live on a public road people often stop to look at Pal for not only is he clever but also very beautiful. He is a golden tan in color, and very pretty. I wish that every dog lover could see him. I am inclosing a snapshot of him, only he was clipped at that time, for he was shedding so badly that everything was full of dog fur. I don't know what we'll do if anything happens to Pal.

Theresa Magnelli

Dauphin county, Pa.

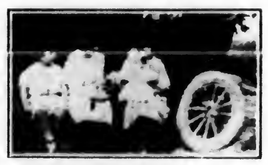
A Wise Chicken

Second Prize

FROM a number of pets, I'll tell you about a hen which I raised by hand from a peep. When hatched this little peep could not keep with the rest of the brood. So I took it to raise, because it was so tiny and weaker than the others. I put it in a box by the stove, covered it with a woolen blanket and learned by the different little chirps whether it wanted food, water or to be hovered.

Warm days I made a pen in the yard where it was sunny. When I wanted to put her to bed for the night I would hold down my hand, making little chirps like she did when she wanted to be hovered. She would come and jump in my hand. After she got a little larger I let her have her freedom in the yard. On cold, rainy days she would come to me to have her blanket put over her in her box.

There were some real rough children come to see us. Several times they hurt my little pet. Then I would put her in the box where she slept at night, covering her so she could not get out. One day when the children came, my little pet was missing. I hunted everywhere thinking she might be hurt or killed. When I found her she was in her box where I always put her for



Bernice Crofutt, who tells about her pet chicken, is the one in the middle. The others are her brothers and sister.

Little Folks Corner

Do You Read the Ads?

THE dropped letters in the following lines will spell the names of two advertisements in Pennsylvania Farmer for May 18. The first five to send in the correct names, with page number and a good letter, will receive prizes.

Once riding in old Baltimore,
Heart filled, head filled with glee,
I saw a Baltimorea-
Keep looking straight at me.

Now I was eight and very small,
And he was no whit bigger,
And so I smiled, but he coked cor-
-is tongue and called me "Nigger."

I saw the whole of Baltimore,
From May until December;
Of all the things that happened there,
That's all that I remember.

A Thank You

MANY thanks for the gift that came in last Saturday's mail.

My school closes today, and I shall get much pleasure out of the very useful gift.

It might be interesting to you to know that sister and I can sing your health song, "Marching to Wellsville." We both look forward with pleasure to the receipt of the Pennsylvania Farmer each week.

Again thanking you, I remain,
Yours very truly
Homer J. Darlington.

Vacation Thoughts

Our school days are over,
Our lessons are done,
Now we can work
And have all sorts of fun.

No lessons to study,
And none to prepare,
The school will seem empty
With nobody there.

My wishes we'd have school
The whole year around,
For some kids than us,
She says can't be found.

We romp and we chase
We stomp and we shout
Till Mother gets cross
And chases us out.

Written by Gladys Kr
Monroe county, Pa.



Lois Rimer, Clarion county, was one of the prize-winners in our last contest. This picture was taken on her seventh birthday.

IT WON'T BE LONG NOW!

Just [illegible] more days until June [illegible] and drawings and letters in this office. "When You Don't Laugh at Skunk" is a never-to-be-forgotten time but we want [illegible] to tell us about it in a prize [illegible].

We've always room ideas on what you would do if you were Teacher and send them to Young People's Editor, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh. Prizes for [illegible] are gold pencils and pen-[illegible] for the boys.

Here's still a few booklets telling [illegible] cooperating. Send [illegible] to Page Editor and we will be glad to forward you a copy.

FOUND IN YOUR BEDROOM

What would you do if you woke up in the night and wanted a light?
What would you do in case of fire?
If [illegible] in the night, what would you do?
If you want to write a letter?
If you want dinner?
If you are feeling sad, what would you do?

WHAT A WATCH SUGGESTS

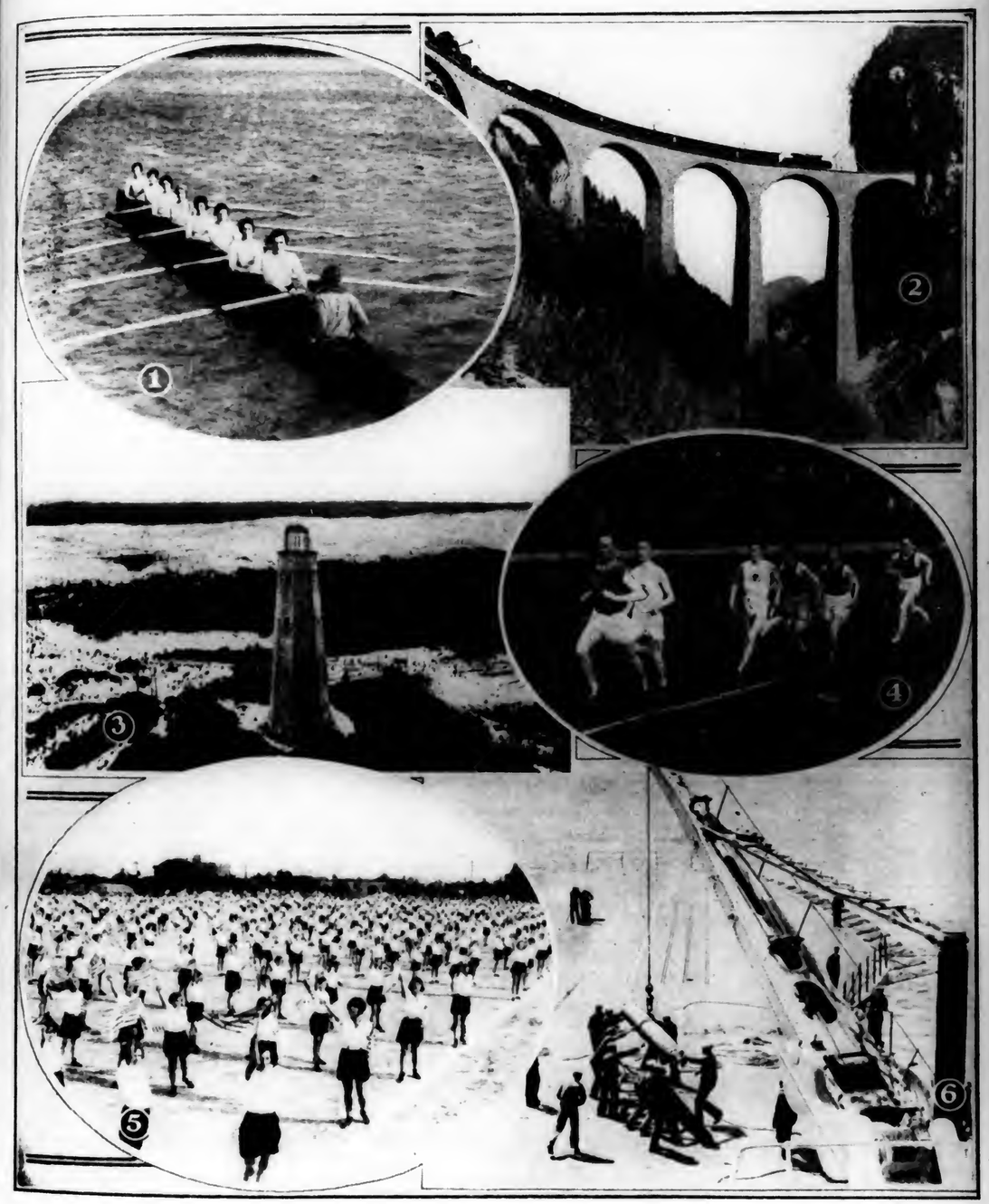
1 Support in a flower.
2 The [illegible] of an author.
3 Four [illegible] dollar bills.
4 Suggested by a physician.
5 Always found in a circus.
6 A [illegible] summer flower.
7 Loud [illegible].
8 Part of [illegible].
9 What [illegible] should do.
10 Insects.
11 [illegible] secretary.
12 Wedding anniversary.
13 What [illegible] have.
14 Be used in court.
15 What you [illegible] our hostess in put

MISSING LETTERS

"X" is in the place of the [illegible] to be supplied to answer each sentence.

1 May Fete a [illegible] [illegible].
2 Exx [illegible] [illegible].
3 Next [illegible] [illegible].
4 Exxx [illegible] [illegible].
5 Next [illegible] [illegible].
6 Next Give [illegible] [illegible] and pass the doctor.
7 Exxxx [illegible] [illegible] [illegible] [illegible].
8 Xxxxx Xxx [illegible] [illegible] [illegible].

PASSING EVENTS IN PICTURES



(copyright by Underwood & Underwood)

1 The Wellesley Senior crew photographed on their first day of practice. From right to left, Coxswain Peggy Hamilton, Chicago; Emily Rockwood New York City; Charlotte Selzer, Cincinnati, O.; Lydia Francis, New York City; Helen Klein, Cincinnati; Zella Wheeler, Pittsburgh; Helen Post, Constantinople; Rachael Haywood, Lindlay, Ohio, and Eleanor Webb, New York City.

2 Train on stilts. Photo shows a passenger train passing over the Landwasser Viaduct in the Grisons, Switzerland.

3 First lighthouse built in United States will be preserved as memorial. Photo shows the first lighthouse built by the United States after its formation. It will be preserved as a monument to the landing of the first permanent English settlement in America at Cape Henry, Va. The government has been asked to donate the lighthouse to the Society for the Preservation of Virginia Antiques. It was built in 1791 and was in continuous operation until 1879.

4 Philadelphia, Pa.—Paavo Nurmi, photographed just as he started to lead on the third lap of the two-mile run in which he set up a new world's record.

5 Long Beach, California.—Photo shows a wand drill participated in by hundreds of school girls of Long Beach. The fair pupils are using American flags for wands and thus making of their exercise a colorful flag drill as well.

6 Hoisting torpedoes aboard the U. S. S. Lexington. The Lexington was originally intended to be a battle cruiser, as provided for in the 1916 building program, but was converted into an aircraft carrier under the terms of the Washington Conference and commissioned by the Navy in 1927. She is a sister ship of the Lexington.

TIGHT BINDING TEXT CUT OFF

Garden and Truck Crops

By GILBERT S. WATTS

LAST fall we hilled a considerable area of celery as high as possible to afford maximum protection against damage from freezing. This was harvested with the aid of a blade trimmed old potato digger that disturbed the ridges very little. No leveling was done last fall and this spring on March 21st the tops of the ridges were dry enough to work and very mellow, whereas level ground was wet and sodden. A fine-tooth cultivator was run over the top of each ridge and peas, radishes, spinach and lettuce were sown. Although much cold and rainy weather has intervened these early planted crops are very far in advance of those that went into the ground two weeks later.



Of course, this is not a new scheme. Planting on ridges has been done for generations. Yet there is reason to believe that the practice should enjoy wider application. It may be the means of making earlier plantings and securing earlier crops in addition. Every job which can be got out of the way early leaves that much more time to take care of other work in proper season.

• • •

I WONDER sometimes whether the importance and far-reaching effects of timeliness in all farming and gardening operations are as generally appreciated as they should be. The evidence accumulated at experiment stations and the experience of countless growers have demonstrated repeatedly that plantings made at the proper time almost invariably return the greatest yields and highest profits. It is scarcely possible to do too much to insure all of one's operations being timely. It is so easy to fall behind and place the blame on the "backward season".

A few weeks ago my father called on the telephone and asked whether I had succeeded in planting all of my early cabbage during the two short days the soil was in working condition at that time. I had to reply that about two-thirds of my plants had been set. Almost two weeks of continued rains followed. Unquestionably we did well to make as large an early setting as was made, yet the bare fact remains that all of these plants could have been set if we had had just a little more power available to fit land at the opportune moment.

Unquestionably it costs money to maintain power, yet there are times when an ample reserve of power is worth much more than the cost. As this is being written at the beginning of May oats have not been planted on a number of farms, but the farmers with abundant power have been able to make very considerable plantings in the brief periods the soil has been in working condition. In a good many cases horses or mules in cooperation with a good tractor make the ideal solution of the power problem.

• • •

A FEW days ago a gardener of four score years called to purchase a small amount of fertilizer for his back-yard farm. We enjoyed a spirited discussion on gardening problems, and finally got around to the business of the moment. At this point my friend emphasized the fact that he was not fertilizing for the immediate crop and current year only but that he wanted to fertilize in a manner that would build up his land.

and what satisfaction it is to see land build up year by year.

• • •

I WISH some of those who are concerned about the possibility of increasing or maintaining fertility where vegetables are grown year after year could see one of my fields as it now stands in rye. Most of this area has been in a cash vegetable crop each year since 1921 and in each year but one a green manure crop, usually rye, has followed.

Last summer an adjoining area that had been in general farm crops was taken in with the field in question. In September rye was sown, the drill running directly across the former dividing line. Neither part ever received manure and now the rye on the section which has been worked the hardest is three feet high and so dense that it is lodging while that on the land which has had an "easy time" is not much more than half as high and lighter in color.

Commercial fertilizers, green manures and reasonable liming will maintain or advance fertility on a great many soils.

Asparagus

I am interested in growing asparagus. We have about three acres of grass. The cost of fertilizing has become very high, so I am writing to you for your advice on sowing soy beans in the asparagus about July 1st, then in fall about October 1st mowing it and letting it lie on the ground as a cover.

Is lime any benefit to an asparagus bed?

S. Evan Reynolds.

SOY BEANS or oats sometimes are sown in asparagus in late summer as soil building crops. However, I would hesitate to sow as early as July first, because the green manurial crop is likely to compete seriously for moisture with the asparagus if a dry fall sets in. In fact the danger of the green manure exhausting the moisture supply is such that the practice of growing a green manure in asparagus has never proved very popular.

It has been well proved that the asparagus tops if disked into the soil each year will maintain organic matter.

Most growers consider it desirable to have the tops stay green as late in the fall as possible. It is considered wise to let the tops ripen on the roots, as there is a loss to the plant if the tops are removed while still green.

If the soil is acid it is likely that asparagus will be benefited by liming almost to the point of neutrality.

G. S. W.

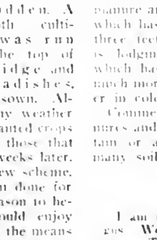
Tape for Grafting

I NOTICED in the Pennsylvania Farmer of May 4 something about grafting. This is the third year for me grafting with the common black tire tape that can be obtained at any garage. I would not start with wax any more, as I have had fine luck with the trees I grafted and I did quite a bit for my neighbor this spring.

This method is very good for small trees, as a small tree stock has not enough spring to hold the graft tight. The tape binds it and holds it in place. I put one on this spring about three-eighths inch in diameter and it is growing faster than any (this a cherry).

If the graft grows well cut the tape with a knife after harvest on the opposite side from the split place of the stub. When putting them on, cut pieces of tape so that they will reach down on each side of the stub about two inches and then wrap the tape around down as far as it is split and to extend about one-fourth inch above edge of stub and double over so as to form an air-tight job. I don't think any one will have trouble to get grafts to grow this way, if the graft is set right.

Albert L. Ott.





Home of Ira W. Miller, Cumberland County, Pa.

Orchard Windfalls

By S. W. FLETCHER

BEES and Pollination—At this writing (May 3) it appears that if there is a short crop of fruit in Pennsylvania this year it will be due more to poor pollination than to frosts. In general, the weather has not been favorable for insects to work on the blossoms.

Some years ago I saw a striking illustration of the value of bees on a Shenandoah Valley orchard. The weather during the blossoming season that year was cold and wet, with only occasional half days of sunshine. This apple orchard of twenty acres was near the house, where twenty five stands of bees were kept. It had a full crop that year.

Another orchard owned by the same man, and identical in age, varieties, site and soil, but one and a half miles away from any stands of bees, was almost a complete failure, although blossoming full. The bees worked that season only on the blossoms near the hives; they did not travel far afield in the uncertain weather.

Fruit growers who are interested in this subject should write for two recent publications; to the Michigan Experiment Station, East Lansing, Mich., for Special Bulletin 188, "Pollination of Orchard Fruits", and to the American Bee Journal, Hamilton, Ill. for their pamphlet, "Bluey Bees Bring Bending Branches". In the former, experiments are reported which indicate that Delicious, Jonathan, McIntosh and Grimes are among the best pollen producers of our standard varieties. The new variety of peach, South Haven, was found most satisfactory for pollinating J. H. Hale, which is self-sterile.

It is recommended that colonies of bees be distributed through the orchard before blossoming time, one colony to each acre. Bee keepers do quite a business in some sections of the country, especially in New Jersey, renting bees to fruit growers for the blooming season at $2 to $3 a colony. At Alder Run Orchard, which is adjacent to a great area of state forest and unimproved farm land, there never is any question about pollination; the trees hum with wild honey bees and bumble bees.

Damage by Deer

This sounds unbelievable, but it is true: "This past year a committee of the Massachusetts Fruit Grower's Association [illegible] a standard form with which to measure damage done by deer to fruit trees. This form has received the approval of Director Adams of the Department of Fisheries and Game, State House, Boston. It is at his suggestion that a school for the appraisers of deer damage claims to fruit trees is being held." The unbelievable part is that a State Game Commission can be brought to the point where it will admit that the hunt growers has any just claims against the state for recompense for such damage. We will come to this in Pennsylvania in time. In the meanwhile, our present regulations give partial relief.

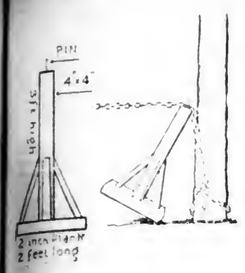
The State Horticultural Association has contended for several years that the deer population of Pennsylvania has increased to the point where it is a menace to farm crops, in certain districts. The open doe season of last year, in certain districts, was an admission of the truth of this contention. Even more convincing evidence is the large number of dead and dying deer found this year in some parts of the state. Some of these have a nasal parasite, but most of them appear to have died from starvation; the natural browse is short. With starvation threatening, no wonder deer devastate the farms. We have not settled the deer problem in Pennsylvania in its relation to agriculture, by any means.

County Spray Service

A majority of the commercial fruit growers of Pennsylvania now receive the County Spray Service, which consists of spraying directions, both time of application and materials, sent out by the extension specialists in entomology and plant pathology, through the county agent. The vital point in the Spray Service is timeliness of application with reference to local conditions and insect emergence, so that the sprays are most effective. In 1[illegible] 3 fruit apple growers, in 37 counties, requested and followed these directions. In addition, it was extended to [illegible] cherry growers, and 650 grape growers in Erie county, and to 1,350 peach growers in various counties.

The extension specialists report that the average yield of eight sprayed [illegible] counties covered was 3.2 tons an acre of four not sprayed, 1.8 tons. The orange return an acre from these [illegible] yards, with grapes at $40 a ton, was $114.01 from the sprayed and $[illegible] the unsprayed.

In 34 apple orchards sprayed according to the directions given in the Spray Service, the average loss because of [illegible] cent, as compared with 24 orchards [illegible] which no spray directions were followed, the loss from insects and [illegible] was 15 cents a bushel. The [illegible] 100 cents difference fairly represents the loss from imperfect spraying for insects in Pennsylvania, when applied to the 1928 apple crop of the state, the value of that crop would have been increased $4,23[illegible]00. This of course assuming that the larger crop of perfect fruit so produced would have sold for as much as the reduced crop does, which is not always the case.



How to Pull Posts

By R. U. BLASINGAME

EVIDENTLY there is a faster method for pulling fence posts than I outlined to Mr. Chas. Boden a week or two ago. I have had several letters from readers, all of whom indicate that there is one best way to do things for doing the job.

Mr. G. P. Williams states that in hooking the chain around the post close to the ground, and running it over an upright stood very close to the post, as the force pulls it has given a lift action and thus [illegible]. He states that during wet weather is the best time to pull posts, a couple of the fast that they slip out of the ground very easily. In dry ground in dry he advises digging around the post and pouring in a bucket of water.

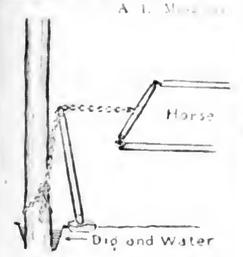
Mr. Simon H. Rumbaugh gives a sketch of the upright as shown [illegible]. The upright consists of a 4x4 [illegible] feet long nailed to a two inch plank two feet long and bolted [illegible] plank to the upright in such a way so as to give the upright a [illegible] inch plank sufficient stiffness to [illegible] the pull.

We greatly appreciate the assistance given us [illegible] hope that they will continue to [illegible] us out in questions [illegible] in position to answer.

• • •

I WROTE to Mr. [illegible] Huston pulling posts [illegible] issue of the Pennsylvania [illegible] pull posts easily [illegible] to 36 inches in diameter. A [illegible] of a wagon is all [illegible] against the post. Hook [illegible] long chain around [illegible] the ground, let the [illegible] el wheel and hitch a [illegible] end of the chain. You can [illegible] fast as you can hitch on.

A. L. Mc[illegible]



Water Aids in Pulling Post

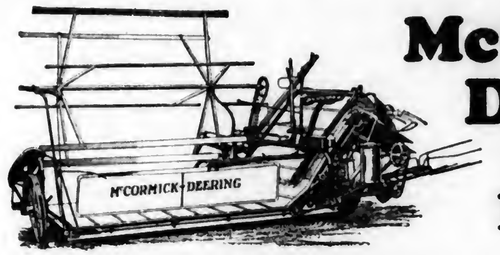
Stubborn Nails

I SUPPOSE every one has had the experience of trying to drive a nail or spike in a hard and dried wood, it bends and doubles over instead of forging its way through.

Take the nails or spikes and dip the points in axle grease and then tell me of the results obtained.

J. B. S.

Ball Player:: We gave the umpire 50 bucks to let us win the game.
Friend: And still you lost?
Player: Yeah—the umpire was crooked.



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There are many improvements on the new McCormick-Deering that your old machine does not have. They accomplish more in less time, with fewer stops in the field, have longer life, lighter draft, and are easier and more comfortable to operate. You will certainly want to get acquainted with these improvements. Check them against your old machine. Your local McCormick-Deering dealer will help you by showing you the new McCormick-Deering and pointing out the features your old machine does not have.

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TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

THE weakness of the hog market continued, and prices were off 20 to 50 cents for the week, in spite of some recovery at the close. Receipts for the week at 106,000 were a thousand larger than last week. Shipping demand was only fair. Eleven markets had 460,000 hogs this week, against 448,000 last week, and 553,000 the same week last year.

Average price of the week, at $10.85, compared with $11.05 last week, and was the lowest since the first of March. A year ago the average was $9.65, and the same two years ago.

To a considerable extent the weakness of the market is due to the large stocks of provisions on hand. The figures for the entire country came out this week. They show that on May 1 the total amount of pork in store was 992,610,000 pounds, comparing with a May 1 five-year average of 811,441,000 pounds. Only five times has there been a larger May 1 supply. Usually pork holdings start to decrease about this time of year, but during April there was a slight increase rather than a decrease.

It is the same kind of story with respect to lard. Here the total supply on hand May 1 was 184,705,000 lbs. It is the largest May 1 supply on record, a fact of some significance when we consider how far short of the record years hog slaughter has fallen this year. Here, too, there was a small increase in the supply during April. During the past few years lard stocks have reached their peak during July and August. Thus last year the May 1 supply of lard was 173 million, on June 1, 185 million, on July 1, 214 million, on August 1, 205 million, and from then on there was a rapid decrease to the end of the year. However, for the first two weeks of May this year, the report for Chicago shows a small decrease in the supply of both pork and lard.

The feeling in the hog market is quite definitely on the weak side. Some hold now that the low point in the market will come in June, when there usually is quite liberal marketing.

The earnings statement of George A. Hormel Co., Austin, Minn., for the second quarter of the company's fiscal year, shows a net of $670,243, nearly three times as large as for the same period a year ago. This is one of the so-called interior packers that are giving the big packers a lot of competition. This development of what a few years ago were small packers is responsible for the growth of direct buying.

Cattle Tone Weak

The cattle market wasn't much to brag about this week, in spite of the fact that the combined run at leading points fell some short of last week. Cattle marketing is moderate, but beef is not selling well, and consequently there is more weakness in the tone of the market than those who have cattle in the feed-lot would like to see.

Top was higher this week, but in general the market was lower 15 to 25 cents lower on everything except the best light steers. It was cattle weighing a little over a thousand pounds, two loads of Hereford, that brought $15.35, against a top of $15 last week.

Few stockers and feeders are offered, and even so the market was weak to a little lower this week, conditions in the fat cattle market not being such as to encourage those who have feed for cattle. The report on movement of stockers and feeders from the 15 leading markets came out the other day, and the figures for April were quite a surprise. The total for the month was 273,853 head, an increase of 35,570 over the month last year, and of 168,431 over February this year. It was the first time this year that the movement for a month was larger than for the corresponding month a year ago. However, the four-month movement is practically 100,000 short of the first third of 1928, a decrease of about 12 per cent.

The large April movement was evidently due largely to more cattle moving out of Texas to northern pastures, since three markets in Texas accounted for 122,284 head during the month, against 95,421 a year ago.

Weakness in the hog market will of course not help here.

Lambs Much Lower

The sheep situation will bear watching. There is rather striking evidence of expanded production, though it is not thought that there will be any immediate effect of far-reaching importance in the market. The fact that April marketing of sheep and lambs at leading points was the largest on record for the month has already been cited in this column. Now comes the April figures on the movement of sheep and lambs to the country from the 15 leading markets. The increase in the number over April last year was 73,426. The total increase for the first four months of the year was 183,178, a gain of 40 per cent over the first third of last year. Dry weather in California has some effect in boosting the April figures, but even allowing for that there is apparently a substantial increase the result of expansion in the sheep business.

The lamb market went steadily down all this week, losing $1 to $1.50, while the sheep market was 25 to 50 cents lower. At the close best native shorn lambs were selling at $13.50. There was a substantial increase in receipts. Receipts here were 90,000, against 77,000 last week and including 54,000 California lambs. Government reported eastern markets moderately supplied with lamb and trade steady but packers and lamb was hard to sell.

Wheat Still Lower

Weakness in the grain market continues, wheat losing two or three cents more this week. The cut in grain rates has not helped. In fact, it has been met by a reduction in the Canadian rate, which was expected. Corn and oats both gained a little, due to a good cash demand and bad weather reports. The weather has been unfavorable for spring work. Much oats seeding was delayed and some abandoned, on account of the wet, and corn will probably average at least two weeks late in planting.

A railway official says that the temporary reduction by the railroads in the freight rate on export wheat and flour was unquestionably intended as a subsidy to the wheat grower and was made at the request of the government. "There are many, however, who do not believe that the reduction will be of any benefit to the farmer," he says. "Canadian railroads have already made corresponding reductions on export wheat from Canada. Moreover, the price of wheat on the Liverpool market has dropped more than sufficient to consume the reduction in rate since that reduction was announced.

"As long as other wheat-growing countries have many million bushels of wheat in excess of what they can consume within their own borders, they will be able to compete with even the Liverpool parcels, even were our wheat carried to the seaboard free of charge by the railroads. Meanwhile no one contends that the action taken does not mean a reduction of some millions of dollars in the revenues of the railroads which are already small. This is good for either themselves or the people at large."

Horse Trade Weak

The horse market was rather wet 2, this week. Some 200 head were sold at top of $225 for a single horse. 6 and team blacks are quoted at $450 to $500 not having much for the producer who is shipping and selling overseas on their own account.

Iowa Farm Return

Iowa records show that 453 farmers in that state had a net return of $458 last year, after allowing "on all operating expenses, interest on the farmer's capital and wages for the farmer and his family at the rate of $60 a month. The average value of the land, as figured by the farmers themselves, was $146 an acre.

Egg Record

The world's egg record is claimed to five White Leghorns at the Illinois state testing plant at Quincy. The hens are owned by a Kansas man and in 31 days laid 152 eggs. Each of the hens laid an egg a day for five successive days.

Turning to Beans

That soy bean acreage will take a jump in Illinois this year on account of the late season is indicated by the demand for and shortage of seed. Best seed is quoted at $2.50 a bushel. Watson.

Chicago, May 18, 1929.

Miscellaneous Produce

York

Butter. Country, 50@55c, separator, 55 @60c.

Eggs. Fresh, per doz., 30@31c.

Poultry. Hens, per lb., 28@30c; Leghorns, dressed, $1.25@1.50 each; heavy, $1.50; springers, 30@40c each.

Vegetables. Potatoes, 75@90c per bu.; cabbage, 5@15c per head; lettuce, 10@20c, bd.; spinach, 15@15c ¾ pk.; celery 8@15c stalk, onions, green 5@8c bunch, asparagus, 10@15c per bunch; rhubarb, 5c bunch; radishes, 5c bunch; carrots, 8@10c bunch; turnips, 15c bu.

Apples. Per bushel, $1.50@3.

Strawberries. Shipped, 20@30c box.

Philadelphia

Eggs. Firsts, 35c; seconds, 28@28c.

Butter. Creamery, tubs, 92 score, 44c; 90 score, 42@42½c.

Poultry. Fowls, 33@38c; broilers, 26@ 48c; old roosters, 18@21c; pigeons, per pr., 35@50c.

Apples. U. S. No. 1, per bu., nearby, Romes, Winesaps, $1.75@2.25.

Strawberries. E. S. Va., 32-qt. crate, $1 @4.75.

Asparagus. N. J., Del. & Md., doz. bunch crates, green, large, $2.75@3.75.

Beans. Snap, Fla., ¾ bu., hamps., wax, $1.50@1.75.

Cabbage. E. S. Va., ½ bbl., hpr., 50@ 65c.

Cucumbers. Fla., ¾ bu., $1.50@2.

Lettuce. California Iceberg, crates, 4 to 5 doz., $6@8.

Onions.—Texas crates, yellow U. S. No. 1, Bermudas, $1.50@1.65; yellow boilers, 75c.

Potatoes. Pa., round whites, per 120 lbs., $1.40@1.65; Fla., new stock, per bbl., Spaulding Rose, U. S. No. 1, $5.50@6.

Sweet potatoes, N. J., hpr., yellow, $2 &$2.25; Md. and Delaware, yellows $1.85@2.

Tomatoes. Fla., choice to fancy, 83@4.

Radishes. Nearby, bu., 50@60.

Rhubarb. Nearby bunches, 10@3c.

Lancaster

Butter. Country butter, 59@59c; creamery, 59@59c.

Poultry.—Chickens, dressed, $1.25@2.50 each; springers, 75@$1.25 each; ducks, $1.50@2.50 each; squabs, 25@50c each.

Eggs. Fresh eggs, 30@33c.

Vegetables. Asparagus 15@20c per bunch; beets, 10@15c per bunch; egg plants, 15@30c each; string beans, 30@35c; per ¾ pk.; beans, Lima, 35c per pt.; box; cabbage, 10@20c per head; carrots, 8@ 15c per bunch; cauliflower, 20@35c per hd.; celery 15@25c per bunch; cucumbers, 8@ 15c each; spinach, 12@15c per ¾ pk.; rhubarb, 5@10c per bunch, peppers, 5@8 each endive, 10@15c per head, lettuce, 10@ 20c per head radishes, 5@10 per bunch mushrooms 25@30 per pt box, peas, 25 @30 per ¾ pk. onions 20@25 per ¾ pk. green onions 5@10 per bunch.

Potatoes. Old, per bu., 60@75c, new, 25@30c per ¾ pk.

Sweet potatoes. 20@25c per ¾ pk.

Baltimore

Butter. Creamery, prints 44@45c; rolls and dairy prints 34@35c; packing stock, 31c, butterfat, lb 42@44c.

Eggs. Md. Pa. nearby firsts thru cases 29½c; western firsts 29½c; seconds 28½c.

Live poultry. Hens, col. 4½ lbs. and over, 33@35c; small to medium, 28@32c, Leghorns, 25@30c; guineas young 15c to or over each 75@1.25; roosters 18@20c; ducks, 25@30c; pigeons, pair, 25@40c; squabs, 30@50c.

Potatoes. Md., 150 lb. sack, $2@2.25; new, No. 1, bbl., $6@6.50.

Apples. Fancy pack, bu., $1.50@2.75.

Asparagus. Per crate choice to fancy, $1.50@3.50.

Onions. 100 lb. bag., $1.25@1.50.

New York

Butter. Creamery, higher than extras, 43½@44c; extras, 43c; firsts, 40@42½c.

Eggs. White eggs, current receipts, average extras, 33½@34c; extra firsts, 32½ @33c; mediums, 31@32c.

Poultry. Live, by freight, fowls, 37c; broilers, 30@40c; ducks, 28c; turkeys, 15 @20c.

Apples. Eastern and Southern, bu., baks., $1@1.50; barrel stock, $3@11.

Pittsburgh

Butter. Creamery, prints, 92 score, 49½@50c; tubs 48½@49c; fresh tubs 46 @47c.

Eggs. Fresh, select white, 34@36c; brown, 31@32c, current receipts, 29@30c.

Poultry. Heavy hens, 32@34c; Leghorns, 30@32c; broilers, 45@47c; roosters, 18@20c; ducks, 30@32c; geese, 26@27c; pigeons, 40 @50c, per pair.

Apples. Ba. basket, U. S. No. 1, 2½ in. N. Y. Baldwin, 82 count to basket, U. S. No. 1 N. Y. Rhode Island Greening, 88 count to basket, $3@3.50.

Asparagus. Del. & Md., doz. bunch $1.25@1.50.

Cucumbers. Ohio hothouse, 2 doz., $1.90 @2.

Mushrooms. Pa. 3-lb basket, $1.25@1.50.

Potatoes. Per 150-lb. sack, U. S. No. 1 Mich. Rurals, $1.60@1.75; Penn'a Whites, $1.75@1.85; 2 bu. sacks, Maine Green Mts., $1.75@2.

Spinach. Virginia and Md., bu., $1@1.25.

Radio Talks

Answers to questions on farm production and management will be given from Washington, D. C., during the week of government radio talks by Department of Agriculture workers broadcasting June 3, through a network of N. B. C. stations. Each day the talks begin at 12:45 P. M., Central Standard Time.

Monday, June 3, N. A. Olsen, chief, Bureau of Agricultural Economics, "Functions of the Foreign Service Concerning European and Oriental Markets." L. F. Stone, agricultural commissioner to Germany, "Highlights on the Doings of Foreign Agricultural Markets."

Tuesday, June 4, Dr. John R. Mohler, chief, Bureau of Animal Industry, "Government Policy toward Prevention and Treatment of Livestock Diseases." Dr. E. C. Branch, associate chief of the Bureau, "The Hog Cholera Situation."

Wednesday, June 5, W. W. Kitchen, assistant chief, Bureau of Agricultural Economics, "Expansion of the Sphere of Governmental Market Reports." J. B. Kincer, in charge of meteorological work, United States Weather Bureau, "The May Weather Report, and Forecasting of Crop Yields."

Thursday, June 6, W. A. Wheeler, in charge of the hay, feed and seed division, Bureau of Agricultural Economics, "Trends in the Alfalfa Market."

F. L. Parker, in charge of hay inspection and standardization investigations, "Producing High-Grade Alfalfa Hay."

Friday, June 7, J. E. Barr, marketing specialist, Bureau of Agricultural Economics, "Sea Island the Birth of a New Industry."

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A UNIVERSAL Possession of the air has been sensed by Lewis J. Taber, Master of the National Grange, for Friday evening, June 7, to be broadcast through a nationwide hook up of N. B. C. stations from Washington, D. C.

Arthur M. Hyde, Secretary of Agriculture is the chief speaker on this program which is coming at 9:00 to 10:00 p. m. Eastern Standard Time, is expected to reach the homes and community meetings of over a million Grangers.

Senator Arthur Capper of Kansas, Governor John Kitchen of Michigan and Governor Gifford Pinchot of Pennsylvania are also on the Grange original expect to be here to hail Congressman Ruth Hanna McCormick of Illinois, and Congressman Marvin Jones of Texas make up the group of speakers for this occasion which according to the Grange head, promises to be the greatest group of agricultural interests in the history of broadcasting." Music will be furnished by the Imperial Marine Band of Washington, D. C.

WEEKLY WOOL MARKET REVIEW

Boston, May 17. The volume of trading in domestic wools of 48s, 50s and finer grades has shown a considerable improvement during the past week. The inbred fine sales have been of only moderate proportions, however, according to reports, but the aggregate has been fairly large. Prices are slightly easier than those quoted in the previous week.

Sales were reported on moderate quantities of 64s and finer Ohio deliveries at prices in the range 68@70c, in the grease, and 58s 60s strictly combing fleece wools were sold at 55@56c, in the grease. Choice 56s Ohio fleece wools brought 66c, while average grades of this quality sold slightly under this price. The 48s, 50s and lower grades were slow.

Trading on graded territory wools has been uneven. Sales were reported on a good many strictly combing wools at about $1, scoured basis.

Trading is at last reported in the West. It is believed that at least 25,000,000 pounds of wool has been purchased or taken on consignment. The Jericho pool, comprising about 8,000,000 pounds, has been consigned to a Boston dealer in Wyoming fine and fine medium clips have sold at 58@60c, grease basis, while three eighths staple to low blood lines brought 53@55c. Dealers are getting some medium wool in Ohio at 56 and some fine wool at 58c.

Domestic Wool Quotations
Grease Basis, Ohio and Similar

64s 70s, 80s (fine) strictly combing 66@ 68c.
64s 70s, 80s (fine) French combing 64@ 66c.
64s 70s, 80s (fine) clothing 58@60c.
58s, 60s, ¼ blood) strictly combing 65@ 68c.
58s, 60s, ¼ blood) French combing 62@ 64c.
58s, 60s ¼ blood) clothing 55@57c.
56s, ⅜ blood) strictly combing 62@64c.
56s, ⅜ blood) clothing 52@54c.
48s, 50s, ⅜ blood) strictly combing 60@ 62c.
48s, 50s, (¾ blood) clothing 46@48c.
46s (low ¾ blood) strictly combing 60@ 62c.
36s, 40s, 44s (common and braid) 50@52c.

H. L. Shrader, extension poultry husbandman, "Talking Turkey."

Produce Market Review

NEW potato prices were lower during the week and old stock was draggy. South Carolina is now the leading source of new and on Thursday shipped nearly 30 cars. Shipments from Norfolk district are anticipated along toward the end of the week. The acreage of potatoes in the Southern states has been reduced about one-third from last years plantings, according to government estimates and it appears that the average yield per acre may be 10 per cent less than in 1928. The commercial crop in the group of states from Virginia to Georgia and westward to Texas is forecast at only 20,000,000 bushels as compared with 32,750,000 last spring. Virginia will likely have one-third fewer potatoes than in 1928. North Carolina and Louisiana a little more than half of last years commercial crop and South Carolina only about one-half of its 1928 production. South Carolina Cobblers sold around $3.50 per bushel in the Eastern markets to the end of the week. The best Florida Spaulding Rose brought $6.25@7 a bushel.

The asparagus market improved slightly during the week, due largely to lighter receipts. Cool and rainy weather held back the grass and heavy winds Dispatches in some sections of New Jersey resulted in considerable quantities of stocked steel. I ended the pack house of one large grower in Central Jersey on Saturday and there was not a straight stalk to be seen. He said he that it looked fine on Wednesday but by Saturday it was very crooked. At the close of the week large green asparagus sold at $2.75@3.50 per dozen bunches with extra fancy stock bringing up to $4.50. The new leaders and small sizes sold at $1@3. The situation in New York was about the same as on this market. The demand was more active and prices were somewhat higher. Pennsylvania asparagus ranged from $2 to $3.50, New Jersey from $1.25 to $1.50 and Maryland and Delaware from $1.50 to $3.

Strawberry prices fluctuated considerably during the week due to variations in supplies. Truck receipts of the Eastern Shore of Virginia and from Maryland and Delaware were heavy during the early part of the week but later the supply was lighter and the market improved. Receipts in Philadelphia are running lighter than at this time last year and prices are accordingly higher. The government crop report however, estimates that the crop is heavier than a year ago.

Semi of the intermediate strawberry states, from Maryland, Delaware and New Jersey westward to Illinois, Kansas, Missouri and parts of California expect a combined crop of 108,641,000 quarts, or nearly one-fourth more than last year. The acreage was reduced but average yield was indicated at the high figure of 2,000 quarts per acre. Delaware and New Jersey show slight decreases, but Maryland shows the largest gain and a crop of 20,445,000 quarts is estimated compared with 16,105,000 last season.

Prices in Philadelphia ranged from $2.50 to $3.50 per 32-quart crate at the close of the week. A few New Jersey berries were offered in New York.

The apple market held firm with good fruit slightly higher. Truck receipts of Romes, Winesaps and Paragon sold at $1.75 @2.25 per bushel in Philadelphia with Baldwins slightly considerably higher. Shipments of apples have increased and so far this season 126,000 cars have been shipped compared with 50,000 for the entire last season. On May 1 the total holdings of apples in storage were 10 per cent lighter than those of a year ago and 20 per cent below the average for May 1. The supply in barrels was 21 per cent greater than the average but supply of basket stock. One cause for this is the fact that the basket is becoming more popular as a container for apples and is more widely used than in former years.

The Philadelphia egg market was steady throughout the week. Buyers still resisted any price advance but very firm country offerings controlled the situation. Indications are that there is less poultry on the farms than a year ago so is shown by the egg market on live and dressed poultry. Western shippers are paying prices for eggs which will not enable them to sell at the quoted eastern prices and receivers are storing them for their own account rather than meet the buyers' ideas of price. Nearby eggs have shown better quality this week due possibly to cooler weather.

Irregularity in weight and pack continues to work to the disadvantage of nearby receipts. Desirable lots of nearbys, mixed colors, ranged during the week from 31c to 32½c on street sales, with whites irregular, ranging from 35c to 37½c according to weight and uniformity. White eggs have shown some accumulation and receivers have been storing the better lots.

There was a better demand for nearby white eggs on the New York market during the later part of the week and prices moved from 35c to 36c. Nearby browns ranged from 31@32½c and mixed colors 28 @29c.

The butter market was steadier with no material change in prices. The improvement in quality and the general price declines and the fact that buyers believed that butter was cheap added firmness to the market. Receivers placed considerable of their better goods in storage. Light color butter was in fairly active demand on the eastern markets for storage purposes, as much of the trade expects natural grass color in the near future.

Heavy live fowl were plentiful on the New York market and sold slowly. Light fowl were scarce and in demand. Broilers were in good demand especially Rocks and Reds. Leghorn broilers were freely offered and were only steady. Colored fowl brought 28@32c per pound and broilers 25@36c. Fresh killed broilers were in moderate supply but the market was weaker for average offerings. A few fancy worked out at a premium. Most of the broilers arriving were poorly graded with large sizes mixed with the small.

W. R. W.

LIVESTOCK

PITTSBURGH
Cattle

MONDAY'S receipts were light, only 27 railroads. Steers were generally steady to strong. Best heavy and best light steers brought $11.50 in both cases the tops being about as good as come to this market. Two carloads of yearlings went at $11.50 and two carloads of heavy steers at $11.40 @11.60, with other good but not top weight steers at $11.25. A few plainer weights steers but fat brought $8.50@13.75. Good light and handy weight butcher steers sold around $11 with only fair kind $10.40 @11.50 and anything below $10 very ordinary in condition and quality. No feeder cattle appeared and none expected. Some new heifers at around $80 lbs. brought $13.50 but good ones were scarce and fair kind went at $11@12. A few choice fat cows sold at $11 but many good enough to command over $10. Both fat cows and canners were steady the latter going at $6@7 largely, some old shells down to $5 or a little less. Butcher bulls were lower. A couple of extra quality brought $11, but $10@11 was practically the top of the market. Bologna bulls were all wanted at $9 @10 and looked dear as compared with the better kind.

Choice grain-fed steers, 1,300 lbs or over	$11.25@11.50
Good to choice do	10.00@11.25
Fair to good do	8.50@10.00
Plain heavy steers	7.00@8.50
Choice handyweight steers	11.25@11.50
Good butcher steers, 1000 to 1,150 lbs	11.00@11.25
Fair to good do	10.50@11.00
Choice fat cows	10.00@10.50
Good to choice do	9.50@10.00
Fair to good do	8.50@9.50
Common to fair do	6.50@8.50
Choice heavy bulls	10.25@10.75
Choice handy butcher bulls	10.00@10.25
Good handy bulls	9.75@10.00
Fair to good bulls	9.00@9.75
Common to fair bulls	8.00@9.00
Inferior bulls	6.00@8.00
Choice fat heifers	11.25@11.50
Good to choice heifers	10.50@11.25
Fair to good heifers	9.00@10.50
Common to fair heifers	7.00@9.00
Choice fat cows	9.00@10.00
Good to choice fat cows	8.00@9.00
Fair to good cows	7.00@8.00
Common to fair cows	6.00@7.00
Canners and cutters	5.00@6.00
Fresh cows, calf at side	50.00@150.00

Monday's Representative Sales
Steers

No.	Wt.	Pr.	No.	Wt.	Pr.	No.	Wt.	Pr.
20	1412	11.50	24	1069	11.50	21	985	11.50
19	1410	11.40	19	1215	11.35	18	1220	10.25
16	1218	11.25	4	1170	11.00	12	1068	10.00
20	1046	11.00	12	896	11.00	26	1008	13.00
18	1245	13.75	22	1106	13.70	17	1327	13.60
3	1046	13.60	18	1228	13.50	15	952	13.50
10	887	13.50	15	1110	13.40	11	1092	13.25
14	1016	13.25	5	1004	13.25	5	980	13.25
10	1193	13.00	8	1072	13.00	7	1073	13.00
8	971	12.75				5	880	12.50

Cows and Heifers

3	693	12.00	2	845	11.50	2	880	13.50
1	1280	10.75	1	1070	10.25	1	980	10.25
1	1160	10.00	5	1076	10.00	2	895	10.00
2	770	10.00	3	693	10.00	1	1100	9.50
1	985	9.00	1	750	9.50	1	1180	9.00
1	1170	9.00	2	905	9.00	1	950	8.75
1	1010	7.75	1	810	6.50	5	758	6.50

Bulls

1	1580	11.00	1	1120	11.00	1	1830	10.75
1	1350	10.75	8	1312	10.75	1	1488	10.05
5	1250	10.05	1	1340	10.50	1	1790	10.00
1	1420	10.00	1	870	9.25	1	950	9.00

Hogs

Monday's supply was about 35 double-deck carloads, which was more than enough for the good of the selling side. Prices were 15@25c lower than at the close of last week, when two decks brought $11.75. Good handy weight hogs brought $11.50 as a rule, with mixed lots not too heavy at the same figure and weightier kind $11@11.40. No decks of heavy hogs appeared, but a few brought $11@11.25, and probably extreme weights would fail to sell up to $11. Light Yorkers, 120 lbs or less brought $11@11.25, with good pigs $11 and others less. Demand for sows continues good and they went at $10 if straight and smooth.

Heavy wts., 250 lbs. or over	$11.00@11.25
Heavy mixed	11.00@11.50
Medium wts., 180-200 lbs.	11.45@11.50
Heavy Yorkers, 165-180 lbs.	11.45@11.50
Light Yorkers, 125-150 lbs.	11.00@11.25
Pigs, 90-100 lbs.	10.50@11.00
Roughs	9.50@10.00
Stags	6.00@8.00

Sheep and Lambs

The market for sheep and lambs continued on the down grade last week. Monday's supply was light, about 9 carloads including holdovers, but the demand was narrow and trade rather slow. Sheep were about steady with last week's close, best lately wethers going at $8 and half fat kind at $6.50@7. Common sheep sold at the lowest prices of the year. Lambs were lower, with $14 the outside figure. One double of well fed Indiana lambs sold straight at this figure. Culls brought $8@ 10 largely interior stuff less. Receipts of spring lambs continue light, the crop being late as a rule. They were lower at $17 for the best here.

Good to best wethers	$ 7.75@ 8.00
Fair to good wethers	7.25@ 7.75
Good mixed	7.00@ 7.25
Fair to good, do	6.00@ 7.00
Common to fair	4.50@ 6.00
Inferior sheep	3.00@ 4.50
Good to best Lambs	13.75@14.00
Medium lambs	11.00@12.50
Culls and common	7.00@10.00
Early lambs	13.00@17.00

Calves

Receipts were liberal, about 1,550 head. The market was lower at $15 for best veal calves, $10@12.50 for fair to good culls and $7@9 for inferior kind.

LANCASTER
Cattle

Lancaster, May 20.—Four hundred head made up the supply. Market slow. Fat stock steady with last week's close. Top was $13.40 for steers averaging 1,240 lbs. Bulk of sales on steers was at $12.50@13.25.

With 200 calves on sale the market was slow to weak with top at $16.50.

Good steers	$13.00@13.75
Medium to good	12.00@13.00
Common to medium	8.75@12.00
Good to choice heifers	10.50@12.00
Medium and common	7.75@10.50
Good to choice cows	8.25@10.00
Common and medium	6.75@ 8.25
Low cutter and cutter	4.00@ 6.75
Good to choice beef bulls	10.50@11.75
Cutter, common and medium	7.75@10.50
Feeder and stocker cattle	7.50@12.00
Good to choice calves	14.00@16.50
Medium	12.00@14.00
Culls and common	7.50@12.00

Hogs

Receipts of hogs amounted to around 300 head. The market was slow and about steady.

Heavy weights, 250-350 lbs.	$11.00@12.00
Medium weights, 200-250 lbs.	12.00@12.50
Light weights, 160-200 lbs.	12.00@12.50
Packing sows (rough and smooth)	8.25@11.00

CHICAGO
Cattle

Chicago, May 20.—With 18,000 head of cattle on sale the market was 15@25c lower. Top steers brought $14.80.

Common to fair yearlings	$11.50@12.25
Fair to good yearlings	12.25@13.00
Good to choice yearlings	13.00@13.85
Choice to prime yearlings	13.85@14.80
Common to fair steers	11.50@12.00
Fair to good corn feds	12.00@12.75
Good to choice corn feds	12.75@13.50
Choice to prime corn feds	13.50@14.60
Common to good cows	7.75@ 9.75
Good to prime cows	9.75@12.00
Heifers, common to good	9.00@12.00
Heifers, good to prime	12.00@14.75
Canners and cutters	6.00@ 7.50
Interior light bulls	8.50@ 9.00
Bologna bulls	9.25@10.25
Fair to choice butcher bulls	10.00@12.00
Stockers, common to fair	10.00@11.25
Stockers, fair to good	11.25@12.00
Stockers, good to choice	12.00@12.75
Fancy yearling stockers	12.75@13.25
Stocker and feeder heifers common to choice	8.75@11.00
Stocker and feeder cows	7.75@ 9.00
Feeders, common to fair	10.25@11.25
Feeders, fair to good	11.25@12.00
Feeders, good to choice	12.25@13.00
Fancy selected feeders	13.00@13.75
Milkers and springers	90.00@125.00
Common to best vealers	10.00@14.50

Hogs

Thirty-seven thousand hogs were on sale. Light weights were 50@10c higher with tops at $11.35; other kinds steady.

Heavy butchers, 270 lbs. up	$10.50@10.85
Mediums, 225 to 265 lbs.	10.70@11.00
Lights, 190 to 225 lbs.	10.90@11.15
Selected, 160 to 190 lbs.	11.00@11.35
Mixed packing, 270 to 350 lbs.	9.70@10.05
Heavy packing, 350 to 500 lbs.	9.55@ 9.75
Roughs, 300 to 500 lbs.	9.35@ 9.50
Stags, subject 20 lbs. dockage	9.00@10.00
Pigs, best grades	9.25@10.00

Sheep

The supply of sheep and lambs amounted to 16,000 head. Market steady.

Wethers, all ages	86.00@10.50
Yearlings	7.75@12.00
Western ewes	4.75@ 7.50
Native ewes	4.25@ 7.50
Fed western lambs	12.00@13.75
Native lambs	8.75@13.50
Feeding lambs	12.00@13.75
Native spring lambs	13.00@17.00

Wooled stock $1 to $2 above foregoing quotations.

Stock Movement

	Cattle	Hogs	Sheep
Receipts this week	39,927	108,931	86,577
Last week	40,888	105,811	77,425
Year ago	44,800	131,968	77,887
Shipments this week	13,163	18,109	26,071
Last week	12,746	21,140	29,258
Year ago	17,327	30,988	30,312

English News Letter

(Continued from page 8.)

again this year, the recent changes in industrial developments will be most noticeable. Workshops and factories are springing up where but a short time ago a rural place remained. The tendency is for industrial concerns always associated with the Midlands and northern England to spread south.

Commercial Stock News

At the present time most classes of commercial livestock are meeting a fair trade in the leading markets although in places stock cattle are inclined to drag a little.

To Meet American Team

Buckingham Royal Latin School Calf Club has been chosen to meet an American team in a judging contest at Brighton next June.

HELP WANTED

FARMER and DAIRYMAN, able to run tractor and truck. Married small family. Only sober and energetic man need apply. Address Box 149, Penna. Farmer, Pittsburgh.

WRITE for this Chick Catalog

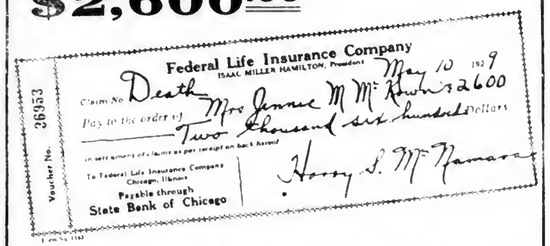
CHICK PRICES REDUCED Order Today. Get our High Quality chicks from carefully selected, well-bred stock. Prices shown below effective May 16th. Write or wire your order. Immediate delivery. "A" Grade of the following, per 100. Bl. and Wh. Rocks, Buff Orps., Hollywood Wh. Leghorns $13.00; White Wyandottes $14.00; Buff and Brown Leghorns $11.00; Heavy Mixed Chicks $10.00. Light Mixed Chicks $9.00. 50 less per chick in lots of 500. 10 less per chick in lots of 1,000. Postpaid. 100% live delivery guaranteed.

BIG FREE Catalog

NEW LONDON CHICK HATCHERY COMPANY, Box 2, New London, Ohio

TIGHT BINDING TEXT CUT OFF

Another Insurance Claim Paid
$2,600.00



Automobile Accident Fatal

The above is a reproduction of a check for $2,600.00 that was paid to the widow of Wm. McKown, Lockburg, Pa., who was instantly killed when a small truck in which he and three other men were returning from work, overturned as the driver attempted to pass another car. The accident occurred near Casa Grande, Arizona, where he and his wife were spending the winter.

Over $20,000.00 Paid
To Pennsylvania Farmer Readers

In the three years Pennsylvania Farmer has been offering its subscribers this insurance protection over $20,000 has been paid to policy holders. Any and all members of a reader's family between the ages of 10 and 70 years may secure one of these policies upon the payment of $2.00 per each policy.

Here Is What It Is Worth

$10,000.00 For loss of life by wrecking of railroad passenger car or steamship. $25.00 per week for 13 weeks for total disability.

$3,000.00 For loss of life by wrecking of St. Car, Omnibus, Taxicab Automobile Stage or Passenger Elevator. $15.00 per week for 13 weeks for total disability.

$500.00 For loss of life while riding as a fare-paying passenger in an Airplane, Aquaplane, or Dirigible Airship. $5.00 per week for 13 weeks for total disability.

$2,000.00 For loss of life by wrecking or being accidentally thrown from any horse-drawn or tractor driven car or motorcycle or while using or operating Farm Waggons and other farm machinery which are not horse-driven or horse-drawn $10.00 per week for 13 weeks for total disability.

$1000.00 For loss of life by being struck or knocked down while on public highway or by being struck by lightning, cyclone, tornado, collapse of outer walls of a building or by the burning of any church, theatre, school, or municipal building. $7.00 per week for 13 weeks for total disability.

There Is Need For This Protection

One out of every 11 deaths is caused by accidents—over 30,000 people are killed or injured every day—over 7,000 passengers are killed every year in railroad accidents; 57 automobile accidents occur every hour. Over 25,000 persons were killed and over 700,000 injured in highway and street accidents throughout the nation in 1927. No one is immune. Fill out the application blank below and mail today with $2.00. Tomorrow may be too late.

Notice Not more than one policy can be issued to any one person, but any or all members of a reader's family may each secure one.

Application

Print each name and address clear) and carefully. Illegible names will delay the delivery of your policy.

for $10,000.00 Farmers' Special Accident Insurance Policy issued to readers of PENNSYLVANIA FARMER

PENNSYLVANIA FARMER
Insurance Department, Pittsburgh, Pa.

I am a reader of PENNSYLVANIA FARMER, more than 10 years of age and less than 70 years, not deaf or blind or crippled to the extent that I cannot travel safely in public places, and hereby apply for a $10,000.00 Farmers' Special Automobile, Travel and Pedestrian Accident Policy in the Federal Life Insurance Company issued through PENNSYLVANIA FARMER. Enclosed is $2.00 (two dollars)

Full name ..... Age.....
Print plainly and carefully

Postoffice ..... State.....

R. F. D. ..... Occupation .....

Postoffice ..... State..... Relationship of Beneficiary .....

Full name of beneficiary .....

Farm and Dairy

By L. W. LIGHTY

EVERY FIELD ... [illegible] soil, whether ... the earth in the pasture. ... [illegible] to get the cattle ... milk. Methods ... [illegible] used to make ... milk, but ... [illegible] is to feed ... the cows ... possible.

... [illegible] ... the cows ... the pasture ... [illegible] ... [illegible] ... [illegible]

SELL or Consign Your . . **HAY** To G. A. Schnelbach Established 1861 Pittsburgh, Pa

WANTED—Farm Products Poultry, Eggs, Potatoes etc. Write for net offers. **GIBBS & BRO.,** 321 N. First St., Phila., Pa. Dept. A.

DAIRY CATTLE

Holstein Bulls for sale from an accredited herd, bred from calves to service-able age, from K. P. 40 lb. 52 lb. 4 tenth. butter and 455 lb. 4 day females. **Crystal Spring Stock Farm,** Littlestown Pa.

TWO RICHLY BRED, thrifty, registered Jersey bull calves, 7 months old, At prices to sell. **W. F. McSPARRAN,** Furnace, Pa.

Two Guernsey Bulls ready for use, from im-ported tested herd. A. R. Records on request. **WM. A. DERSTINE,** Stillersville, Pa.

REGISTERED GUERNSEYS for sale by owner. Entire herd of registered Guernseys, abortion tested and tuberculin accredited. Address **BOX 118,** Penn'a Farmer, Pittsburgh, Pa.

GUERNSEY BULL CALVES. Fine stock and well bred to vent. Will sell at little better than veal price. Dams on A. R. test. Write **William Baumgartel,** Box 82. Sewickley, Pa.

BROWN SWISS BULL CALVES or YEARLINGS. Will exchange for Delivered Chancey I. Friedline, R. 5. Somerset, Pa.

HORSES

HORSES—Registered Belgians Young stallions and mares. Write fully your wants or better come and see. **HYLLMEDE FARM,** Beaver, Pa.

PERCHERONS Three year gray stallion, $600; one year gray stud, $200; one year mare, $125.00. Others at reasonable prices. **Wm. A. Reid, Oxford, Chester Co., Pa.**

SWINE

Chester White Pigs Properly mated. Ask us about these. **R. L. MUNCE,** Conoshaugh, Pa.

CHESTER WHITES.—Pedigreed big type Cham-bloods, all ages, 13 sows farrowed 153 pigs, pric-ed low, must please. **C. E. Cassel, Hershey, Pa.**

CHESTER WHITE and BERKSHIRE PIGS. 6 weeks old, $5.25 each, 8 weeks $6. **C. LEWIS TAYLOR,** Wyalusing, Pa.

Chester White Pigs BIG TYPE. $10.00 each, prepaid. **GEO. F. GRIFFIE,** R. 3, Newville, Pa.

Reg. Berkshires Superior breeding stock. All ages Both sexes. Cholera immune. **WOLF CREEK FARM, R. 3, Slippery Rock, Pa.**

BETTER BERKSHIRES.—Boars ready for serv-ice. Bred gilts, young pigs, prize winning stock. **Bear-By Stock Farm,** Pottsgrove, Pa.

BERKSHIRE PIGS, 8 weeks old. Registered, $12 each. Elimination and Brookes' Champion King breeding. **G. E. Tanger, York Springs, Pa.**

Large Modern Berkshires, Correct type and fashion-able breeding. **Dilts & German,** Esterville, Ohio

GREENFIELD FARMS The place to buy. HEAL-fering pig, growthy fall gilts bred and ready to breed for early fall farrow. Also spring boars ready to wean. Prices right. **GREENFIELD FARMS,** Tiffin, Ohio

REG. SPOTTED POLANDS. Pigs 8 weeks, $11.00, either sex. Express paid on orders of 3 or more. Boars and sows not related. **A. M. KENNEL,** R. 2, Honey Brook, Pa.

PURE-BRED BIG TYPE POLAND-CHINAS. Sows and gilts, bred for summer, and early fall farrow. Also spring boars. The best of breeding. Priced right. **John W. Sigrist,** Dundee, Ohio

BUY BIG TYPE POLANDS. Hogs and Pigs for sale for breeding purposes. Write for prices. **O. S. HALL,** Farmdale, Ohio

100 Feeding Pigs Six weeks old, $5.00 each. **INDIAN CORN HOG FARM,** Dushore, Pa.

DUROCS Big Type Reg. Durocs Priced right. Shipped on approval. Visit us or write your wants. **G.C.Sauffley, Hummelstown, Pa.**

O.I.C's Original Type, Gilts open and bred, Spring Pigs, both sexes. Satisfaction guaranteed. **C. E. BELL,** Millersburg, Ohio

O.I.C. PIGS, $10 each, at 8 wks old, with pedigrees Guaranteed to please. **O.D. Mellis Calvin,** R. 2, Beaver Falls, Pa.

SHEEP

For Sale 1001 yearling ewes, 1200 goats, 50 steers, 60 he-grade yearlings, 80 bred Guern-sey-Jersey heifers. **W. Hundley, Boydton, Va.**

POULTRY

Special Fall Prices on high class breeding Turkeys, Geese, Ducks and Guineas, write your wants and for mating list. **Pioneer Stock Farm, Telford, Pa.**

CATTLE

HEREFORD BULLS.—Yearling bulls, the pick of our herd. Ready for service and priced to sell. **GEO. E. COCHRAN,** Dawson, Pa.

BUCK & DOE RUN VALLEY FARMS Hereford Cattle—Poland-China Hogs—Dumpshire Sheep—Draft Horses **THE SAINT AMOUR COMPANY,** Mertensville, Penna.

Angus Cattle at reasonable prices Write **BAYARD BROS.,** Waynesburg, Pa.

MILKING SHORTHORN white bull calf, 2 mos. old, out of a granddaughter of Carnie Clan. **HOMESTEAD FARMS,** Westford, Pa.

PLEASE say: "I saw your adv. in Pennsylvania Farmer."



We never quibble or question a hog about why he eats coal slack. Our soft coal slack costs us from $2 to $3 a ton at the coal yards. If our supply runs out when we can't haul a load we bring home two grain bags full on our rear bumpers. G. P. W.

What Our Readers Say

Reply to D. L. E.

I WOULD like to have space to answer D. L. E.'s letter of March 30th. In one paragraph he makes the statement that it seems difficult for some to see more than one side to the tax question. I certainly agree with with him here.

In another paragraph he refers to the high price that some farmers are paying for farms. It would be interesting to know what he thinks of the watered stock of some of the large corporations.

Farther on he says, "Go into any good farming community and you will find some farmers who are making some money." I never saw any business so bad that some one didn't make some money, but this doesn't mean that the business as a whole is prosperous.

Again he says, "I wonder to myself why they didn't look at it in that light long ago and steer their canoes in that channel." If D. L. E. would study statistics a little he would see that a few million have done that very thing and there are many still doing it. Again he says that there are some who have missed their calling; they probably never will make a success at farming. These are the exceptions and will be found in all lines of business.

D. L. E. wonders "why the farm land that is over-taxed is not disposed of and the money invested in some other business." If he could find buyers for the over-taxed land he would be in demand more than any other man in this country today.

Now, in regard to school superintendents I would like to ask D. L. E. if he ever knew of a school superintendent who resigned and there was not a number of applicants to take his place. Some years ago I heard a school official say that he got one hundred dollars salary and ten thousand dollars worth of abuse. He is still holding his office. Evidently he likes either the ten thousand dollar abuse or the one hundred dollar salary.

D. L. E. also mentions Ford and General Motors and their experts and superintendents. I wonder why they didn't pick farming to build up their high power system and make their millions.

If there is no farm problem, as D. L. E. would have people believe, all this discussion of the farm problem going on over the country is worse than waste of time, but if there is a farm problem to be solved I don't think it will ever be solved by such letters as D. L. E. wrote. Subscriber.

Resents Cruelty to Bulls

I HAVE read several articles on cruelty to bulls and I heartily agree with Mr. C. W. Cobb of Erie county, Pa., in his article in the May 11th issue of the Pennsylvania Farmer.

I have handled several bulls and I have a six-year-old Guernsey bull now that if I ever caught any one using a blacksnake whip on there would sure be trouble. I got him when he was a three-year-old and was cross and he has got to be very gentle and I will not sell him for any price. I bought him to make use of him myself and not to trade with a cattle dealer.

I believe that cruelty to animals of any kind is a disgrace to any community and I am glad to see that Mr. Cobb is going after it. Here's hoping he gets around.

At Her Best

A LITTLE chicken of a hair ranch has a broad back and ought to be held like Eliza crossing the ice. The chicks are at their best when the cherry flowers are white, the orchard range is green and the hills are dotted with delectable sweetness. Early summer is at her best during May, the month of blossoming trees and flowers.

With the coming of the heat, many early pigs will fade out and the bright ones will be ready for the market. Do not forget to provide plenty of shade. It is a delightful place to live.

V. J.

Crops to Hog Down

THE practice of hogging down corn is to injure an experiment having proved satisfactory in many parts of the country. If corn is planted for this purpose J. D. Harper of the National Livestock Producers' Association advises that some crop to supplement the corn be grown so that arrangements be made to allow the pigs access to such good pasture.

"The common practice is to plant soy beans with the corn," says Mr. Harper, "while still another used very largely is to plant rape at the last cultivation. Barring any mid-summer drouth the rape should make considerable growth by the time the corn is ready. Best results will be obtained if, in addition to the above feeds 0.2 to 0.3 pound of tankage per head daily or enough of some other protein supplement is fed.

"In a trial conducted by the Ohio Station, pigs hogging down corn in which rape or soy beans had been grown gained 1.28 pounds, while others fed 0.3 of a pound tankage per head daily in addition gained 1.81 pounds. In this particular trial, adding tankage increased the gross return per bushel of corn by 18 cents after deducting the cost of the tankage fed. The experiments at Ohio show that it is even of more importance to add a protein supplement to the ration than it is to grow a supplemental crop with the corn.

"In five trials at this Station pigs fed on tankage while hogging down corn in which no supplementary crop was grown gained 1.82 pounds per head daily and consumed only 417 pounds of corn and 18 pounds of tankage for 100 pounds of gain. Other pigs on corn in which soy beans had been planted were fed no tankage in addition and gained only 1.31 pounds per head daily and required 574 pounds of corn for 100 pounds gain. Thus it follows that it may be economical to let the pigs that are hogging down the corn have access to good alfalfa, clover or rape without other supplement. The gain may be slower, but it is mentioned only as an economical measure."

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CHICKS—10 QUALITY Barred Rocks, White Rocks, Rhode Island Reds, White Wyandottes, White Leghorns, Buff Orpingtons, Anconas, Light Brahmas, Silver Laced Wyandottes, Black Minorcas, Buff Rocks, Heavy Mixed. Prices Reduced. Hall Brothers, Richfield, Pa.

CHICKS—Barred Rocks, White Rocks, White Wyandottes, White, Barred Rocks, Brown Leghorns, Anconas, White, Buff and Black Orpingtons. Free range stock. Circular free. Prices reduced. Hillcrest Poultry Farm, Box H, Berlin, Pa.

QUALITY CHICKS—White Leghorns, Barred Rocks, Buff Rocks, White Wyandottes, Minorcas, Buff Orpingtons, Black Rocks. Light mixed, 8c. Pullets, 15c. Hillcrest Poultry Farm, Berlin, Pa.

CHICKS—10 cents up. 100 Rocks or Reds, Leghorns, Anconas, Assorted, $8.00. Heavy mixed, $6.00. Delivery guaranteed. Postage prepaid. Catalog free. C. F. Shellenberger, Hatchery, Dept. H, Myerstown, Pa.

CHICKS from heavy laying strain Barred Rocks and White Leghorns, parcel post prepaid. Circular free. **R. J. Ehrisman, Box B, Mifflinville, Pa.**

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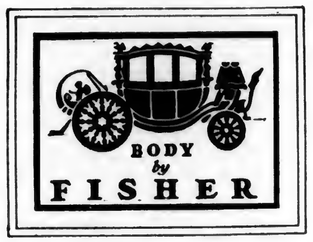
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THE MAN who is always "doin' poorly" in health generally does poorly in wealth, too. It is not his fault. The human machine finds it impossible to produce properly when it is run down.

The same thing applies to those egg machines and milk machines called hens and cows.

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In the case of poultry and cattle, diet is even more important than to humans. Good feed to them is something more than a necessity for health—it is raw material to be manufactured into eggs and milk. The goodness of the finished product depends upon the goodness of the raw material and of the machine.

A good feed is one that satisfies both needs—the needs for health and production. Both are interdependent and equally important, for a feed that stimulates to over-production may do so at the expense of health.

So the problem is to create a ration that is complete in every respect, that satisfies every need of the animal, and that is easily assimilated. The problem is one that calls for scientific research of the highest calibre.

In the research laboratories and on the experimental farms of The Park and Pollard Company, nutritional problems are constantly being solved. Solving them is an important part of the daily work of creating Park and Pollard feeds. These feeds ensure the highest degree of production consistent with the health of the bird or animal because research has gone before and enabled the makers to know exactly what they were doing.

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Farm Facts and Fancies

By ALVA AGEE

IN all times there is a question how far the leadership of old organizations represents the convictions and desires of a majority of their members. The leaders take public stands on certain questions that arise, get into contests, and cannot have a continual referendum to learn whether the plain people back home are traveling as fast as they go, or even in the same direction. However, there was an expression last November and the election indicated that the farmers were weary of the old legislative stalemate that prevented the coming of any sort of farm relief, and were wanting a new administration to work out its best plan, and then they would have whatever benefit could come from it.

Faith was evidenced in the constructive ability and the sincerity of the man elected President. He had indicated that he had no confidence in the economic value of price-fixing measures and subsidies, and while some had wished to see them tried they had come to prefer that a new President be trusted to do all he could see to do rather than that nothing at all be done. Then our farm organization leaders stepped in and have encouraged a swing of votes away from administration support. Its plan may be adopted finally, but the rift has permanently weakened the power of this administration to accomplish things.

Boulder Dam Once More

It was possible to pass the Boulder Dam bill only with the provision that the public pay only a certain part of the cost which was made chargeable to flood protection. The provision was that contracts for power must be entered into to provide repayment to the government of the greater part of the cost of construction. We called attention to the great probability that such contracts would not be made on account of the enormous sums involved, but having the bill finally passed the next usual step was to modify the provision for full reimbursement and let the public stand for heavy costs.

This program now appears to lie directly ahead unless the leaders see how impossible it would be to amend the law while the farmers are stirred about the heavy increases in farming lands at public cost. I do not believe that the money will be pledged by power companies and municipalities, and certainly not until a strong effort is made to change the law so that the nation must foot the greater part of the bill. It is an interesting situation, and we shall hear much more of it a little later on.

Having Company

I have quoted, and often have had in mind, Henry Van Dreser's statement that they lived a little better at his house the days they had company than other days. The habit is to dress up a bit when company is coming. Now that may work out all right in social life, but it is easy that a little naturalness be lost. When our farm papers were merged, some old contributors realized that they were new to tens of thousands of subscribers who likewise were new to them, and as I read the weekly articles of the old staff writers I wanted see whether they unconsciously were keeping their Sunday clothes on, or were feeling as free as ever to say whatever they would have said in the old way to the old crowd.

If one writes profitably for others he must speak freely out of his own thinking. Of course that may not make the matter profitable reading, but along with some merit in the thinking must be freedom of expression just as if one were among old friends. Frankly, I think that the merger of two big farm papers can be a bit hard on some readers until they learn what to pass by, and equally on contributors until they realize once more that they are reaching only those who want to read what they say, and with such it is easy to feel at home.

More Noise than We Need

A few level-headed people continually protest against the vast amount of unnecessary noise in the world, and some remedies have been sought. Matters have grown worse rapidly in this mechanical age, and the development of the radio and gramaphone gives nearly unlimited possibilities to people of barbaric tastes.

We have been having a little local discussion of the right way to deal with those who monopolize the air. There is a gramaphone not a quarter of a mile away that advertises to many thousands of peace-loving people the execrable taste in music that afflicts its operator, and an airplane likes to hover over us announcing to all and sundry that certain articles of merchandise have peculiar virtue.

The suggestion from one quarter is that a band of citizens shoot them up. Now, I am not claiming that the law should be stretched to save the operators' lives, nor that there would be anything contrary to ethics in picking them off, but this method of dealing with such cases seems too abrupt and would be liable to abuse. There should be means of preventing persons from projecting suffering through the air to a multitude of people, distributing discontent with life.

The man who invents and patents an ear muff that can be adjusted to admit only the sounds desired has a fortune ahead of him. It should be entirely possible to devise something permitting the user to tune in on what he wants to hear, and that only, be it music, conversation or plain noise, and to tune out when he does not care to have his ears in use.

Liking Recognition

The ancient Jews knew the desire to occupy the chief seats in the synagogue, and the new administration at Washington has brought in a big social contest to determine whether the half-sister of an official has the same social value as a wife. Our universities and colleges are sticklers for due recognition of rank, and those who smile at it all have in them the love of recognition, though they may reveal it less frankly.

The craving varies in degree, and many good people would say that it is absent from them, but second consideration would show that when they have done well they are glad others think so. Why not? Commendation is heartening to old and young, and the wonder is that we are so slow to express it to those with whom we are in daily contact. It is the due of children more than others, and influences conduct more than whippings, physical or lingual.



THE famous cross of snow in the Holy Cross National Forest of Colorado is to be preserved as a national monument. A proclamation just issued by the President of the United States has set apart the Holy Cross National Monument an area of approximately 1,392 acres including this famed landmark.

Farm Practice

By W. D. ZINN

Substitute for Silage

I have a lot of coarse cow manure which is full of timothy seed and some different kinds of weed seeds. I wish to use this to mulch my strawberry field with and want to know if there is any way of killing out the timothy and weed seed before using.

What is the best substitute to feed dairy cows to take the place of corn silage? E. A. Moser.

I KNOW of no practical method of treating the manure to kill the timothy and weed seeds. Anything that would kill the seeds would impair the efficiency of the manure.

Silage is valuable as a feed because it is succulent. It comes nearer taking the place of grass than almost anything that we can feed. Stock beets will fill the place of a substitute for silage nearer than anything else perhaps. Some farmers who do not have silos feed beets. Farmers sometimes buy beet pulp and feed when they do not have silage and they claim to get good results from feeding it.

* * *

Timothy and Oats

I have a herd of 30 cows. The farm I bought has only one field of clover on it, the rest being timothy. A neighbor, an old farmer, tells me to cut the timothy real green and to sprinkle four quarts of salt over each load after it is put in the mow. What is your opinion of that?

Will oats sown June 10 to 15 make hay? Can I sow oats and rye mixed the last of July for fall and spring pasture? How tall should oats be before you can pasture it? W. F. Cooper.

YOUR old farmer friend is right. Timothy cut when real green is a more nutritious feed than when cut later. At the West Virginia Experiment Station timothy was found to contain 10.5 per cent protein when cut before blooming, 7.2 per cent when in early bloom, 6.5 per cent in late bloom and 5.9 per cent when nearly ripe. We baled some timothy recently that was cut before the timothy was in head. We will feed it to sheep and we expect better results from feeding this hay than we would get from feeding clover hay. It is richer in protein than clover hay when nearly ripe. I am wondering whether this is not a solution for the wintering of sheep when clover is not available. We hope to get both our timothy and orchard grass cut this season just before they come into head if possible, for the hay will be fed to sheep. The salt may prevent the hay from moulding to some extent, at least it will cause the hay to be eaten with a greater relish.

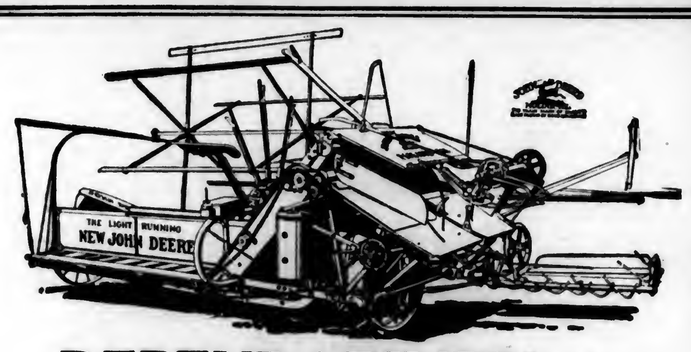
Oats sown June 10th to 15th ought to make a lot of good hay. It should be cut when the oats are in the milk stage but may be cut before they come into head and make a very good hay.

Oats and rye sown the last of July will make a fine fall pasture, but if spring oats are sown the freezes will kill the oats. The rye will make a lot of good pasture early in the spring. If winter oats are sown they will stand the winter. The oats may be turned on when eight or ten inches high.

* * *

Wheat after Wheat

A PENNSYLVANIA reader asks whether wheat can be grown where it was raised this year. Yes, I have known wheat to be grown on the same land for five or six years in succession. It is not the best method, however. Wheat does its best when following a clover sod that has been turned down in July or the first of August. Since the introduction of the combine, with which three men can harvest and thresh forty acres of wheat in a day, I am wondering whether farmers in the East can longer afford to grow wheat. It now looks like we will have to change our farming to suit changed conditions.



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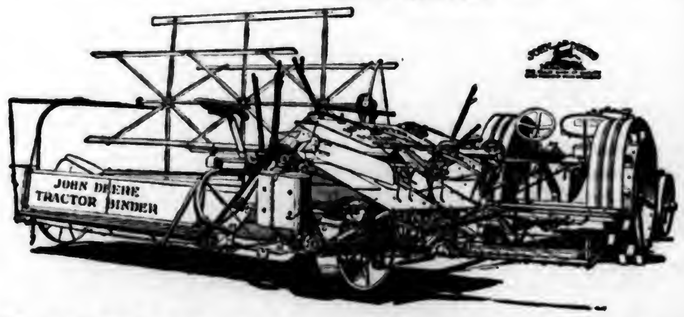
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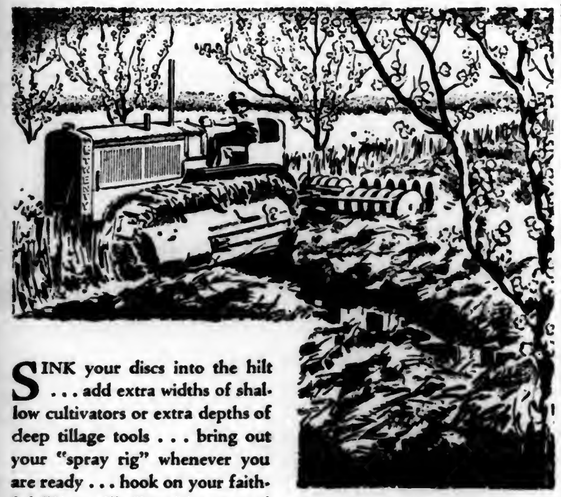
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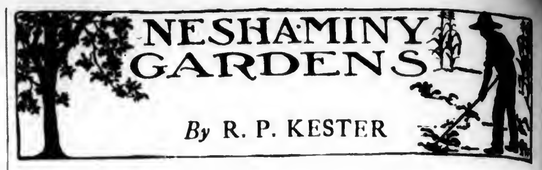
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ONE gathers from riding through the country that more than the usual number of farms are not being worked this season. Part of the reason may arise from the fact that the season is so late and that this has prevented the commencement of operations. But in what we here call the metropolitan area there is, without doubt, more and more land left to be idle each year. Owners say that they cannot afford to operate it now, nor do they wish to lessen the amount of "unearned increment" by spending more than they can get from its operation.

• • •

The prospects for another excessive wheat crop this year, and this excess to be added to the big carry-over from last year, only tends to make the battle over "farm relief" in Washington all the more intense. It is doubtful whether consideration of this measure is based on sound, impartial judgement. The prospect of creating bottoms prices in order to exact private profit shows how human nature may prostitute itself when personal gain is the prize. Like potatoes last year, wheat is likely to sell after harvest at losing prices. But whose fault is it? Last year farmers raised too many potatoes in the hope of making money. The result was that few made more than expenses. At wheat sowing time last year the political parties were promising "relief." On the strength of this farmers planted more than the usual amount of wheat. Since the rest of the world will probably have sufficient wheat, how in the name of common sense do men expect to make the American crop pay without doing an injustice to somebody else?

• • •

But all this does not justify one C. H. Wise writing in Pennsylvania Farmer of May 18 a tirade of abuse and misrepresentation. Surely, the name attached must be a misprint, as there is no evidence of wisdom in the article. If he has really seen people who live on farms arising at eight o'clock in the morning and loafing around through the day, spending time at entertainming themselves at play, he was mistaken in thinking they were farmers. I have known other renegade farmers who became over-wise and super-critical about farmers after they left the farm and went into something that suited their tired minds and muscles better than farming.

• • •

As I expected, a reply has come in commenting on my remarks about improvements and single tax. A subscriber in Beaver county, Pa., writes:

"Your notes are always interesting, but especially so in issue of May 4. J. S. R. made a good case which you fairly and courteously admitted. He takes the same view as my nearest neighbor, whose views and history I am enclosing herewith. It would be a God-send to farmers if all taxes, except that on the value of bare land, were abolished. With the remittance of tariff and internal revenue taxes, their money would buy nearly twice as much, and with the abolishment of indirect and weasel taxes they now pay, the prices of goods would be greatly reduced.

"The most of the farm land in Pennsylvania, if stripped of all improvements, has no value. The majority of farms would not sell for a fair present value of the improvements on them."—J. W. S.

• • •

Of course no such plan was ever really tried in this country, and it is doubtful whether it will be in our time. As to the tariff idea, the sentiment seems to be growing that if we did not have a stiff tariff tax people would not have money with which to buy, no matter how cheap goods might be. That's the argument heard and people are sold on the idea.

• • •

Has it come to a time when boys who voluntarily take up farming as a life work are as scarce as blacksmith apprentices or harness-maker journeymen? A casual survey seems to indicate that it is in some places. The influences of the times, including high-pressure industrialism and the educational system, seem to begin turning the eyes of our boys and girls into other callings as soon as they first stand up and begin to look around.

During the past fifteen years there has been so much emphasis placed on commerce, manufacturing, professional life, and the great progress we are making and the wealth we are accumulating, that it has caught the quick ears of the boys and girls and it is not strange that they want to become a part of it. During most of that same period they have heard only the opposite concerning agriculture. Is it any wonder that they wish to shun a business which its followers proclaim to be poverty stricken and unpopular? If the same bally-hooing had been done in relation to farming that has been done for other callings, would it not be in better condition and in better repute?

Friendly Talks

By Edgar L. Vincent

WHEN I was down-town the other day I met a man from the country. I knew he was a farmer the moment I looked at his brown face and the warped knuckles of his hands. Then, too, he wore a pair of heavy felt "overs." They looked comfortable. Some folks turned to comment on those rough foot coverings, but if the man from the farm knew it he did not care. His face was calm and his eye steady. I knew his heart was warm and his mind was on better things than the most of folks he met were thinking about.

Feet shod in thick woolen overs, but heart up where the stars shine.

I do not know that this is so, but it may be that this man of the rough clothes and the clear eye could go over to the bank and draw a check for more money than nine-tenths of the men and women he met on the street that day. Whether that is so or otherwise, he certainly had in his heart a big reserve of peace and comfort and love for the really big things of life and that is what counts after all.

For what does it amount to if one has a million-dollar deposit in the bank and a soul empty of the things which make for real happiness? I would be rather be able to see the beauties of the world about me and enjoy them than to count my fortune by the bagful.

I know that the farmer's day is long. He is tired when the last chore is done for the night. Much of the work he has to do is not so very pleasant. But when night comes the farmer can sit down under his own rooftree, read his paper and think of the big things in the world and then lie down to rest happy in the thought that he is doing a work which keeps all the rest of the world going, and without which the old earth would soon be a desert. What difference does it make whether a man walks the world shod in felt overs, if his soul is soaring among the pearls of eternity!

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Alfalfa on Pennsylvania Farms

By H. E. BECHTEL

CHIEF among the plants rich in protein is alfalfa. Although other members of the legumes are also grown for their nitrogen value, alfalfa is regarded as the most efficient producer of high-class protein. It is also quite rich in minerals, lime and phosphate, all of which are essentials for the proper development of young stock and for continued high milk production. Alfalfa hay is light, bulky and laxative and is the best hay obtainable for growing, fattening or milk production. It is also very palatable, which factor increases its feeding value considerably.

There are several instances in Pennsylvania where farmers have decided to try alfalfa and on getting a poor stand have come to the conclusion that it is not a suitable and economical investment. Many of these failures have been due to the use of unsuitable seed and to the improper treatment of good seed.

In planning to start a field of alfalfa it is essential that one buy from reliable seedsmen who have a reputation for putting out good seed. Northwestern Common is the common strain of alfalfa seed successfully used on most Pennsylvania farms. Hardy Alfalfa is another strain noted for its hardiness and consists of the Grimm, Liscomb, Baltic and Cossack varieties. This group has characteristically branched roots and is able to survive under very adverse conditions and still give a good yield.

Advantage of a Mixture

It is found to be a good practice on many farms to sow a mixture of fifty per cent Grimm and fifty per cent Northwestern seed, as this decreases the chance of an entire crop failure. Seed grown in South Dakota, Idaho, Montana and Kansas has been found to be hardy in the southern counties of Pennsylvania and is fairly high yielding. As a general rule in buying alfalfa seed it is a good practice not to use seed produced in states having mild winters. Imported seed may be all right, but large quantities of undesirable seed are imported annually from Europe and South America and the source of supply is often questionable.

Alfalfa is not influenced so much by the time of seeding as by the weather immediately after sowing and by proper drainage and inoculation. If all of these factors are well taken care of and good fertile soil is used a good crop will be the outcome.

A common practice is to sow the seed on a prepared seed bed that is entirely free from weeds so that the seed can be put in by the early part of August. This means that the ground must usually lie about four weeks after plowing in order to pack, it being harrowed from time to time to keep down the weeds and to conserve moisture.

In case of a wet season it is sometimes possible to seed alfalfa after the wheat or oats crop, especially when the stubble is fairly clean. Some dairymen also plow corn stubble in the early summer and apply lime and manure and harrow in time to sow by the latter part of August. The two difficulties often encountered in August seeding are the danger of a dry fall followed by a severe winter and the extra labor required in preparing a seed bed.

Lehigh and Berks counties find it quite practical to sow alfalfa with a nurse crop, such as barley, in the spring. Barley is usually used in preference to oats because the latter requires more moisture and a longer growing season. The rotation practiced in this section of the state is potatoes, wheat and alfalfa.

Still another method of sowing alfalfa is that of putting it in with the wheat in the fall. This practice may be objectionable on account of the rush season of work in the fall, but its chief value lies in the chance to reseed in the spring in case of a failure during the winter. Fifteen pounds of seed per acre is the proper amount to use under this method and the secret of succeeding with this lies in getting the alfalfa down in the ground with the drill along with the grain, because the wheat will afford protection for the alfalfa during the cold weather.

Alfalfa responds most readily to phosphoric acid and potash. When seeded alone on infertile soil it is necessary to apply about 300 pounds of a fertilizer containing two per cent ammonia and a rather high phosphoric acid and potash content. If manure is put on the surface or if the land is very fertile 200 or 300 pounds of superphosphate may be sufficient. Good fertilization is required where the alfalfa seed is sown with winter or spring grain and if properly inoculated the crop will supply its own nitrogen after it becomes established.

Application of Manure and Fertilizer

Where the land is poor a top-dressing of manure either before or after seeding is very helpful and when applied in the fall may help to prevent winter killing, but it is also true that manure has a tendency to bring in weeds and grasses. Where not much manure is available and where a long lived stand is wanted, it is good to top-dress annually with 200 or 300 pounds of superphosphate after the first or second cutting. In cases where alfalfa plants die the trouble may be caused by acidity, poor soil or poor drainage. This of course may be improved by proper aeration and fertilization. It is unreasonable to expect to grow alfalfa on the same land continuously over a period of several years and hope to get results.

Sweet soil is the only place in which alfalfa will grow. The ground may be tested for lime requirement by taking samples over four inches deep from several parts of the field and getting the county agent to test it for you. In case of a very high lime requirement it is not wise to add more than two tons of ground limestone per acre; if more is required it is best not to grow alfalfa at once.

Inoculation with nitrogen-gathering bacteria is necessary for a successful alfalfa stand, unless these bacteria are already in the soil from previously grown legumes. It is these nitrifying bacteria that produce the root nodules and give the legume its high protein value. The easiest method of inoculation is by use of pure cultures of bacteria which may be obtained from commercial concerns or from your State College. Another method is to broadcast 500 to 1,000 pounds per acre of soil taken from an alfalfa field. A convenient way of doing this is to take a small amount of soil from various parts of the field and spread with a spreader over the new field.

An Easy Way

An easy way of inoculating seed is to take a small amount of soil from about the roots of alfalfa plants and dry it without exposure to sun or artificial heat. Sift and pulverize by passing through a screen and moisten the seed slightly and evenly with molasses and water or with thin glue. While still moist, stir in about a half peck of soil for each bushel of seed and mix until all seed is slightly coated with dust. The seeds are then ready for sowing.

Recent work in Kansas and Wisconsin seems to prove very definitely that if cutting is delayed until the crop is in full bloom the plants will stay more vigorous for a longer time and will be thick on the ground with few weeds. This way of cutting allows but two cuttings per year but results in a larger tonnage than with three cuttings. The earlier cut hay when three cuttings were made was finer and more digestible than the two-cutting hay but did not contain as many digestible nutrients per acre. It has been advised that five or six inches of growth should be present before zero weather sets in.

It is difficult to secure hay in the East with a real green color. However, investigations show that this color is totally unimportant from the standpoint of feeding value. The hay is best when it is air dried rather than cured by direct sunlight and it should be kept in mind that as many leaves as possible are to be saved. A side delivery rake and a hay loader are necessary equipment in the handling of a large alfalfa hay crop.

In view of the fact that Pennsylvania farmers are mainly interested in dairying and that one of their most serious problems is the growing of sufficient protein feed it seems that they should increase their alfalfa acreage to meet this demand, as it excels in production per acre as well as in digestibility. It may produce a good stand for two to four years.



Pennsylvania Dairymen May Well Consider Increasing Their Acreage of Alfalfa

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ANOTHER TERM

AN economic conference held at Geneva, Switzerland, gave us this definition of rationalization: "The methods of technique and organization designed to secure the minimum waste of either effort or material." Rationalization sounds so good that somebody is sure to recommend it to agriculture, hence we hasten to publish the definition.

FIRM

THE National Grange will "stand firm" on the debenture plan, we are assured by the publicity bureau of that organization. The Grange is entitled to whatever glory it can get by standing firm on such shaky footing. Next time, we venture to hope, the Grange will not throw away its opportunity to stand firm on solid ground, where its friends are accustomed to seeing it stand.

IMMIGRANT FARMERS

THE Institute of Social and Religious Research announces the result of an inquiry as to immigrant farmers which shows that they are as efficient in farm management as native Americans. What of it? Maybe we are too dense to understand the subject, but it does seem to an ordinary hayseed editor that a worth-while institution could be spending money to better purpose than trying to ascertain whether some farmers are better or worse managers than others. What does the Institute propose to do about it in any case?

DAIRY PROGRESS

LAST year dairymen in Pennsylvania produced as much milk as in 1924 and did it with 18,000 fewer cows. The production in 1928 amounted to 441,270,000 gallons, valued at $112,254,920. This was 7,370,000 gallons over the 1927 total and was made without an increase in number of dairy cows. Better breeding, feeding, management and disease control have made the annual average production per cow in this state 115 gallons more than forty years ago. These things mean more profit for cow keepers, they measure progress in dairying and they indicate that the dairy farmer in the Keystone State is something of an efficiency expert.

COMING OUTLOOKS

THE Department of Agriculture is evidently committed to the outlook business, for it announces the dates of its special outlooks this summer "designed to assist farmers in planning crop and livestock production programs on the basis of the prospective demand for their products." The dates when the outlooks will be issued are as follows: Hogs, July 15; poultry, July 22; sheep and wool, August 5; strawberries, August 15 or earlier; beef cattle, August 26; early potatoes, September 1 or earlier; winter grains, September 5. Whether former outlooks have helped farmers plan their production to better advantage than they would have without them we do not know, but they have helped the outlookers to regard the future with less assurance than at first, for recent forecasts have been worded with caution and hedged with qualifications to absolve the prophets from all responsibility due to the uncertainties of the weather or the idiosyncrasies of human nature.

PER ACRE

IN a recent test at the Madison county, O., Experiment Farm Paul Gerlaugh tried to ascertain how to get the most money out of an acre of corn. He put 6½ acres of corn in the silo and fed it to steers, with cottonseed meal and mixed hay. He fed 6½ acres of the same field, both grain and stover, to another lot of steers, with same ration of cottonseed meal and a little more hay. The steers on dry feed made a return of 372 lbs. of beef and 67 lbs. of pork per acre and were valued at $14.75 per cwt. at the finish. The silage-fed steers returned 752 lbs. of beef and 39 lbs. of pork per acre and were valued at $14. The dry-fed steers returned $80.80 per acre and the silage-fed $71.65. These are only a few of the things indicated by this experiment, details of which will be given later. The acre basis is the right basis on which to figure on feed crops, and the problem is to get the most meat per acre out of them.

THAT RAILROAD CASE

THE ruling of the United States Supreme Court, that the cost of production must be considered "along with all other pertinent facts" in the valuation of railroads, is in line with its previous decisions and with common sense. The decision does not mean that the cost of reproduction shall be the basis for rail rates, nor does it even say to what extent that cost may be considered in valuation. Many conjectures have been published as to the financial significance of the decision, all of them merely guesses. Let us guess that in the end rail rates will be based on what is just and reasonable, not on cost of reproduction, temporary condition of an industry or any other single consideration. That guess is just as good as any, though it lacks the figures which some other guessers have thoughtfully provided to make their prophecies impressive. The whole valuation scheme was foolish, for it has cost taxpayers, carriers and shippers a vast amount of money without corresponding benefits to anybody.

A BIG BUYER

FOR an industry tottering on the brink of bankruptcy, as is frequently claimed for it, agriculture shows an astonishing amount of business activity. Last year, reports the Department of Commerce, manufacturers' sales of equipment for use on farms in this country amounted to $399,433,586, compared with $391,868,822 in 1927 and $364,751,142 in 1926. This is the sum the makers got and not what farmers paid dealers, which would be much more. It represents only one branch of farm buying and does not touch feeds, fertilizers, food, clothing, shoes and the countless other things used in the home and the business of farming. While the total shows a yearly increase not all items increased, some showing a decline. The latter were the smaller machines, indicating a tendency toward larger units and newer styles—"a growing trend of agriculture toward the abandonment of antiquated farm machinery and the adoption of more modern labor saving devices," as the Department of Commerce puts it. This indicates that the business of farming is not entirely a losing game. The money for these purchases must come from somewhere, and the only place it can come from is from profits, brought about by the application of better methods of farming.

FROZEN FRUIT

DURING 1928 some 100,000 barrels of berries in the Pacific coast region were preserved by freezing, so the industry is already of respectable proportions. The advantage to the grower is that the cold pack or frozen pack affords a means of offering the product in packages convenient for home use and which can be handled by grocery stores, and it lengthens the period of consumption. This would be expected to promote consumption and may eventually mean taking small fruits out of the highly perishable class. Anything which distributes a commodity over a period of time must be a force in expanding the demand for the article, while the size and convenience of the container, as well as its availability at all seasons, naturally has much to do with the desire for its contents.

MORE CHANGES

MANY changes will appear in the tariff bill which is expected to pass the House of Representatives this week. Hides have been taken off the free list and will bear a duty of 10 per cent, shoes 20 per cent. Rates on cattle are advanced, now standing at 2c per pound on those under 800 pounds and 2½c on those heavier than that. Butter is advanced from 12c to 14c per pound. Onions are advanced from 1½ to 2c per pound, potatoes from 50c to 75c per 100 pounds, and prepared or preserved tomatoes from 25 to 40 per cent ad valorem. When the tariff bill finally passes and its effects on what farmers buy and what they sell can be noted probably they will find that they are paying 25 cents to get a quarter, besides risking a reaction from consumers that in the end may cost too much.

THE CONSENT DECREE

AFTER years of investigation and litigation, costly and bad for their business in every way, the log packers entered into the "consent decree," whereby they agreed to abandon "unrelated" business and confine their activities to slaughtering and the things related to that industry. They preferred to make peace, even at a sacrifice, rather than continue a fight to which they could see no end. Later they repented their decision and tried to have the consent decree set aside. In this they were joined by certain canneries which wanted to take advantage of the economies of the packers' system of distribution. They were opposed by the grocers, who didn't want to lose some of their business. The suit of the packers to set aside the decree was lost, whereupon the canners demanded and were granted the right to intervene. The decision granting this right rendered the consent decree inoperative. The United States Supreme Court has just reversed this decision, has denied the canners the right to intervene, and so the consent decree again goes into operation. There never was any sound economic reason for this decree, which keeps out of certain lines of distribution those who can do it at least cost and is therefore a disadvantage to consumers and producers both. But it is hard to shed the sympathetic tear for the packers, who surrendered their rights instead of fighting to a finish for them.

New Jersey Farm Comment

By G. W. HARRIS

POTATO growers in New Jersey and nearby states will be interested in the fertilizer studies and other tests being made on New Jersey farms by the Experiment Station. Any one of the men on whose farms this work is being conducted will welcome interested potato growers and be glad to go over the plots with them.

Interest in concentrated fertilizers has been rapidly increasing during the past few years and this year in the fertilizer plots stress is placed on a comparison of the concentrated fertilizers.

On the farm of James Ewart, Cranbury, Middlesex county, a comparison of six different concentrated fertilizer mixtures is being made with a ton per acre application of a standard 5-8-7 mixture. Mr. Ewart is also conducting a depth of planting and distance of planting test. In one test potatoes are planted at a depth of one-half, one, two and two and one-half inches and in the other test a comparison is made of 9, 11, 13 and 15-inch plantings in 36-inch rows.

Charles B. Probasco, Hightstown, Mercer county, is comparing 5-8-7, 10-10-14 and 15-24-21 applied at the rate of 2,000, 1,000 and 700 pounds respectively.

Spencer Perrine, Cranbury, on a test has applied a 10-10-14 formula at the rate of 600, 800, 1,000 and 1,200 pounds per acre and a 5-8-7 mixture at double these amounts. He has also treated his seed with several organic mercury compounds and mercuric chloride to determine their value in the control of rhizoctonia.

A comparison of nine different concentrated and a standard mixture of fertilizers is being made on the farm of William Clayton, Freehold, Monmouth county. In order that potato growers may become acquainted with various potato diseases, five varieties showing a number of virus diseases including leaf roll, mosaic, leaf rolling mosaic, spindle tuber, wire stem, witches' broom and giant hill have been planted by Mr. Clayton. This is of real value to growers in studying disease problems and should be visited by every grower in the state.

S. W. Rühl, Deerfield, Cumberland county, is making a large scale comparison of three fertilizer mixtures with the following analyses: 5-8-7, 10-10-14 and 15-24-21.

At the College Farm, New Brunswick, two fertilizer tests are being conducted, one with concentrated fertilizer and the second a study of the influence of nitrogen, phosphoric acid and potash on size, shape and the number of tubers. A seed treatment test similar to the one on the farm of Spencer Perrine is being conducted at the College Farm.

An extensive test is being conducted on the farm of Andrew Schnetzler, Elmer, Salem county, to determine the value of the addition of certain materials to the fertilizer for the control of soil borne scab and rhizoctonia.

In order to determine the best yielding variety and source of seed under New Jersey conditions five varieties from several different sources are being grown by Spencer Perrine, Cranbury; Ross Clayton, Freehold, and Alvrell Sloan, Elmer.

All these tests are being conducted for the benefit of the growers in the state. Potato growers should need no urging to visit these plots and follow the work which is being done on them.

* * *

THAT the Record of Performance Hennery Testing Project, which is now supervised by the Experiment Station be taken over by the State Department of Agriculture was requested by the New Jersey Certified Poultry Breeders at their fourth annual conference held at Trenton on May 23. This work was originally carried on by the Department of Agriculture but for the past two years has been an Experiment Station project.

Laboratory testing for bacillary white diarrhea and chicken pox inoculation work were recently transferred from the Experiment Station to the Department of Agriculture. If the trapnesting project is transferred on July 1st, all the poultry standardization and certification will be placed under one department instead of two state agricultural agencies, as in the past.

Last year 128,695 birds were inspected for poultry certification. Of this number 24,093, or 19 per cent, were rejected.

* * *

A GIFT box of New Jersey asparagus was sent by parcel post to President Hoover, by Charles Kier, asparagus grower of Gloucester county, N. J. In the box were twelve bunches of the "long green" asparagus of the same kind that has been bringing top prices on the New York market all of the season.

The box was sent out in a special mail pouch addressed to U. S. Senator Walter Edge, who will present it in person to the President and Mrs. Hoover as a gift from the asparagus growers of Gloucester county. This is the first time that asparagus has been sent to Washington from New Jersey. In the same mail there was another gift box for Senator and Mrs. Walter Edge.

* * *

WHEN the 4-H Club Camp opens in Washington on June 19 four future club leaders from Delaware will be in attendance. The boys and girls selected from the state to attend this leader training camp are: Frances Passwaters, Sussex county; Hazel Taylor, Kent county; Louis Edgelle, Sussex county, and Edwin Pierson.

Frances Passwaters, who is now a freshman at the University of Delaware, has been interested in canning club work for the past eight years. Hazel Taylor has been a member of a clothing club for four years and has been acting as a local leader for the past two years.

About eight years of club work—pig club, sweet potato and corn projects—are to the credit of Louis Edgelle. He is president of his club and is a local leader in his community. For the past two months Louis has been doing official testing work at Winterthur Farms, Delaware.

Edwin Pierson started in club work four years ago—his first three years as a potato club member. From his potato projects he made enough money to be able to buy a purebred Guernsey calf last year. He plans to become a partner with his father and build up a purebred Guernsey herd.

The traveling expenses of these boys and girls are being paid by the Wilmington Kiwanis Club.

* * *

HOLSTEIN breeders will meet in Philadelphia June 3-5, for the 44th annual convention of the Holstein-Friesian Association of America, and the Federation of Holstein-Friesian Clubs of Pennsylvania, New Jersey, Delaware and Maryland.

The first day of the convention will be taken up by registration of visitors and committee meetings. At the morning meeting, June 4th, O. E. Reed, Department of Agriculture, Washington, D. C., and H. W. Hotton, Jr., will discuss herd improvement plans and Earl J. Cooper will talk on extension service.

As guests of H. F. DuPont, owner of Winterthur Farms, Del., a trip to Wilmington by boat is planned for the afternoon. From there the guests will visit Winterthur Farms and Longwood Gardens, near Kennett Square, Pa.

A banquet and entertainment completes the convention the following day.

Arrangements have been made to entertain ladies attending the convention. Sightseeing trips about the city and a special luncheon are planned.



Here's a new picture giving some idea of what the new administration building of the United States Department of Agriculture at Washington will look like when finished. The new building links the two large wings constructed during James Wilson's administration as Secretary of Agriculture. The contract stipulates that the building be finished a year from this May, but because of good weather conditions for construction work the building has progressed at a rather rapid rate and it is possible the finishing touches will be put on several months earlier than first expected.
C. E. Galpen.

Dairy Short Course

AS a part of the work of the Agricultural Department of the Sussex high school, Sussex county, a series of meetings has been conducted in cooperation with County Agent Keller, in the form of a dairy short course for the benefit of the dairymen in the county. At the last two of the ten meetings Dr. Raymond S. Huff, veterinarian in the county, discussed some of the common ailments of dairy cattle that give the dairymen of the county much concern.

Losses to the dairyman as a result of infectious abortion alone runs into hundreds of dollars for many dairymen. Dr. Huff emphasized the importance of keeping the premises absolutely clean, since the greatest channel for the infection to enter the system of an apparently healthy cow is through the mouth and so on into the digestive system whence it gains entrance to the reproductive system. The Bang bacillus is taken into the digestive tract by the cow eating contaminated feed and roughage, or by eating from a contaminated floor. He also stressed the importance of isolating any suspects or aborters as soon as they are discovered, and thoroughly disinfecting the contaminated area of the stable from which the diseased cows were taken.

The subject of tuberculosis brought about some very constructive discussion. It was stated by a local cattle dealer that the so-called "bologna" cattle from tuberculin tested herds sell for fifty to seventy-five cents more per 100 pounds than similar cattle from untested herds, in the Jersey City markets. Another statement was made that the upkeep and replacement cost of a large pure-bred herd in Warren county, N. J., is fifty per cent less than it was before the herd was tested. Those two points alone show that the tested herd is more economical to maintain than the untested herd.

Mastitis, foot rot and hemmorhagic septicemia were discussed at length as were the other two diseases and the entire discussion proved to be very interesting as well as helpful to all those present.

The interest manifested in the course was very gratifying and efforts will be made to conduct a similar course during the next school year.
R. B. D.

Future Farmers

THE Future Farmers of Moorestown high school enjoyed and profited by a carefully planned variety field trip in South Jersey a few weeks ago.

The agricultural classes of the high school, consisting of some twenty young people, assembled at the agricultural room ready to start in the morning as soon as the school bus was available after the collection of the students. The group was off toward Vineland before 9 o'clock.

Arrangements have been made with Mr. Willis Sutter, foreman of the International Egg-Laying Contest, for a tour of inspection of the contest and the Vineland poultry tract. Mr. Sutter explained to the boys every detail of the contest plant and the operation of the contest. He showed how the records of the individual hens are procured and compiled.

The boys were particularly interested in observing the characteristics of the winning and high-scoring pens of the contest. Special attention was paid to the Australrop pens which are arousing interest among poultrymen just now.

Pinehurst Farm, owned and operated by Mr. James Wetzel, was next visited. Here the boys observed a typical Vineland tract poultry farm. Mr. Wetzel showed the students thousands of laying birds, a mammoth electric incubator in operation and thousands of chicks being raised by the new battery system.

Wene Chick Farms were next visited. Here the students observed what seemed to be miles of incubators from which sprang thousands of fluffy chicks. This was of especial interest because only eggs from state tested flocks are hatched. There was also observed here a large number of chicks being raised in batteries.

Enjoying a hasty luncheon enroute the group soon arrived at Millville where are made many of the baskets which carry South Jersey's fruit and vegetables to market. Here as a guest of Mr. J. B. Bailey was observed the manufacture of baskets. The boys were impressed with the rapidity with which the large logs enter the plant at one end and come out at the other a few minutes later as crisp new baskets ready to carry the products of the farm to market.

The next stop was at Glassboro to observe the manufacture of vinegar. Of especial interest here were the large wooden casks through which the vinegar is clarified.

The last stop on the itinerary was a fertilizer plant at Paulsboro. Here was observed the manufacture of superphosphate, mixing of fertilizer ingredients and finally the bagging and delivery of the fertilizer to trucks of nearby farmers or railroad cars for shipment.

and come out at the other a few minutes later as cars for shipment.
Lester S. Hess.

TIGHT BINDING TEXT CUT OFF



Corriedale Ram and His Two Sons, Tasmania

Australian Wool Auctions

By J. F. WALKER



South Australian Type of Merino

OVER seventy-five years ago the Australian wool growers decided that if they secured values for their product they would be obliged to inaugurate a better system of selling wool than they enjoyed at that time. As matters then stood all wools were consigned to the English markets and it frequently required a year's time before the grower had any account of the wool he had shipped.

On two occasions the industry of Australia had practically gone bankrupt due to the dumping of wool at low prices on English markets and they felt that the concern of the London broker was more to secure low prices for the mills than high prices for the sellers. A system of selling wools at house at public auctions was decided as the logical plan to pursue and the first year less than 1,000 pounds of wool were so disposed of. This seemed like a very small beginning and doubtless was laughed at by many who felt that it would be impossible for Australia ever to be able to induce wool buyers to come half way round the world to secure wool.

There is neither time nor space to tell of the gradual development of this effort, but for many years Australia has been able to dispose of practically all her wool clip in her own markets at prices which are very satisfactory to the growers and certainly reflect greater comparative value than the growers of the United States have been able to receive.

The present clip of Australia runs between 850,000,000 and 900,000,000 pounds of wool annually. This is practically three times the size of the clip in the United States and the placing of this tremendous volume of wool on the market is a job that requires careful consideration if values are maintained.

Originally most of the wool was purchased outright by local buyers. The next step was the erection of brokerage houses. These brokerage houses, called stock and station agents, handled all of the products coming in from the farm and sold to the farmer practically all the supplies which he required in his farm operations. Everything is handled on a commission basis and the money with which they operate is secured through the sale of shares, largely among the sheepmen or cattle men themselves. These houses finance the operations of the livestock men and many of them own large areas of land which are stocked with sheep or cattle.

The development of the cooperative marketing organizations within recent years has been along lines quite similar to those of the old brokerage houses. These cooperative concerns have various departments representing the various commodities handled. In all of them one will find a wool manager, a livestock manager, a wheat manager, an insurance manager, a financial agent and a purchasing director. The board of directors of these cooperatives is composed of the actual producers of the commodities handled and each departmental head is given almost complete jurisdiction of the management of his department.

Cooperatives are financed through the sale of stock. Dividends, however, are limited to 8 per cent, which is the usual rate of interest in that country, and patronage dividends are paid back to the members of the cooperatives in accordance with the volume of business which they do through the organization. This, briefly, is the general setup of the organizations handling wool. There are a few specialized groups, particularly the dairy groups and the fruit organizations, which are not connected with the larger corporations that handle varied farm products.

Many years ago the Australian sheepmen decided that wools should be merchandized throughout the year if they hoped to get full value for their clip. The coming of the war, which threw all of the wools in the hands of the government, served to bring about a centralized system of marketing wool, which is still practiced voluntarily along lines somewhat similar to the compulsory methods which the government used during the period of the World War.



South Australian Merino Rams, a Cross between South Australian and Wanganella Types

Before getting into the marketing systems, it may be well to discuss briefly the methods of breeding, preparation of clip, etc., practiced on the farms, or "stations" as they are spoken of.

The Australian sheep breeder breeds with a strictly utility standpoint in view. He observes carefully his climatic conditions, available feed supplies, etc., and selects those sheep which give him the best return out of the conditions which he has in his particular section of the country. We find, therefore, quite varied types of sheep even of the same breeds in different sections and there is not the intermingling of breeds or breed types which is so common in the United States.

After deciding what type of sheep is best suited to his conditions, the Australian sheepman each year before shearing goes through his flock, examines each individual carefully and marks them, so that he may mate to overcome defects or strengthen desired qualities or even reject interior specimens. It is freely stated that even in pure-bred flocks culling will average about 30 per cent yearly. This heavy elimination of off-sort sheep is rapidly standardizing the type of wools that come out of the country. Desirable stud rams are eagerly sought for and no price is considered too high for an individual that will work improvement in the flock. Prices up to $25,000 have been recorded for rams to go into pure-bred flocks, while it is not unusual to see $500 to $2,000 for rams for purely commercial flocks. This price encourages the breeder to put forth his best efforts to improve his sheep still further, knowing that he will be paid in direct proportion if he is successful in doing so.

Shearing is done by hand on the pure-bred flocks and by machine on the commercial flocks. The average price for commercial flocks is about ten cents per head. Double that for rams and double these prices for hand-shearing in pure-bred flocks. The careless and slovenly way in which fleeces are frequently taken from sheep in Ohio would not be tolerated for a moment in that country. Double cuts, torn fleeces and things of this sort are practically unknown in Australian shearing sheds.

This preparation of the wool gives it an added value on the market and as soon as the fleece is removed from the sheep the belly is put to one side and all off sorts are carefully taken away from the fleece proper and packed separately. Fleeces are even graded according to their quality and length and put in separate bales. A large outfit may have as many as 12 to 15 different types of wool coming from the same band of sheep.

In the smaller outfits no effort is made to perform this work at the point of shearing, but service is rendered to the grower by his brokerage house or cooperative. This means that the purchaser of these wools is receiving a satisfactory quality and grade without off sorts. Because of this they are willing to pay the top market price, knowing exactly what is in the package, and not having to make allowance for such wools as may not be desired by their particular buyer.

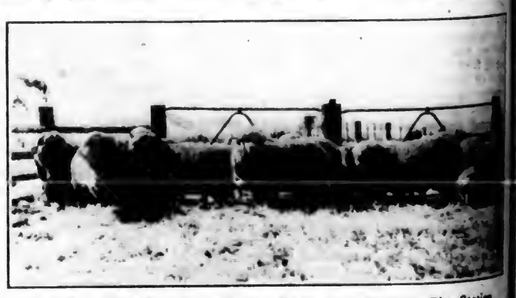
There were 25 concerns engaged in handling the Australian clip of 1927 of almost 900,000,000 pounds of wool. Ten of these concerns handled 80 per cent of the wool. Contrast this with the method in the United States where there were 500 concerns handling a clip of one-third of the size of that of Australia. The Australian wool clip was concentrated at six selling centers, and put up and sold by auction, the sales extending through ten months of the year.

At the beginning of the sales season the Association of Wool Growers meet with the Association of Wool Sellers and arrange for financing the oncoming clip as well as the amount of wool that is going into each monthly sale, etc. The system is so arranged that each house selling wool gets its percentage and each producer's clip has a value passed on it called the "upset" price, which must be reached when wools are offered at auction. This protects the interests of each concentration point, each house operating at these various points and each producer with wool. Wools are sold at auction and the price is submitted to the grower, less the handling charge, which commonly runs between 2½c and 3½c per pound.

So successful has this system been that it has attracted buyers from all wool producing countries of the world. It has given Australian wool the reputation of being the best prepared and best merchandized of any wools in (Continued on page 21)



Fine-Wool Type Merino Ewes in the New England Section of New South Wales. This Clip Topped the London Market in 1926



Two-Year-Old Wanganella Merino Ewes from Haddon Rig Station, New South Wales

The Farm Home

Common Sense Rules for Health

By HEPSY NEFF

THE three unchanging rules for health are comfort, peace and a sense of security; perhaps safety is a better word. One of the strange facts of this old world is that no two persons or things in it are precisely alike. At first this may seem like a calamity but the more it is studied the more we see in it a joyous providence. How else could the rich and varied beauties of nature, of mind and character be produced? It is only when we try to copy and to conform to what we see in some or less slavish fashion that troubles multiply. There is real gain in putting our arms into new words and when some one coined the phrase, "Live and let live," it went into use at once.

Only the comfort that makes us forget the whole complex machinery of the body can set the mind and spirit free for action. Why, the best automobile on the market cannot run when it is cold. We have learned that the human body when in health can maintain its own steady, even temperature in every part whether it is in the Arctic or in the tropics. Men go where they will and stay as long as they like by the simple rule of keeping the body comfortable through proper clothing, food and shelter.

Keep Throat Enemies Away

How many of our best housewives have established two regular, annual periods of discomfort, otherwise known as house-cleaning time; one in the spring and the other in the autumn, the two most beautiful periods of the whole year. Because our heating stoves make more dirt to the hour than any one piece of household furniture they are often taken down and carried to the woodshed during the spring housecleaning. While clear skies and warm sunshine make a comfortable air out of doors the inside air, especially on rainy days is damp and chilly. To make matters worse we shed our heavier clothing as spring comes on and a queer legend says that once a heavy garment is taken off it cannot be put on again without danger of taking cold.

If the medical men have said any one thing more often than another it is that various white blood corpuscles, "the policemen of the body," will defeat any invading army at the doorway of the throat as long as they are not chilled; that a chill brings on something like a panic and turns every one into a deserter in a moment. The simple and easy remedy is to keep warm, to keep the heating stove in place all the year around; keep an extra sweater or warm garment within reach for quick use at any time. Of course the cook-stove is always in use, but how can a family gather around a cook-stove in the kitchen when a cold rain falls all day?

The cook in every family is the most important one of any. Her best and safest rule is few and simple dishes, well chosen and well cooked. Meats, milk, fresh vegetables, both raw and cooked, and fruit. The evening meal must be the simplest because all are weary and food that is safe and nourishing when muscles are in prime condition may bring harm when one is dead tired. More and more we are prizing the housekeeper who dares to be and do differently from her neighbors. It is the criticism of new things just because they are new that discourages many young women. We must console ourselves with knowing that it is the most ignorant who are least willing to adopt new ways.

After we have secured such measures of peace and comfort as our means will allow, the sense of safety can only be at its best in the home that is owned and under the management of a capable Master Farmer and Mrs. Master Farmer. If all this looks like a large task to any young housekeeper let her study the master builders who carry their work with the greatest ease. Whatever the work it is the master workers who find the most joy and the largest success.

Stains on mattresses can sometimes be removed by covering them with a thick paste of laundry starch and soap jelly, allowing it to remain until dry, and brushing it off with a whisk broom.

* * *

A coarse scrubbing brush kept near the door is convenient to clean muddy shoes and better than a knife which may cut or scrape the leather.

Garnishes on Summer Dishes

ONE of the reasons foods in summer-time can be made to look so appetizing and attractive is that there are then so many colorful, edible materials to garnish them with. Another reason, perhaps, is that many cold dishes are served. Cold slices of meat, fish and other salads, aspic jellies, and hors d'oeuvres of various kinds. Garnishes that would soon lose their crisp shapely appearance on hot foods can be successfully used to decorate cold ones. Only enough of any garnish should be used to give a touch of color.

What a difference there is between this platter, photographed by the Bureau of Home Economics, containing neatly arranged slices of lamb, each topped by a thin slice of lemon, and just a plate of cold lamb! The garnish is not intended, in this case, to be solely ornamental. A few drops of lemon on lamb or veal add surprisingly to the flavor.

Another way of making a plate of cold meat look attractive is to alternate slices of ham with chicken, veal or lamb, so that the two colors contrast with each other. A sprig of parsley, cress, mint, a few celery tops, or small leaves of lettuce, would also be a good garnish for cold meat. Narrow rings of green pepper, strips of pimento, rounds of tomato, thin slices of cucumber or pickles, and olives are other suggestions for introducing color.

Among the cooked and edible garnishes often used by restaurant chefs are slices of beet or carrot cut in tiny fancy shapes, cubes from bright gelatin moulds such as tomato, mint or jellied stock, and hard-cooked eggs, cut in slices or symmetrical pieces. Sweet jelly, too, when stiff enough to hold its form, makes a garnish which tastes as good as it looks.

Dainty slices of orange may be used like lemon to garnish either cold or hot meats, especially chicken or duck. Rings of apple, or jelled red-colored apples are often served with pork. Potato salad and sliced ham are a favorite combination, each garnishing the other, as it were.

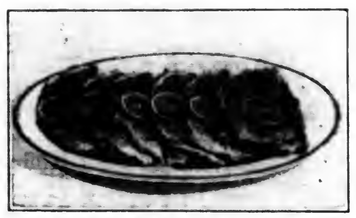
Fried chicken served on a plate with corn fritters, garnished with a bit of currant jelly, makes its appeal to the eye as well as to the palate. The broiled mushrooms or fried onions served with steak are meant to tempt the beholder through the nose as well as the eye.

Lemon, parsley, cress and cucumber are the garnishes commonly used on fish. As the lemon is for flavoring, it is better to cut it in quarters or sixths lengthwise than to slice it. Then each person can squeeze the juice over his own portion. Cucumber garnishes are sometimes given a saw-toothed edge with a fancy cutter.

Among the garnishes for cold drinks, especially iced tea, are sprigs of mint, or geranium, or slices of lemon, orange, or lime, with or without a few whole cloves in each slice. A grape or other large green leaf is often used as a garnish under grapefruit, cantaloupe, orange, or fruit cup.



Sun Suit—Isn't He Just the Picture of Comfort, Health and Happiness?



Cold Lamb Garnished with Lemon

Sunshine Will Keep Them Well

By GERTRUDE S. STEWART

THE radiant sunshine is the most vital factor for existence. Old Sol furnishes light, heat and vital energy to bodies. He is necessary for our food. What would we have without the green food? And how much green food would there be without sunshine?

Recent study and experiment have proved also that the sun's rays in some mysterious way permeate every body tissue. (If they have a chance). Something vital is stored up if Doctor Sun can work on bodies. His warm rays encourage healthy growth of children and young animals.

There is less tendency to disease in bodies that have good sun baths. Sunshine neutralizes common poisons and prevents others. "Acid formation", so much discussed today in health clinics and in magazines, is put to rout by good warm sunshine.

Nothing is to be more fashionable this year than a good coat of tan. That should react in increased health and vigor. Let every one of us make exceptional use of the sunshine for our families and ourselves.

Sunshine will help to free us of any disease that we may be fighting. It will keep us well, after we get well. So you see it is both a cure and a preventive. Provide the youngsters with clothing keeping this fact in mind. You will find them never happier than when clad in sun suits. I found that out last year. Very few garments are necessary for the entire summer's vacation if there is a comfortable sun suit handy. Think of that on your next ironing day. Mary will need a nice dress for Sunday School and little else. The sun suit we are showing you by photograph is especially desirable since a little coat takes care of the rainy or windy day. It makes the child quickly ready too for a trip to town with father.

This outfit for the whole summer is very inexpensive. Would you have thought it possible to dress your wild son the whole summer for just a bit over a dollar and a half? Well, such is the truth. You can buy suits like this picture in "sport suede", which is a nice soft cotton fabric. It is sun fast and tub fast, and comes in many colors. You may get it completely made-up for children from two to six years of age. The sunsuit trunks cost sixty-nine cents, and the dashing little coat eighty-nine cents.

Pennsylvania Farmer is not selling these garments, but heartily endorses them and will gladly tell you where they can be bought if you send the usual self-adressed stamped envelope with your request. Address your letters to Household Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Ready for Storage

ALL wooden goods or clothing should be carefully brushed, cleaned and, if possible, placed in the sun before it is stored in sealed paper bags containing napthalene flakes or napthalene moth ball[illegible] says the New York State College of Agriculture.

Ordinary wrapping paper or newspaper will serve as well as expensive paper bags, provided several thicknesses are used so that no holes are left for the entrance of moths.

Camphor is not nearly as effective as napthalene and such substances as lavender flowers, cayenne pepper, allspice, black pepper, salt, borax, red cedar leaves, and the like, are worthless.

TIGHT BINDING TEXT CUT OFF

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Beauty in the Farm Home

ABOUT this time of year home furnishing worries multiply as fast as new grass blades. Things that were endurable enough last winter become more impossible with each new breath of these bracing spring time breezes.

Furnishing a room is like painting a picture, but you home-maker in "doing over" whatever room you choose, may feel all the artist's creative joy with an added pleasure.

The first thing the artist does is to paint in his background. The very first thing to be thought about in doing any thing to a room is the "fixed background", that is, the floors, walls, ceilings and room openings. These constitute the main architecture of the room. Let's see what can be done about them.

Height, width and spacious-ness are all achieved at this stage of the game. Plain surfaces make the ceiling, wall and floor spaces appear larger. Have you ever seen a ceiling so heavily decorated that it looked to be in constant danger of crashing down on the luckless heads below? A plain surface will prevent that (frightening) feeling and make the ceiling stay properly on top of the room.

Restful Colors

Large patterns make wall spaces fairly dwindle away while patter patterns with small figures covering the same area tend to increase the apparent size of the room. Therefore, never, never, never use large patterned or vividly colored paper in a small room.

Colors in background areas are most important. Those light in value tend to increase the room size and also to make the walls rise, rather than give that lid-down-and-bolted effect we get when we have dark, heavily decorated walls.

This difference is due to the reflection of light. Here, then is the reason why pure white in walls and woodwork is unpleasant. White reflects too perfectly and is painful to the optic nerves. White can never be used in a room meant to be restful. This too, quite aside from the fact that they would never look clean, is the reason why pale rugs are not in good taste.

Have you a room that is positively barn-like, one that you just can't get filled? An excellent way to shrink its apparent size is to give the walls the effect of being paneled. Heavy moulding may be used to outline panels made of decorative textiles. Another method that is just as effective and not nearly so expensive, is to use panels of decorative wall paper set on plain paper and outlined with a narrow border.

Horizontal or Vertical

In large rooms having low ceilings, a different problem presents itself. The mistake in the background is, of course, that the ceiling is too low for the size of the room, giving it a bureau drawer appearance. The only salvation for such a room lies in repeating the perpendicular lines as often as possible, thus leading the eye always upward and giving the appearance of greater height. Use a wall paper having a suggestion of a vertical stripe. Buy furniture that has straight, vertical lines, using grandfather clocks, highboys, secretaries and high-backed chairs whenever possible. By all means avoid any horizontal emphasis such as couches, long tables and oblong pictures hung with the longest side parallel to the baseboard.

Conversely, if the room is small and has a high ceiling, let the furniture lines be horizontal. The davenport top, table tops, chair tops and desk tops should all be about on a level so that the eye may travel around and around with no break. In this manner they serve to bring that too high ceiling down very effectively. A "dado" or chair rail may be used to good advantage because this too breaks up the high side wall areas. Paneled woodwork may be used in a dining room and a corniced or drop ceiling in any room. This effect too may be gained more cheaply by continuing the ceiling paper down on the side wall several inches and using a simple border in place of the expensive cornice.

Mary Jane Adams

Noodles

TIME was when we thought we needed the whole egg to make noodles properly. Now we find that equally splendid noodles can be made from using the yolks only and allowing a teaspoon of water to each yolk. When making angel food or other white cakes calling for egg whites only noodles make a nice solution for using up the other portion of the egg.

For baked noodles first boil them off in either salt water or broth. Make a thin white sauce. Butter a baking dish and place a layer of white sauce, a layer of noodles, then cheese cut fine, then more white sauce and more noodles and more cheese until the dish is full, topping with cracker crumbs and dots of butter. Bake until a nice brown.

For a one-dish meal which your family will be sure to like cut beefsteak into pieces, roll in flour and sear in hot lard and butter. Cut up an onion over steak and add several handfuls of dry noodles. Over all pour a can of tomatoes. Cover skillet and bake until steak is tender, being careful to see that there is enough liquid. This with a simple dessert will make an appetizing meal and will supply the necessary food elements. Augusta Rex.

Fashions



No. 2723.—Smart Wrap Around. Designed in sizes 16, 18 years, 36, 38, 40 and 42 inches bust measure. Size 36 requires 3¾ yards of 40-inch material with ½ yard of 32-inch contrasting.

No. 3453.—Smart Flare. Designed in sizes 14, 16, 18 years, 36, 38, 40 and 42 inches bust measure. Size 36 requires 3⅝ yards of 40-inch material.

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21 VARIETIES gorgeous colored Irises. The Garden's Greatest Beautifiers (including "Your Choice" the best pink) labeled and postpaid for only $1. Silk orders for only $3. Color circular free. A. B. KATKAMIER, Hanover, R. 5.

FARM LOANS under Land Bank Plan...
OHIO-PA. JOINT STOCK LAND BANK
294 Yeoman Building Harrisburg, Pa.

Garden and Truck Crops

By GILBERT S. WATTS

NUMEROUS inquiries are received on cause and control of club root. Unquestionably the loss from club root amounts to a great deal every year, much of which could be prevented by a better understanding of the disease and the application of simple precautionary measures. Unfortunately there is no practical way of saving the crop after this pest has once infested it.



Club root is caused by a fungus that lives on the roots, causes the characteristic swelling and prevents the plant from providing itself with nourishment. The organism will live in the soil for several years. Therefore, cabbage should not be grown on the same land or part of the garden more often than once in four to six years.

Liberal liming will help control because club root thrives best under acid soil conditions. Pulverized limestone has proved especially satisfactory in this connection. Everything will be lost unless disease-free plants are used. If club root organism is present in the seed bed, or plant patch outdoors, it will be carried with the plants wherever they are set. If diseased cabbage stumps are fed to livestock the manure is likely to spread the trouble wherever applied.

Club root is one of those things that may be prevented comparatively easy. When once present great care should be taken to rotate, to lime, to secure clean plants and to avoid dragging soil from one part of the farm to another as harrows or other implements.

• • •

IN addition to our strawberry plantation which will be picked for the first time this year there are several acres which will be fruited for the second time. Part of this old patch is quite clean but about a third of it is terribly infested with timothy. The trouble began in the straw that was used for mulching. Clean straw was used on the part that has remained clean. On the other part purchased straw was applied. This came from a very poor field of wheat, that was cut late and in which the stand was so thin that some timothy had shot up and tiptened. As a consequence we will be short perhaps 2,000 quarts of berries, a serious loss.

Too much emphasis cannot be placed on the importance of securing clean straw for mulching. In a part of my new patch purchased straw was used that contained so much grain that the volunteer wheat is getting to be something of a nuisance.

• • •

IT has been lots of fun in recent weeks to roll under luxurious green manure crops with the new corn-borer plow carrying two 18-inch bottoms. In dense tangled growths this outfit with its 18-inch rolling coulters and liberal sized jointers has walked right through, turning out a clean job of plowing. Moreover the three-foot swath that it cuts counts into acres mighty fast, a great advantage in a cold backward spring. The draft of this big plow is not as much greater than the draft of 14-inch plows as one might expect. Neither is it necessary to plow excessively deep. One can turn a good furrow at ordinary plowing depths.

• • •

"WOULD you please give me some advice on dusting celery for blight instead of spraying?" I have preferred to spray celery with a 5-5-50 Bordeaux mixture because the rest of the material is somewhat less than when dust is used and because this material has proved thoroughly dependable and satisfactory under a great variety of conditions. On the other hand certain growers report satisfactory results from the use of dusts, and it is possible where the acreage does not justify a modern sprayer that dusting may be more practical. It is important to get the dust on very early in the morning before the dew dries or the wind rises. What is known as a 20-80 copper lime dust has been recommended for dusting celery.

• • •

A CORRESPONDENT wishes to know why we have not said more about vetch in discussion of soil improvement crops. The reason has been that vetch up until this year had not proved as satisfactory under my particular soil and climatic conditions as some other plants. Having faith in vetch, however, I almost invariably have included a very small proportion of this seed in other mixtures, always inoculating it.

Now I am beginning to find vetch very much worth while, it is growing in a fully satisfactory manner on most of the farm. This may be due to the very thorough inoculation that has been secured or to the general increase in fertility or possibly to both. As a rule maximum results in soil building on the vegetable farm will be secured when a number of soil improvement crops are called on either alone or in mixtures as fertility conditions, moisture conditions and the dates at which sowings can be made may indicate.

About Budding Peaches

Can you give me some information on budding peach trees? What time of year is it done? What circular from State College would give information on this subject? Robert J. Hile.

I HAVE sent you under separate cover Extension Circular No. 103 in which you will find a detailed description of budding peaches. Peach seedlings usually are budded the first season; that is to say the peach pits are sown in the fall or early spring and the young seedlings are budded in August or early September of the same year.

The most essential conditions in budding are to have buds of the variety that you desire to propagate which are sufficiently mature and, also, that the bark of the stocks into which the buds are to be placed shall separate readily from the wood, so that the incision can be made easily and the bud inserted beneath the bark.

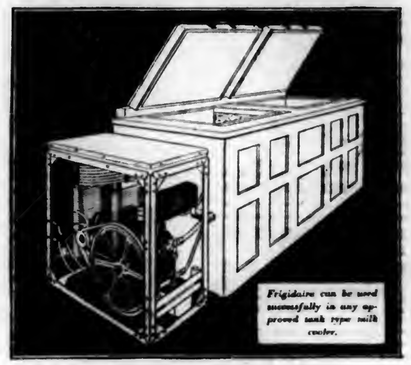
Peach trees of bearing age seldom are budded or grafted to change the variety. It can be done but usually it is not practicable because young peach trees come into bearing so quickly. In this part of the country peach trees cannot be cleft or cerf-grafted to advantage, as is done with apples, pears and cherries. A bearing peach tree that is to be changed to another variety should be cut back almost to the trunk in the spring. Vigorous shoots will arise from the stubs; certain of these may be budded in August. Buds thus inserted make a new top to the tree the following year. Thus two years are lost and a young tree can be brought into bearing in three years, so the method is hardly practicable.

S. W. Fletcher.

Wormy Cherries

Will you tell me what to do for worms in cherries? Our sour cherries get wormy every year. They seem to be all right when they first start to ripen, but if we leave them until they are ripe they get wormy. J. M.

THIS may be the larva of either the curculio, which more commonly attacks plums and peaches, or of the cherry fruit fly. Send specimens to the Extension Entomologist, State College, for identification. In either case control is secured by spraying with powdered arsenate of lead, one pound to fifty gallons of water when the blossom shucks split (before they fall off), and again about ten days later. S. W. F.



"Frigidaire cools milk or cream *faster and colder*

...refrigeration cost reduced about 60%"

Standard Dairy Co., Des Moines, Iowa, makes big, extra profits with Frigidaire. So can you! Return the coupon for all the facts.

• • •

FIGURE the *extra* profit you'd make by ending ice bills and spoilage losses. Use Frigidaire to cool milk and you'll make this extra profit. At the same time, you keep the bacteria count remarkably low. You can cool milk faster, keep it sweet longer, get better prices for it. You can make more money by operating at lower cost... meet and beat competition. You can do *all* that thousands of dairymen do... with Frigidaire.

Consider the experience of the Standard Dairy Co., Des Moines. "Using Frigidaire," writes Alvah Hanke, manager, "we cool milk or cream faster and about 20° colder, than with ice... keep milk sweet longer, give a better, safer milk than ever before. In addition... refrigeration cost has been reduced about 60%. Frigidaire is our most economical investment."

Imagine spending *only 40 cents* where you now must spend a dollar to cool milk with ice. Think of turning present spoilage losses into additional profit. Think of the time, labor and money you'd save if Frigidaire was on the job... *now!* And you can have it *so easily!*

Get the facts at once. Find out how little Frigidaire costs ...how it actually *pays for itself* as you pay for it on General Motors liberal terms. No matter how small or large your dairy. Frigidaire operates efficiently and dependably, in any approved tank type milk cooler, at low cost on high line or Delco-Light current.

The entire Frigidaire story costs you nothing... places you under no obligation. Send for it immediately. Mail the coupon ... *today*. Frigidaire Corporation, Subsidiary of General Motors Corporation, Dayton, Ohio.



This big, 4-cylinder, 1800 watt Delco-Light Power Plant develops complete current to operate Frigidaire.

FRIGIDAIRE CORPORATION,
Dept. M-217 Dayton, Ohio.
Show me the way to bigger dairy profits with Frigidaire Milk Cooling Equipment. Send all the facts at once.

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PRODUCT OF GENERAL MOTORS

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Pride o' Niagara CHICKS

1200 Breeders Trapnested on our own Breeding Farm. Foundation stock mated to R. O. P. Pedigree Males. 1,000 satisfied customers. Every Chick a credit to its name. Leghorns, Reds, Rocks, Wyandottes, Orpingtons, Anconas, Minorcas, Black Giants, Pekin Ducklings. WE GIVE FULL SATISFACTION ON EVERY ORDER. Get our catalog.

NIAGARA POULTRY FARM, Box 25 Ransomville, N. Y.

PENNSYLVANIA COOPERATIVE LEGHORN FARM

Breeding COCKERELS with RECORDS to 303 EGGS. PURE TANCRED-HOLLYWOOD-BARRON STRAINS White Leghorns—Brown and Buff Leghorns—QUALITY EXTRAORDINARY—PRICE WAY DOWN Ship C. O. D. Get our prices quick.

Pennsylvania Cooperative Leghorn Farms Box 318, Grampian, Pa.

BABY CHICKS

	25	50	100	500
Wh., Bl., Bf. and Br. Leghorns	$2.75	$5.50	$10	$49
Rocks, Reds and Wyandottes	3.50	7.00	13	64
Heavy Broilers	3.25	6.50	12	59
Light Broilers	2.75	4.50	8	39

Twenty-four page catalogue free. 19 years in business. Hogan tested flocks. Postage paid. 100% delivery.

JOHNSON'S HATCHERY, ICKESBURG, PENN'A

Baby Chicks from High Egg Laying Flocks

11 years reliability. Satisfied customers our specialty. Prices Reasonable Write for catalog and price list.

BUCYRUS HATCHERY CO., Box 415, Bucyrus, Ohio

Bigger Chicks

Hatched from two-ounce eggs or better.

Prices on	50	100	500	1,000
White Leghorns	$5.50	$10.00	$47.50	$90.00
Wh. & Bd. Rocks	6.50	12.00	57.50	
S. C. Reds	6.50	12.00	57.50	
Jersey Black Giants	9.50	18.00		
Mixed	5.50	10.00	47.50	90.00

COVALLEN POULTRY FARM, F. W. Matzabaugh, Duncansoo, Pa.

BARRON LEGHORN CHICKS

From Large Type Barron English S. C. White Leghorns. Hens weigh up to 7 pounds. Extra quality chicks from free range selected stock at $9 per 100, $42 per 500, $80 per 1000. Hatches June 12 19 26 or any week in July. Chicks 100% live arrival C.O.D. 10% books order. Catalog free.

ROBERT L. CLAUSER, Box N, Kisiotelterville, Pa.

TAKE NOTICE 150,000 CHICKS for June and July Delivery

	25	50	100	500	1000
S.C. White Leghorns	$3.50	$4.50	$8.00	$37.50	$70
Barred Rox	3.00	5.50	10.00	47.50	90
Rhode Island Reds	3.00	5.50	10.00	47.50	90
Silver Leg. Wyandottes	3.00	5.50	12.00		
Light Mixed		4.00	7.00	32.50	60
Heavy Mixed		4.50	8.00	37.50	70

From carefully selected free range flocks. 100% arrival. Postpaid. Write for illustrated catalog.

THE RICHFIELD HATCHERY, Box 3, Richfield, Pa.

Penn's State "Supervised" CHICKS

Flocks inspected by officials from the Penn's Dept. of Agri. S. C. White and Brown Leghorns, 11c each; Barred Rocks and S. C. Black Minorcas, 12c each; S. C. Reds, 14c. Assorted, 8c and 9c each. Our 19th year. $1.00 books order. Catalog free. Member I. B. C. A.

THE KEYSTONE HATCHERY, (The Old Reliable Plant) Box 67, Richfield, Pa.

BABY CHICKS Order direct from this ad and save time

From Range bred	25	50	100	500	1000
White & Brown Leghorns	$2.25	$4.25	$ 8	$39.00	$75.00
Anconas & Wh. Leghorns	2.25	4.25	8	39.00	75.00
White and Barred Rocks	2.75	5.25	10	49.00	95.00
Colemb. Wyan. & R. I. Reds	2.75	5.25	10	49.00	95.00
Heavy mixed broilers	2.50	4.75	9	42.50	80.00
Light mixed broilers	2.00	3.50	6.50	30.00	57.50

Full count and quality guaranteed. Catalog free. For Greater Profit Ulsh Poultry Farm & Hatchery, Hatchery Chicks Box F, Port Treverton, Penn'a

FOR GREATER PROFITS Hatchery Chicks

27,000 CHICKS WEEKLY FOR JUNE

	50	100
Barred Rocks and R. I. Reds	$4.50	$10
White Wyandotte	5.00	11
Leghorns and Anconas	5.00	9

100% live arrival and. All breeders culled for health and production.

L. R. WALCK HATCHERIES Dept. G. Greencastle, Pa.

BABY CHICKS C.O.D!

Send no money. Just mail your order. We ship C. O. D. and guarantee live delivery of chicks. From purebred, inspected and culled flocks.

Prices on	25	50	100
S. C. Wh. and Br. Leghorns	$3.00	$5.50	$10.00
Bd. Rocks and R. I. Reds	3.50	6.50	12.00
Wh. Rocks and Wh. Wyandottes	4.00	7.50	14.00
Broiler Chicks	2.50	4.50	8.00

Box 905 Bellefonte Poultry Farm, Bellefonte, Pa.

Neighbor Poultrymen

By H. C. KNANDEL

ON Seneca Lake at Glenora, N. Y., is a man by the name of E. A. Beers who has remodeled a fruit storage building into a chicken factory. In the basement are the incubators and on the floor above the brooders. Only the highest quality of stock is bred on this farm. I do not know who gave him his training in cleanliness. He is not married, but his poultry houses appeared as neat as any which we observed. Strict sanitation is employed on this farm. No serious disease has ever visited his stock and to help him maintain this good record we all wore over-shoes when entering the various pens in his poultry house.



One of the largest stock farms near Batavia was the first place visited Tuesday morning. A barn 190 feet by 40 feet, the equal of which is seldom seen, was fast being remodeled into a poultry house. Of course, only a small area was needed, since it was possible to keep fowls on three floors. Mr. W. W. Hawley, Jr., the owner, maintains a large flock of hens, a few cows and some sheep.

Quality the Keynote

The little White Leghorn hen has surely given some of the larger animals a terrible race. Trapnesting a part of the flock principally for R. O. P. work and securing males with known records behind them is considered important on this farm. Eggs are sold to special markets and put up in dozen cartons. A poultry supply office is also run in connection with the many other poultry activities. Once again, quality of stock sold was the keynote of success.

The next farm visited was most interesting, especially to the city chap. Mr. and Mrs. M. B. Heisler of Alden, New York, started in the poultry business ten years ago. Neither knew a chicken from a jack rabbit. The start was made with one hundred chicks. If the beginner in the poultry business would only follow this plan there would be fewer failures. After observing how these chicks behaved, more chicks were purchased the next year. Now a flock of several thousand chickens is maintained and quality stock is produced.

No chick has ever come on the farm that cost less than 35 cents, and none has been sold for less than 25 cents. Several hundred hens are trapnested. Last year a surplus of pullets was raised. These were offered for sale. A prospective buyer came, looked and said he would be back later. The next week he returned to take the lot, but it was too late. In the meantime Mr. and Mrs. Heisler had decided to build a home for these pullets and the concrete work was under way.

Averaged 236 Eggs

Another farm which we visited in this vicinity was owned by a real estate man in the city of Buffalo. The flock consisted of only about 500 hens, but they were of real quality. The flock average last year was 236 eggs.

A boy 20 years of age with an appearance of but scarcely more than 16 years was the caretaker. A keener young chap you could not find. Deprived of a high-school education because of the fact that he was the oldest in a family of 12 children, he went to work. He could tell you more about those hens than some people know about their own families.

On every farm visited in New York state some fowls were being trapnested. Quality and not quantity is their goal. They are building permanently for the future.

CHERRY HILL CHICKS

S. C. W. Leghorns—Wyckoff Strain	$9.00
S. C. Everlay Brown Leghorns	8.00
Barred Rocks and R. I. Reds	10.00
Heavy Mixed	9.00
Light Mixed	7.00

5c less per chick in 500 lots. 1c less in 1 and 2 lots. For less than 100 lots, add 2c per chick. 100% live arrival guaranteed. Parcel post prepaid. Bank reference. Order direct from this ad, or write for free circular.

CHERRY HILL POULTRY FARM Wm. Nace, Prop., Box P, McAlisterville, Pa.

GREEN FOREST HUSKY CHICKS

English and Tancred Strain

Ship C. O. D.	25	50	100
S. C. White Leghorns	$2.50	$4.25	$ 8.00
S. C. Barred Plymouth Rocks	3.25	6.25	12.00
Mixed chicks	2.25	4.25	7.00

We guarantee 100% strong chicks on arrival.

GREEN FOREST POULTRY FARM. J. W. Amig & Son. Star Route. Richfield, Pa.

BABY CHICKS

	50	100	500	1000
White Leghorns	$4.50	$8.00	$37.50	$70.00
R. Rocks	5.50	10.00	47.50	90.00
S. C. R. I. Reds	5.50	10.00	47.50	90.00
Buff Orpingtons	6.50	12.00	57.50	110.00
White Rocks	6.50	12.00	57.50	110.00
Heavy Mix	4.50	8.00	37.50	70.00

100% live delivery guaranteed. Send 20% with order, balance C. O. D.

MONROE HATCHERY, Box 10, Richfield, Pa.

WHITE CAMPINES Greatest All-Year-Round Layers

Superior Ty Leghorns. One customer writes: "243% net profit in 5 months." Another: "A flock of 24 hens laid an average of 198 eggs in a year." Still another: "210 Leghorns had 38% production in Dec. and 87% production in Jan. while 345 White Campines had 42% production in Dec. and 70% in Jan." CATALOG FREE stamps appreciated.

NABOB POULTRY FARM, Box 22, Gambier, Ohio

Baby Chicks From Free Range Selected Flocks

June and July	25	50	100	500	1 000
White Leghorns	$2.50	$4.50	$8.00	$37.50	$75
R. Rock & Reds	2.75	5.50	10.00	47.50	90
Light Mixed	2.25	4.00	7.00	34.00	65
Heavy Mixed	2.50	4.50	8.00	38.00	75

100% Prepaid Safe Delivery Guaranteed. Fair View Poultry Farm, R. 3, Millerstown, Pa.

ULSH'S Superior CHICKS

	50	100	500
White Wyand	$6.50	$12.00	$57.50
Wh. & Bird Rocks	5.50	10.00	47.50
Heavy Mixed	5.00	9.00	42.50

100% live delivery guaranteed. Postage paid. JAS. E. ULSH. Beaver Springs, Pa.

BEST QUALITY CHICKS

	100	500	1,000
Tancred Str. W. Leghorns	$8.50	$40.00	$75.00
S. C. Brown Leghorns	8.00	37.50	70.00
S. C. W. Leghorns	8.00	37.50	70.00
S. C. Barred Rocks	9.00	42.50	80.00
Light Mix. $7.00. Heavy Mix $8.00 per 100. 100% arrival. Postpaid, special price on large lots. Write for circular.			

Chester Valley Hatchery, R. F. D. McAlisterville, Pa.

STOP! LOOK! and take notice to the special low prices on Guaranteed lusky chicks for June Delivery.

	25	50	100
Tancred strain White Leghorns	$2.50	$4.50	$ 8.00
Everlay Strain Brown Leghorns	2.50	4.50	8.00
Barred Rocks and S. C. Reds	2.75	5.00	9.00
Light mixed	2.25	3.50	6.00
Heavy mixed	2.50	4.50	8.00

75% live delivery guaranteed parcel post prepaid. Special prices on 500 and 1000 lots. Free circular.

COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

PENN'A CHICKS FOR JUNE

Have vim and vigor—hatched by men with 18 years experience. Prepaid and 100 per cent live delivery guaranteed. S. C. White and Brown Leghorns, 9c each; Rocks, 10c; Reds and Minorcas, 12c; Heavy mixed, 8c; Light breeds, 8c. $7.50 per 1,000. Circular free.

THE PENNA. HATCHERY. Liverpool, Pa.

PEERLESS STRAIN WHITE LEGHORNS CHICKS

Our breeders are large birds; long, deep, well rounded bodies. Selected for size, vigor and egg production.

$8.00, per 100; $37.50, 500; $70, 1,000 JUNIATA POULTRY FARM, Box P, Richfield, Pa.

Chicks 7c Up Long's Large Type Barron Strain

S. C. W. Leghorns, 2 yr. old breeders, $10.00 per 100. S. C. W. Leghorns, 1 yr. old breeders, 8.00 per 100. Barred Rocks & Reds, 10.00 per 100. Assorted, 7.00 and 8.00 per 100. Prepaid live arrival and satisfaction guaranteed. Catalog.

TURKEY RIDGE HATCHERY, Millerstown, Pa.

Klines' Barred Rocks

Healthy stock. Penna. State Col. males. Strong chicks guar. Prompt del. C.O.D. $10.00-100; $90.00-1,000. Write or wire.

S. W. KLINE, Box 30, Middlecreek, Pa.

WYCKOFF STRAIN WHITE LEGHORNS CHIX

$8.00 per 100 $37.50, 500 $70.00, 1,000

100% prepaid safe delivery guaranteed.

J. N. Nace Poultry Farm, Box A, Richfield, Pa.

Chicks, Barron Eng. Wh. Leghorns 8c

White Leghorns 7½c; Barred Rocks 10c; heavy mixed 8c; light 7c. Reduced on late orders. 100% guaranteed. Now. Circular Free. July and August delivery.

TWIN HATCHERY. McAlisterville, Pa.

BARRON and WYCKOFF STRAIN

S. C. White Leghorn chicks for June, 9 cents each; $80.00 per 1000. Prepaid and safe delivery guaranteed. Our 19th year. Circular free. $1 books order.

THE PENN'A HATCHERY. Liverpool, Pa.

BABY CHICKS

100% arrival	25	50	100	500
White Leghorns	$2.75	$5.25	$ 8.00	$37.50
Barred Rocks	3.00	6.25	10.00	47.50
R. I. Reds	3.25	6.25	10.00	47.50
Heavy mixed	2.75	5.25	8.00	37.50
Light mixed	2.50	4.75	7.00	32.50
Pekin Ducklings	2.50	4.50	7.00	32.50
Mixed Durklings	2.50	4.50	7.00	32.50

JOHN SHADEL HATCHERY, R. 2, Box 9, McAlisterville, Pa.

Baby Chicks

From heavy laying strains of R. Rocks and Reds $9.00 W. and B. Leghorns, $7.50. Mixed $7.50, prepaid.

Member I. B. C. A.

Sunnyside Hatchery, Liverpool, Pa.

HERBSTER'S QUALITY CHICKS

Summer Prices

Ship C. O. D.

R. Rocks & Reds, $10 per 100 Heavy Mixed $8.00 per 100

Herbster's Poultry Farm, Bx.171, McClure, Pa.

STRICKLER'S SUPER-QUALITY CHICKS

High Egg Production Bred. Healthy, Vigorous

Large size Tancred-Barron English S. C. White Leghorns 274-318 egg line matings. No lightly bred chicks are eggs hards and pigeons. These quality pure chicks shipped parcel post prepaid 100% live delivery guaranteed any week in June at $9 per 100; July 1st to 20th, $11 per 100; $85 per 1000 White Rocks, Barred Rocks, $10 per 100. Write for catalog free.

LEONARD I. STRICKLER, Box F, Sheridan, Pa.

ValleyViewChicks

Tancred Strain Wh. Leghorns, $2.75 $5.00 $9.00

S. C. W. Leghorns 2.50 4.50 8.00

R. Rocks & R. I. Reds 3.00 5.50 10.00

Heavy Mixed $9.00 Light Mixed, $7.00

500 lots 3c less. 1,000 lots 1c less. Free range. 100% live delivery guaranteed. Circular.

VALLEY VIEW POULTRY FARM, N. J. Ehrenseller, R. 4, McAlisterville, Pa.

Quality Chicks at Low Prices

PRICES FOR JUNE AND LATER

Variety	100	500	1000
United Strain Leghorns	$7.50	$36.00	$70.00
Barron Wyckoff Leghorns	8.00	37.50	75.00
Special Leghorn, Wyckoff only	9.00	42.50	80.00
Barred Rocks	9.00	42.50	80.00
Mixed Chicks	7.00	32.50	60.00

R. E. STRAWSER. McAlisterville, Pa.

CHICKS Pure bred. Blood tested for range breeders. Leghorns, Anconas, Sc. Rocks, Reds, 10c. Wyandottes, Orpingtons, Minorcas, 11c. Black Giants, 16c. 100% live delivery guaranteed. Manual Free.

SEIDELTON FARMS. Washingtonville, Pa.

CHICKS ZELLER'S EXTRA QUALITY CHICKS from Large Type S. C. White Leghorn Tancred strain breeding hens mating to Barred Rock males. $6.50 per 100; $60 per 1000. Also pure bred Rocks and Reds $12.50—1000. All chicks 100% live delivery guaranteed. Circular free.

2014 Manada St. EDGAR A. ZELLER, Harrisburg, Pa.

WHITE LEGHORNS

Brown Leghorns	$7.00 a hundred
Black Minorcas	7.00 a hundred
Rocks	10.00 a hundred

Mixed chicks, $6 per hundred. Circular free. Order direct from this ad.

ECLIPSE HATCHERY. Port Treverton, Pa.

Baby Chicks from free range flocks. S. C. White Leghorns, 8c; Barred Rocks, 10c; Heavy Mixed, 8c; Light Mixed, 7c. 100% live arrival guaranteed. Circular free.

PENN'S CREEK HATCHERY, R. 1, Selinsgrove, Pa.

JUST GOOD CHICKS

Barred and White Rocks, R. I. Reds...$11.00 per 100. Leghorns and heavy mixed.....9.00 per 100. $1.00 per 100 deposit, balance C. O. D. Money back if not satisfied.

R. Ray Miller, Prop. SUSQUEHANNA HATCHERY Millersburg, Pa.

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BOOKLETS that are offered through advertisements usually without cost to you, stand the advertiser anywhere from ten cents to a dollar apiece. He is willing to send them to you free because he believes that you are really interested in the goods or the service he has to sell.

Read the advertisements in this paper. When booklets are offered on subjects in which you are interested, write for them, mentioning this publication. Advertised goods of known quality are safer to buy than unadvertised goods of unknown or doubtful quality. Read the advertisements.

When writing advertisers please mention Pennsylvania Farmer.

Just Paint it on the Roosts!

—Before the chickens perch. Only a small paint brush and a can of "Black Leaf 40" are needed. While chickens roost, fumes are slowly released to penetrate the feathers; killing lice. Eliminates inbreeding of birds. Ask your dealer or write us.

Black Leaf 40" Kills Poultry Lice

Nicotine Products & Chemical Corp., Inc., Louisville, Ky.

Bonus for Live Rats

25c plus your money back, if Tamplo Rat Killer fails to get them all. ONLY KIND, not a squill or other poison. Harmless to hogs but Rats and Mice. Pests die outside. Proved by thousands.

Can ship C. O. D.

Tamplo Co., 1002 Coca Cola Bldg., Kansas City, Mo.

Send 25c (2.0) Farm Size 1½ pounds enough for 200 rats—for only one dollar, on 15 Days' Trial. If there is a live one left, I'll refund the postman (with postage) plus 25c for your trouble. You risk nothing so write today.

LOOK! Baby Turkeys and Hatching Eggs

Bronze, Bird Bros. strain of prize winners. Narragansett, prize winners at International Turkey Show, Chicago, Ill. Narragansetts. Axtell's strain of Prize winners. Bourbon Reds. Axtell's strain of Prize winners. Roadside weekly Price right. Live arrival guaranteed. Catalogue free.

ROADSIDE POULTRY FARMS, Box Z, Gambier, Ohio

Dairy Brand Concentrated Buttermilk

From Tuberculin Tested Cows

Dairy sour milk solids, 60 per cent lactic acid; thick as cream; with no fat edge. Ingredients. Reduces feeding and increases danger from overfeeding. Increases egg production and promotes fertility and hatchability. Good for chicks, brooders and laying hens. Sold direct from the factory in barrels of about 400 lbs. Write for prices.

TITUSVILLE DAIRY PRODUCTS CO. Titusville, Pa.

BARRED ROCK CHICKS

A Big modern Breeding Farm and Hatchery devoted exclusively to the production of BARRED PLYMOUTH ROCKS

HAVEL POULTRY FARM. GEORGETOWN, DEL.

BROILER—RAISERS

SHIPPING CRATES LOANED FREE

Sell your broilers and other poultry to New York's Oldest Live Poultry House. Est. 1883. We are bonded commission merchants. Birds fed, and sold daily. Highest prices. Our references. Inquire about us. Write for quotations, time, and shipping instructions and Holiday Calendar.

Poultry P-I KRAKAUR POULTRY CO., Inc., 308 Washington Market, New York City.

BABY CHICKS

From Free Range Selected Flocks

Prices on	25	50	100
S. C. White Leghorns	$2.50	$4.50	$ 8.00
Barred Plymouth Rocks	3.00	5.50	10.00

Send no money; just mail your order. We ship C.O.D. and guarantee live delivery of chicks.

ROSEVILLE POULTRY FARM, Box 306, Ringsville, Pa.

Reduced Chick Prices

In effect June to October.

	25	50	100	500	1,000
Tancred Wh. Leghorns	$2.50	$4.50	$8.00	$37.50	$70
S. C. Wh. Rocks, Reds	3.00	6.00	12	57.50	110
Assorted Orpingtons	3.25	6.50	13	62.50	120

Light Assorted 9c Heavy Assorted 10c. 100% Delivery Guaranteed. Catalog Free.

Lantz Hatchery, Tiffin, Ohio

BABY CHICKS

PROMPT DELIVERY—WILL SHIP C. O. D.

	50	100	500	1,000
Light Mixed	$4.00	$7.00	$32.00	$62.00
Heavy Mixed	6.50	8.00	37.50	70.00
S. C. W. Leghorns	6.50	8.00	37.50	70.00
R. & W. Rocks	8.50	10.00	47.50	90.00
S. & R. I. Reds	8.50	10.00	47.50	90.00

FOREST POULTRY FARM & HATCHERY Herbert Miller, Prop. Box 2, Richfield, Pa.

BABY CHICKS

FROM HEAVY LAYING FREE RANGE FLOCKS

	25	50	100	500	1,000
S.C.W. & Br. Leg.	$2.50	$4.50	$8.00	$37.50	$70
R.C. Rocks & Reds	2.75	5.50	10.00	47.50	90
Heavy Mixed	3.00	5.50	10.00	47.50	90
Assorted Orpingtons	3.00	5.50	10.00	47.50	90
Light Mixed Chicks	2.25	4.00	7.00	32.50	60

100% prepaid safe delivery guaranteed. Order from this ad or write for circular.

J. R. NACE POULTRY FARM Richfield, Pa. Box B.

BABY CHICKS

Tancred Str. Wh. Leghorns	$9 per 100	
White Leghorns	8 per 100	
Barred Rocks	10 per 100	
R. C. Reds	10 per 100	
Heavy Mixed	9 per 100	
Light Mixed	7 per 100	

100 lots 1c less—1,000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for free circular.

C. F. LEITZER, McAlisterville, Pa.

Nest Box Notes



JUDGING from the number of inquiries received, a great many readers are interested in the enteritis powder described in a recent issue. I have had no personal experience with this compound, which, however, seems to be getting results in New England. I wish that readers who use this powder would write and let me know what results they get.

• • •

IT is a very good idea to separate the pullets from the cockerels as soon as the sex can be determined. The cockerels do better by themselves, and the little pullets develop very much better with the cockerels out of the flock.

• • •

RIGHT now a good many flocks of growing chicks are too crowded. Such flocks will not do as well as they should. They will not grow evenly, and may get into such bad habits as toe and tail picking.

• • •

GROWING chicks should be taught to roost as soon as they are a few weeks old. As soon as they learn to get on the roost nights they are out of danger from crowding in the corners. A low roost about a foot off the floor will suit the little fellows at first.

• • •

THIS is also the season when young birds quickly outgrow their hoppers and watering facilities. It is necessary to provide plenty of hopper space and drinking room, as the young birds are great eaters and must consume lots of mash to grow. Lack of sufficient feed or room to get at it causes uneven flocks with stunted birds.

• • •

THE price of fowls is good and eggs take two-cent jumps every now and then, but I don't think that broilers, especially Leghorns, are any too high.

• • •

MY laying flock has been giving very good production, and after dropping off a bit when I stopped the lights in April has come up in production again. Probably they will begin to slow up pretty soon, but I hope to hold a reasonable production all summer.

• • •

FIELD work is three or four weeks behind on account of wet weather during April, and things are pretty likely to get into a jam, especially if it rains much more. Fortunately the hens and chicks didn't seem to mind the rain, and there is very little gamble there, provided the buildings and equipment are all right, compared to crops of any sort. However, we are plowing under sweet clover about knee high for corn, and I will say that doing a job like that gives a mighty good feeling of satisfaction.

Poor Feather Growth

I have a flock of Barred Rock chicks, 200 more or less. I want to know why some feather out and others go for seven to eight weeks or more before starting out in full. The feed is considered good, contains buttermilk, also cod-liver oil, etc. I had them housed from the first to fourth weeks with glass substitute windows, later they get out in the sun and air with plenty of grass. F. B. H.

IT has been my experience that too warm a temperature in the brooder house and crowding are largely responsible for poor feather growth in growing chicks. Plenty of warmth under the hover but a cool well-ventilated house is the idea. Young birds should be taught to roost as soon as possible, as that will prevent crowding and sweating at night. R. L. S.

Big Chicks from Big Eggs

REDUCED PRICES and SPECIAL SALE on our FAMOUS GOOD LUCK CHICKS

from May 15th to Sept. 1st. You can't miss with our Big Chicks hatched from best strains in America and eggs that weigh 26 oz. to the dozen. Our June and July chicks will make December Layers. They are prize winners and Profit Makers. Hatches off every Monday and Thursday. Prompt shipment assured. 100% alive. Postpaid. $2.00 chart free with each order. Beautiful COLORED ART BOOK FREE. Write today. 10% cash will book your order. Balance C. O. D.

Breed	Number	25	50	100	500	1000
White, Brown, Buff Leghorns and Anconas		$3.00	$5.50	$10.00	$48	$ 90
Barred and White Rocks, R. C. and S. C. Reds		3.50	6.50	11.50	55	110
W. Wyds., Jf. & W. Orpingtons, Bl. Minorcas		3.75	7.00	12.50	62	120
Buff and White Minorcas, Partridge and Buff Rocks, Silver Wyandottes, Jersey Giants		4.50	8.50	15.00	72	140
Heavy Assorted $10.00 per 100 straight. Light Assorted $8.50 per 100.						

Also choice PUREBRED COCKERELS and PULLETS to MATE with Your next year's flock. Write for prices.

NEUHAUSER HATCHERIES & POULTRY FARM, Dept. 46, NAPOLEON, O.

LANCASTER QUALITY CHICKS SHELL EGG & VOIGHT STANDARD QUALITY

LOOK! PRICES EFFECTIVE WITH YOUR ORDER.

Our chicks come from flocks that have been carefully culled for Egg Production and Standard Quality. By poultrymen trained at the Ohio State University. Our catalog is chicken from cover to cover; write for it or order from this ad. 100% live delivery guaranteed. Ref. Hocking Valley Nat. Bank. Member I. B. C. A.

Varieties—Postpaid prices:	25	50	100	500	1000
Quality Big Type Barron White Leghorns	$3.25	$6.00	$11	$52.50	$100
Rose, Single C. Brown Leghorns, Anconas	3.00	5.50	10	47.50	90
Barred, White, Buff Plymouth Rocks	3.50	6.50	12	57.50	110
Rose, Single Comb Rhode Island Reds	3.50	6.50	12	57.50	110
White, Silver Wyandottes, Buff Orpingtons	3.75	7.00	13	62.50	120
Light Brahmas, Jersey Black Giants	4.75	9.00	17	82.50	160

Special Mating Chicks 3c each higher. Heavy Mixed $10 per 100; Light Mixed $8 per 100

LANCASTER FARMS HATCHERY Route 33 Lancaster, Ohio

NATIONAL "SUPERBRED" CHICKS

100,000 Chicks for Delivery in June

	50	100	500	1,000
S. C. White, Brown, Buff Leghorns	$5.75	$11.00	$52.50	$100.00
Barred & White Rocks, Reds	6.75	13.00	62.50	120.00

Light Mixed, $9 (e) per 100. Heavy Mixed, $10.00 per 100. Also White Wyandottes, Black and White Minorcas, Anconas and Blue Andalusians. Send for our Catalog and price list. We guarantee 100% live delivery. Member International Baby Chick Association.

NATIONAL CHICK FARMS. Box 404. MIFFLINTOWN, PENNA.

YOU NEED THIS CATALOG!

Big Poultry Manual Given Free to All Buyers of Chicks

Write for details. Every chick buyer should know about Hoytville Chicks. Our beautiful illustrated catalog tells all about them. Your copy sent on request.

Guaranteed chicks

OHIO ACCREDITED CHICKS — ALSO BABY DUCKS

Every bird in our breeding flock is banded and a record kept. Our flocks are inspected by experts trained and authorized by Ohio Poultry Improvement Association. Find out about our guarantee plan. 18 breeds. We have limited number Chicks from Ohio R. O. P. pedigreed stock. Write today.

HOYTVILLE ACCREDITED HATCHERY, 117 MAIN ST., HOYTVILLE, OHIO

HUBER'S RELIABLE CHICKS

Chicks 8¼c and Up Make extra profits with Huber's Reliable Chicks. At these prices your profit is assured. 19 years careful development. Guaranteed chicks per 100

Order from this add—10% down. Rest C. O. D. if you wish	
Barred and White Rocks, R. C. and S. C. R. I. Reds, Bl. Minorcas	$11.50
S. C. Buff Orpingtons and White Wyandottes	12.50
S. C. White Minorcas and Columbian Wyandottes	14.00
Special Mating White Leghorns	11.50
No. 1 S. C. White and Brown Leghorns, S. C. Anconas	9.50
Heavy Assorted 10.50 Light Assorted	9.00

Size per hundred less on orders for 400 or more

HUBER'S RELIABLE HATCHERY. N. Main St., FOSTORIA, OHIO

Buy C·M·L·Chicks

C. M. L. CHICKS cost no more than ordinary chicks from the average Hatchery, but our superior Quality is far superior for many years we have specialized in Barrons.

We import direct from England 100% Live Delivery Guaranteed, Postpaid.

	25	50	100	500	1000
BARRON S. C. WHITE LEGHORNS	$3.00	$5.00	$11.00	$52.50	$100.00
BARRED & WHITE ROCKS; WHITE WYANDOTTES	3.25	6.50	12.00	57.50	110.00

All stock carefully selected for size and health. C. M. L. chicks mature early and are sure to please you. Better chicks cannot be had at these low prices. Write for Free Catalog or order direct from this ad.

C. M. LONGENECKER. Box 45. ELIZABETHTOWN, PA.

BIG CHICKS FROM HIGH RECORD MATING—Prices Effective June 1

200 to 326 Eggs S. C. White Leghorns. Our long experience in Breeding will pass a satisfaction to our customers at the following prices:

	50	100	1000
White, Brown, Buff Leghorns and Heavy Mixed	$ 8.00	$38.50	$75
Black Minorcas, Barred and White Rocks, Buff Orpingtons	10.00	48.00	95
S. C. Reds, White Wyandottes, Barron Leghorns	11.00	55.00	100
Jersey Black Giants	17.00		
Light Mixed	7.00	35.00	70
SPECIAL TANCRED WHITE LEGHORNS	14.00	67.50	130

Your order will receive my special attention. Satisfaction guaranteed.

UHL PIONEER HATCHERY & EGG FARMS Albert Studer, Prop. Ref.: Farmers State Bank Box P, New Washington, O.

FOR LARGER GAINS BUY EARLE CHICKS

Get our facts and prices on the best quality stock offered at lowest prices. For better laying, better paying, buy our guaranteed stock, trap-nested Hollywoods, and eight different breeds of the most popular strains. Write to-day. Every inquiry answered personally. Start to-day with chicks that pay.

Richland Poultry Farm & Hatchery, Earl F. Layser, Prop., P.O. Box I, Richland, Pa.

HERE: NEARLY EVERYONE RAISES Full Blooded "AMERICAN" Quality Chicks.

Write now for our new low prices. Your opportunity to get our special flock mating chicks at utility prices. Chicks shipped C. O. D. Catalogue and prices on request. 100% live arrival guaranteed. 15 breeds. Write now.

AMERICAN CHICKERIES, Box 318, GRAMPIAN, PA.

CHIX from large breeders

SUMMER PRICES

Prices on	50	100	1,000
Ferris Strain W. Leg.	$4.50	$8.00	$70
Everlay Brown Leg.	4.50	8.00	90
Bassom's Barred Rocks	5.50	10.00	90
Owens' R. I. Reds	5.50	10.00	90
Heavy Mixed	4.50	8.00	70
Light Mixed	4.00	7.00	60

Our breeders are selected for size, type and egg production. The kind that lay and pay. Send for literature. It is free. Tells all about our great egg machine.

JUNIATA POULTRY FARM CHIX Box P, Richfield, Pa.

Baby Chicks

CUT PRICES NOW

Chicks are hatching better, so we can sell cheaper and you can brood cheaper

Leghorns	$10 per 100; $47.00 per 500
Any Heavy Breed	12.00 per 100; 57.00 per 500
Light Mixed	8.50 per 100; 41.00 per 500
Heavy Mixed	10.50 per 100; 50.00 per 500

Order from this adv. Also started chicks.

The Old

THE YOUNG PEOPLE

Celebrating Our Birthdays

TO make a cake shell like that shown in the illustration, first cut a circular cardboard mat 18 inches in diameter, cover it with crushed crepe paper, and put two full ruffles of the same crepe around the edge. Then take a piece of cardboard six inches wide and 30 inches to 34 inches long (large enough to fit easily around the real cake). Fasten this together with gummed tape and also fasten a cardboard top in place with tape.

Next cover this with silver paper, or



The candle on this birthday cake stands for the year to come and the real cake is snugly hidden under the shell.

white crepe paper that has been crushed. The paper is crushed because it may be applied more easily and it has a better appearance than the plain covering. To apply the paper, cover the cardboard foundation with paste, a little at a time, and gently pat the paper in place.

Next cut a second circle of cardboard, making its diameter about two inches less than the top of the cake. Cover this with strips of deep yellow and light green crepe paper that have been slashed to resemble the center of a flower. Or you may simply cover it with crushed crepe paper.

Finally, cut eight large double petals of crepe paper, pasting them together only at the outer edge, the color depending on your own choice. Flute the edges, then gather, and paste the lower ends of the petals, grouping them around the center just made. Fasten a candle in the top, either making a deep holder of cardboard fastened to the top with gummed tape, or by making a holder of sealing wax and building the wax up around the candle.

Tiny nut cups, with high circular handles as shown in the illustration are ideal with this type of centerpiece. A fine, but firm, wire is used for the handle, and this is wound with a strip of crepe paper that has been cut one inch wide and slashed along one side to resemble a grass-like foliage. Make six little petals of the same paper as used on the centerpiece, and form a little flower for the top of the handle. Cover the nut cup with crepe paper and fasten the handle at the bottom with gummed tape.

Peter and Mollie

Third Prize

PETER, the boar, does about the wisest things I saw any animal do. He lives in the barnyard, while the other swine occupy pens. (Peter's pen is under construction at the present time.) He is the cleanest animal on the farm and hasn't a whiff of that fragrant (?) smell hogs are famed for. He has a daily bath in clear running water, not a wallow in a stenching mud-hole. He is white and his bristles are snowy from cleanliness after he performs his daily dozen.

When we drive the cows to water "his honor" wobbles along, stopping at every few steps to shriek hideously at the cow behind him. Peter is reminding her that she is to try no funny tricks, since she is walking behind him.

Strange to say, the cows do not molest him, (and only two are hornless). Another fifteen minutes elapse in which they proceed to the trough, where Peter wallows to his heart's content in the stream below the trough, and sometimes he stays too long only to find himself alone after which he jumps up, shakes himself, and hurries home.

When he reaches home he goes to the gate and stands there occasionally grunting, until he is allowed inside with his bovine comrades.

I must tell you how Peter prepares his bed for the night from the clean straw. When the straw is thrown in and the cows are "housed", Peter takes a mouthful of straw and laboriously continues this operation till his "corner pallet" is to his liking or till the straw gives out.

Last Sunday Peter's actions were quite amusing. It was a sunny, warm day. Mollie, the red cow (hornless), was lying down with legs outstretched, chewing her cud when along came Peter and deposited himself beside her, almost knocking the breath from Mollie, and outstretched his legs in the same absurd manner as she had hers. Peter, after awhile, nudged her. Mollie refused to get excited. Peter repeated the nudge which this time Mollie repaid only to have Peter screech his needle-point shriek. This was repeated as long as I stood there. It was very amusing. Altogether swine aren't such dolts, but sometimes among them are found intelligent animals.

Mary V. Kundra.

Montour county, Pa.

Beheadings

THE same word, beheaded, fills the second, and again beheaded, fills the third, blank.

If your friends you —
You will find them grown —
Before you're grown —

To find a lucky —
Which tells us of a —
We hunt the field all —

To me it's very —
That foolish old King —
Judged love only by his —

A man who tries to —
His hearers all should —
And thus do good to —

With his big, heavy —
He was breaking the —
When he fell off the —

'Twould be useless to play on the—
Or even to strum on the —
To soothe the ferocious, wild —

The night was dark, the wind was —
Slowly I climbed the rocky —
My heart foreboding every —

The soldiers, warm from recruit —
Drank from the cool and rippling —
And soon they all were very —

The bride is bought, as with a —
Then ring the bells, they scatter —
And all the while her heart is —

His coat was like a ragged —
He surely was an awkward —
As ever came from hovel —

Rhyming States

THE blanks are to be filled with the abbreviation of a state. To refresh your memories here are the words—but not in their proper order:

Mass., Pa., N. C., Alaska, Miss., Va., Wis., Nev., Me., O., R. I., Wy., Ariz., Conn., Wash., Minn., La.

In the state of —
There lives a lass,
I love to go — —
As other —
Can ever, I —
Behalf so dear to —
— is blue,
And her cheek the hue
Of pearls where waters swash,
Or her milk white phiz
There refer
The least complexion —
could I win
The heart of
I'd ask for nothing more,
But I only dream upon the theme
And — it o'er and o'er.
Now — — why
Can — — I
Ask this fair maid to wed,
If I wish to press
My suit I guess,
— — instead.

ANSWERS TO LAST WEEK'S PUZZLES

Missing Letters

Mat, life, hole, roof, lots, draft, lungs, magnet, feathers, blacking.

• • •

Found in Your Bedroom

1. Take a feather from the pillow, that's light enough.
2. Go to the window and watch the fly escape.
3. Take a roll.
4. Take a sheet.
5. Take a spread.
6. Look on the bed for a comforter.

• • •

What a Watch Suggests

Stem winder, number, regulator, ring, four o'clock, second-hand, wheel, watch, ticks, minutes, crystal, time, case, hands.

Little Folks Corner

Aunt Barbara's Party

SCHOOL was over and Betty had been promised a party to celebrate her tenth birthday. The boys and girls were tired of the old games and so when Betty's Aunt Barbara came visiting from California she suggested that they play some of the games she had seen the children play under the trees there.

Betty was rather disappointed when Aunt Barbara said the first game would be "Puss in the Corner" but became quite enthusiastic when she heard this new way of playing. Each player chose a tree for his corner in a spot in which certain trees had been marked as being "legal" corners, there being one more player than marked trees. John, who was puss, instead of looking for a corner and trying to tag either of the two players who were trying to change places, found his corner by hitting them with a basketball. The player who was hit had to give up his corner and became the new puss who wants a corner.

Some New Tag Games

After this there were a series of "tag" games beginning with hippity hop when all players and It were required to hippity hop. Betty was It for beanbag tag and she had to carry a beanbag on her head and was not allowed to tag any one if it fell off. Then, since it was a bright, sunshiny day, they tried shadow tag. When It was chasing a player, if that player could step into the shadow of another player both of them were safe and It must look for another victim. However, if "shadows" played safe too long, It called "All out in the sunshine!" and all players had to move.

This was just like the old game of the cat chasing the rat except that the cat had to do everything the rat did and follow the same course the rat took. If the rat turned a back spring while running away from the cat, the poor cat had to do the same.

And then at a quieter moment when they were cooling off after all the running games they brought in a milk bottle to tell fortunes. While they were sitting in a circle some one spun the milk bottle around just after some very pertinent question such as "Who likes himself?" "Who is teacher's pet?" "Who is going to get the mumps next?" The one at whom the milk bottle pointed when it stopped was the answer to the question.

Aunt Barbara promised to help Betty plan his birthday party, so perhaps she will give you some more ideas later.



Bernadine Newcomer, Franklin Co. Pa.

DO YOU KNOW HIM?

He likes his bath as very well
He eats his dinner in it,
I say, "Come out and take a walk,"
He won't come for a minute.
I dropped a line to him one day
Inviting him to travel,
And when he came he wouldn't mind
But laid upon the gravel.

Use This Coupon to Order Instruction Books

"Tables and Favors,"—10 cents.

"Gala Book."—10 cents. (Suggestions for Various Parties and Games.)

Enclosed find 10 cents (or 20 cents) which send me, postpaid, the booklet, (or booklets) I have checked.

Name .....

Postoffice .....

R.F.D. No. ..... State .....

Send all orders to Pennsylvania Farmer, Party Editor, 7301 Penn Ave., Pittsburgh, Pa.

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1. Cowboy Art Exhibit.—Photo shows Everett Bowman of Pawhuska, Oklahoma, who nearly equalled the world's record when he bulldogged this steer in 4 seconds at the 1929 El Paso, Texas rodeo recently.

2. Vestiges of ancient Roman glory still linger in Tunis, Africa. Photo shows the magnificent ruins of the Temple of Jupiter at Dougga, Tunis, a suggestion of the ancient Roman glory in sharp contrast to the commonplace appearance of today.

3. Edsel Ford, son of Henry Ford, photographed aboard the Aquitania just before he sailed for England where the foreign interests of the Ford [illegible].

4. Washington.—Photo shows Lieut. A. Soucek, U. S. N., who is believed to have established a new world's altitude record—indicated at 40,000 feet—nearly eight miles. The former mark by Lieut. C. [illegible]—38,418 feet—was made in the plane used by Soucek—rebuilt after Champion's flight.

5. Upper Island, Florida.—This Gold Button tarpon six feet long and weighing 110 lbs. was caught by Bayard Coggeshall of Morristown, N. J., at Upper Island. The boy is 12 years old and weighs 88 pounds. He is the son of Murray S. Coggeshall, banker, of 111 Broadway, New York City, and is said to be the youngest member of the Izaak Walton League.

6. Members of the graduating class of the West Point Military Academy paid their annual visit to the Army proving grounds at Aberdeen, Md., and viewed the various new weapons and other military devices undergoing tests there.

Photo shows a general view of the cadets inspecting a line of new tanks.

TIGHT BINDING TEXT CUT OFF

The Timber Treasure

By FRANK LILLIE POLLOCK

(Copyright, 1913, by Perry Mason Co. Originally published in the Youth's Companion.)

"THERE'S that fellow again, Fred!" Bert Winslow exclaimed, as their canoe glided through the channel, and they saw the reaches of the upper lake.

This upper lake was called Big Coboconk, in distinction from Little Coboconk, the smaller body of water to the south. It was some twelve miles in length, and Fred, looking where Bert pointed, perceived an apparently empty boat drifting about half a mile above them.

Except for the Peterboro canoe that held the two boys, it was the only sign of humanity in sight. The dark Canadian forest of tangled spruce and hemlock came down to the shores, and, although the lake was not many hours' run from Toronto, one might have traveled five hundred miles to the north and east without leaving the wilderness.

As the boys watched the boat, a man's head and shoulders presently rose out of it, a paddle dipped, the boat moved sluggishly a few yards ahead, and the man sank out of sight again into the bottom.

It was not the first time that the boys had observed these queer maneuvers, and their curiosity was roused. With a dexterous twist of the stern paddle, Fred swung the canoe round, and sent it flying toward the boat.

It was a flat-bottomed punt, a most unusual craft in the north woods. As the boys approached, its occupant rose out of a crouching position in the bottom. He was a tall man of perhaps thirty-five, with a black mustache and a square jaw. He was as roughly dressed as any woodman, yet somehow he seemed to Fred not to belong to the wilderness. His black eyes gave the boys a sharp and almost suspicious glance as they ranged alongside of his boat, but he greeted them good-naturedly enough.

"Hello, boys! Fishing? Where'd you come from?"

"Camping on the lower lake," said Bert. "We got there only yesterday. Saw your boat yesterday as we came down. Having any luck yourself?"

The stranger laughed. "Plenty—in my own way. Want to see? Take a look, then."

The boys leaned over and looked, with the utmost curiosity. In the bottom of the boat a square a foot in diameter had been cut out, and a glass-bottomed box inserted. Fred had seen the like before. It is a simple device for looking into the depths of clear water sometimes employed by nature students.

"Naturalist?" he inquired, looking at the stranger with more respect.

"Ichthyologist—fish sharp," said the man, nodding. "Harrison's my name. I'm getting up a book on fly-fishing, and I'm making experiments. See here."

And he hauled up from the water a long gut cast, decorated with trout and bass flies of brilliant colors, placed two or three inches apart along its length.

"I'm trying to see how different colored flies actually look when seen through water," he explained.

"Studying baits from the point of view of the fish, you see. At the same time, I observe the movements of the fish when feeding."

AT his invitation, Fred stepped into the punt and gazed through the glass bottom. The water was extremely clear, and the pebbles and sunken logs could be seen distinctly on the floor of the lake, twenty feet down.

"You haven't seen anything of the lost raft down there, have you?" he asked, laughingly, as he got up.

"Never heard of it. What is it?"

"Why, a raft of valuable timber—black walnut—was sunk and lost on this lake twenty-five or thirty years ago. I thought everybody hereabouts had heard of it."

"Sunk? Why, timber usually floats, doesn't it?" said Harrison, looking puzzled.

"Not black walnut, unless it's buoyed with some lighter wood. This raft, they say, was cut by the David Wilson Lumber Company of Haliburton," Bert explained. "It was floated with pine timber, but it got caught in a storm, broke up, and the walnut went to the bottom—nobody knows where."

The "fish sharp" looked rather blankly from one to the other. "You boys have some joke on me. I never heard of dry wood sinking before. I'd as soon expect an ax to float."

As a matter of fact, the thing had happened exactly as Bert had said. The "lost raft" had become a tradition of the Coboconk lakes, and many people had tried in vain to locate it. The lumbering off of the heavy timber had, as usual, affected the watercourses, and the lake had shrunk somewhat and changed its configuration in twenty years. Besides, it had a soft bottom, and it was thought probable that the logs had long since sunk deep in the mud. Experts said, however, that the timber would not be harmed by its long submersion.

"Well, if you happen to see a pile of walnut logs on the bottom, I advise you to hook your line to them," said Fred, laughing. "It was a big raft, and they say that, at present prices, it would be worth a hundred thousand dollars."

The ichthyologist gave a cheerfully incredulous laugh as they paddled off, and shouted an invitation after them to visit his camp. When they looked back next, he was down in the bottom of the boat again, peering through his glass window.

It was a clear day in early July, with a strong northeast wind blowing, and far too bright for fishing on open water. Bert, in fact, considered it no day for fishing at all; but Fred, who was an indefatigable angler, intended to try a small river that flowed turbulently into the lake on the east. He fancied that the stream would be too swift and broken for a canoe, so Bert set him ashore at the mouth of it, and paddled alone back to camp.

Once in the deep shadow of the woods, Fred found that the trout bit freely. The stream proved wider and deeper than he expected, and he was sorry that he had not brought the canoe. The thickets came down so close to the water that there was not scope enough for casting, and he was continually hanging up his leader behind him but in spite of all hindrances, he caught trout almost as fast as he cared to pull them out.

It was enough to delight any fisherman, but Fred was not entirely happy. His conscience pricked him. He felt that he ought not to be there at all.

Fred Gillespie had just finished his third year at the University of Toronto, where he had distinguished himself on the running track, rather than scholastically. He had enjoyed [illegible] three years hugely, and had taken [illegible] tle thought of anything but [illegible] ment. To qualify for a profession had not occurred to him, for he understood in an indefinite way that at the end of his course, he would enter his father's offices in some capacity.

His father was a Toronto [illegible] merchant, not a millionaire, but prosperous enough to have his house on Avenue Road and to drive his own car to his business. Fred had only to ask for money to get it, and to spent it with a tolerably liberal hand. The recollection of the sums he had squandered in the last three years made him squirm now with remorse.

The lumber business in Ontario [illegible] no longer what it was. James Gillespie was a dour and silent trader, who would no more have brought business troubles home with him than he would have discussed household [illegible] ters with his clerks. He never spoke of business to his son. In fact, as Fred thought of it now, his father had become almost a stranger to him since he had entered the university. Although Fred lived at home, he saw his father there only by chance, as it were, at dinner, occasionally at luncheon, and on Sundays. Fred entered the lumber offices almost never, and the summer vacations he had spent canoeing and camping in the north woods.

This summer he had intended to go north with a party of university friends to a clubhouse that some of them possessed on Lake Nelson, some distance north of Lake Coboconk. It was to be rather an expensive outing; they were to take three motor-boats, several guides, a cook, a princely outfit of supplies; Fred's share of the expenses came to upward of a hundred dollars. He applied to his father for a check, and received a somewhat curt refusal, accompanied by no explanation.

It was the first time he could remember having been refused money, and he felt bitterly aggrieved. He canceled his plans, and the motor-boats went without him.

About a month later, his father summoned him to his office.

"I guess I can let you have that money after all, Fred," he said and, as he took out his check-book, he added, almost apologetically:

"I really couldn't do it when you asked me. Money was like blood to me just then. In fact, I don't know if the bank would have cashed the check."

"What, has business been so bad as that, father?" asked Fred. "I had no idea, or I—"

"The lumber business is pretty well played out in this part of the country," replied James Gillespie. "I shall have to shut up shop, or go West, in a few years. This spring, things were worse than I even knew them to be. For a while it looked as if I'd have to shut up shop."

GILLESPIE had never said so much before on business matters to his son, and the revelation came upon Fred like a thunderbolt. Looking at his father with suddenly opened eyes, he saw for the first time the deeply drawn lines of age and worry.

"Things are much better now, though," the merchant hastened to say. "I've just put through a deal for a large tract of pulp-wood up north. I bought it cheap, from the Ontario Northern Railway, and the bank will finance me. I should clear twenty or thirty thousand dollars from it next winter."

"I don't want any money, father!" Fred cried. "Look here, can't I do something? Let me come into the office—or into the yards."

"I'm afraid you wouldn't be of much use there, Freddie. No, take your good times while you can. You'll be broken in soon enough. You can have the money as well as not."

So Fred took the check, but he deposited it in a bank, with the firm resolve that it should see him through the rest of the year.

Summer came in early and hot, and in the dusty city the longing for the woods grew strong upon him. Presently he discovered that Bert Winslow, who was employed in the Ontario Northern office, was going to spend a two-week's vacation in a canoe trip north, and Fred determined to go with him.

It was to be a cheap trip, for Winslow had no money for motor-boats. They took a Peterboro canoe each, fly rods and tackle, a shotgun, a small shelter tent, and a carefully selected stock of [illegible] supplies—bacon, flour, tea, beans—a genuine woodsman's outfit. Winslow had "gone light" into the woods before, and professed the utmost contempt for any other methods.

For almost a week they passed through the labyrinth of small lakes and rivers that overspread the Ontario highlands, then turned westward, and reached Big Coboconk by a long portage.

They were on their way back now. They had been out eight days, and the trip had not cost much, yet Fred felt that he should have insisted upon doing something to aid his father, instead of taking a vacation. However, this was the end of his follies. He had only one year more at the university; he would live like an anchoret and work like a horse, and finally try to do something to justify his existence.

He was so absorbed in good resolutions that he fished mechanically as he followed the little river upward. The shores were not so closely wooded now, and the region seemed covered with well-grown spruce, birch and jack-pine.

The mosquitoes as well as the trout bit, and, what was worse, so did the black flies. By noon Fred had traveled two or three miles from the lake. He sat down to eat the cold luncheon he had brought with him, but he found the insects so unbearable that he built a large, very smoky smudge to protect himself.

The ground was covered with pine-needles and spruce leaves that burned with a tremendous smolder, and the dense smoke gave a resinous flavor to every mouthful he ate, but it protected him from the ravenous insects.

When he had finished, he proceeded for a mile or two farther up the stream, then turned back, passed the still smoldering smudge, and went on toward the lake. He had gone nearly two miles when it occurred to him that he had not extinguished the smudge, as he ought to have done.

At least, he fancied he had not extinguished it. He was not perfectly sure about it, and he was tired enough to feel greatly disinclined to add another three miles to his tramp. Perhaps he really had put it out, and anyway, the woods did not seem of a sort likely to catch fire easily. At the worst, the smudge would smolder all night and die of itself.

He went on, although with some misgiving. Reaching the lake, he saw nothing of the boat of the naturalist, but some distance up the shore he saw a light smoke rising, which undoubtedly marked his camping-place.

Fred had still three miles to tramp along the lake shore to reach his own camp. It was almost sunset when he arrived. The northeast wind was growing fresher, the wavelets rolled up on the beach.

The wind rose higher still that night, and a dull roar from the treetops mingled with the incessant dash and wash of the waves by the boys' camp. And when Fred turned out of his blankets in the morning, he was aware of a decided smell of smoke in the air.

Bert was already up, looking at the sky in the northeast. Clouds of blue vapor were rising over the treetops, and the air was already pungent with the smell of burning cedar.

"There's a fire started up that way," said Bert, turning to his companion. "It must be just about where you fished yesterday. Maybe we'd better get ready to move camp to the other side of the lake. The wind's bringing it this way."

"Do you think it will burn far?" exclaimed Fred, in consternation. Too late, he repented of his smudge.

"It may, with this wind. Too bad, isn't it?" He glanced at Fred curiously. "I guess that timber belongs to your father, doesn't it?"

"What? I don't know. Surely not!" Fred cried.

"Yes, he bought it from our company. I'm in the land department, you know, and I made out the entries myself. I thought of it as soon as we came to the lake."

Fred stared at him, pallid with horror. This was the pulp-wood tract, then, that was the last stake of his father's business. And the fire had sprung from his smudge—he felt only too sure of that. In the midst of his good resolutions, he had committed an act of criminal carelessness that made all his other follies trivial.

"I'm sorry. I thought you knew," said Bert, looking startled at Fred's expression.

Fred only groaned. Then, with a desperate impulse to do something, he seized an ax, and rushed down to the canoes at the shore. Bert shouted something after him, but Fred shoved the Peterboro off, sprang in, and drove it with great strokes up the lake.

(To be continued)

The Cheerful Plowman



IT'S HIS FAULT, BUT—

I TOLD Old Shep to stay at home and not to chase the cars or he'd get bumped upon the dome and see a flock of stars. I said, "You may for many years escape a single hurt, but some day, none the less, your tears will drip upon the dirt. If you persist in running out at every passing cart some day you'll sport a broken snout and break your master's heart. You cannot tempt the Fates too long in that haphazard way or some time you who now are strong will be a lump of clay! The sailors say if they but go time, time again to sea, they'll lose their boat some day, they know—old partner hark to me!"

But Shep persisted in his stuff and raced at every car; today a driver, big and gruff with kindness not at par, drove straight toward barking Shep, he did, with all his might and spleen and knocked him flatter than a lid with femur broken clean!

Well, that is that. What did I do with that poor yelping dog? Did I say, "There, old Top, you're through, at last you slipped a cog! I told you so a thousand times, I prophesied your end; don't come to me with tears and chimes, I tried to be your friend!"

Oh no, I made no speech like that, in fact, right then, I know, no thought came trickling through my hat which said, "You told him so!" All I could think of then was this, "Old Shep's in trouble now, and I must not go long amiss or ask the why or how; I must supply his present needs and set his broken limb. I must be led where wisdom leads and bandage him in trim. There is no time for me to lose, no minutes now to waste, no time to argue, pick and choose, this is the time for haste!"

That's how it was. I told old Shep and told him many times to hold his bark and watch his step, restrain his feet and chimes; but none the less when he was hit a cruel and telling blow. I didn't say, nor think of it, "Old chap, I told you so."

J. E. T.



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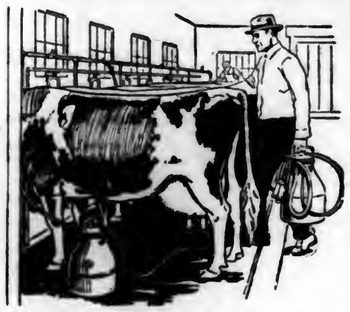
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TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

HOG receipts were some larger this week, and while the market advanced at the close, the average price for the week, at $10.80, was five cents lower than last week, and the lowest since the week of February 23. Receipts for the week here were 121,000 head, against 108,000 last week and 150,000 the same week last year. Eleven markets had 543,000 this week, compared with 481,000 last week, 690,000 the same week last year and 605,000 two years ago. The year to date shows a hog run of 12,116,000 at eleven points, a decrease of 2,110,000 compared to last year.

May marketing is showing some shrinkage from April, and also as compared with May of recent years, which is of good timing in view of large stocks of provisions. Fresh pork trade is not in a very satisfactory condition, demand being only moderate, and packers complain that prices are too low compared to what is paid for hogs. Top wholesale price on loins was 25½c this week against 27c last week.

Cured meats have been in better demand and the foreign call for lard has shown some gain. In spite of an advance in the hog market at the week-end the tone is still weak. The price outlook is not very encouraging for the next few weeks.

CATTLE STEADY

The cattle market closed steady with last week, the loss of around a quarter early in the week being regained later. Receipts of 42,000 compared with 40,000 last week and 49,000 the same week two years ago, and did not include very many loads of choice steers. Top price of the week was $14.85, paid for both yearlings and heavy cattle, and comparing with an extreme top of $15.15 last week. Only about 600 head of cattle were received good enough to sell at $14.50 or better, including a few baby beef lots up to $14.60. Average price of cattle this week at $13.60 showed a loss of a dime compared with last week, but was 65 cents above a year ago and $2.20 above two years ago.

Packers report a moderate demand for beef, and prices too low compared to live cattle. It is not thought that beef production is undergoing much expansion, two things working to hold it in check. One of significance at the moment is the scarcity and high price of feeding stock, and the other is the price temptation to sell heifers that under other circumstances might be retained for breeding. The latter has special application to the range territory.

Supply of stockers and feeders is very light and demand limited. Largest call is for plain stock cattle at $12.50 down.

LAMBS AGAIN LOWER

The lamb market was off again this week, the net loss being 25 to 35 cents. Receipts were moderate, 73,500 against 85,602 last week and 48,000 the same week last year. Average price at $13.65 compared with $14.10 last week. Native spring-ers brought a top of $16.50 this week, against $17.25 last week.

The lamb market shows signs of weakness, and packers complain that lambs are still losing them money. The old lambs are pretty much out of the way. The Colorado season is about ended except for a few shipments of lambs without fleece that will straggle in from time to time. Although thousands of lambs were held by Colorado feeders a little too long this year and sold at a big loss when the break came, the season, as a whole, has been very satisfactory.

The packers knew that there was still a big number of Colorados to be marketed when the new crop of California spring-ers started and evidently were not displeased to see the supply from the coast move to market in record time this year, sending the market for "fed" lambs down $2.50 @3.25.

The most important question in the lamb market at present is whether the new crop of Idaho lambs will be late as the recent government report indicates. Most traders think they will. One of the biggest commission firms, however, says this in regard to the Idaho situation. "In the next few weeks a few scattered shipments of Idahos ought to show up on the market, and by the middle of June the movement ought to be fairly liberal. The peak, however, will not be reached until about the middle of July." If this is true the movement of the bulk would be earlier than in 1928, when August and September were the big months.

West Coast Likes Lamb

The Pacific coast region is apparently using more lamb from year to year. During the past season Idaho shipped out 405 carloads of fat lambs, of which 52 per cent went east and 48 per cent west. During the 1928 season, a total of 805 carloads was shipped out of Idaho, 53 per cent going east and 47 per cent west. During 1927 of a total of 622 carloads, 80 per cent were shipped east and only 20 per cent west. During 1926 a total of 805 carloads went out, 62 per cent east and 38 per cent west.

The Wheat Situation

The wheat situation shows no improvement, prices being barely steady at the recent decline. Corn and oats prices are little changed.

The world's carryover of wheat at the beginning of the new marketing year, July 1, is expected to be 350,000,000 bushels, or about double the amount left on hands last year. While the world consumes about 200,000,000 bushels a month, this year's big carryover is a depressing factor on the market. Most of the world's carryover is expected to be in the United States. The official estimators do not expect the stocks of wheat to be reduced below 200,000,000 bushels by the first of July, which would be 70,000,000 bushels in excess of the carryover of last year.

Discussing the wheat situation the Grain World says this week:

"No upturn of consequence in prices is anticipated until there is a natural change in the situation, and this can only come from the new crop. Should the North American crop come through as it now appears a decline of 10 to 20c per bushel from the prices prevailing at the present time would occasion little surprise, although values at the present time are about the lowest in 15 years, and a decline of that amount would carry them back to where they were before any mention was made of war in Europe which caused an upturn of over 82 per bushel within a few years."

Favorable reports are received of seeding conditions in spring wheat areas. Western Canada is estimating an increase of 1,000,000 acres.

Weather conditions have been unfavorable for corn planting. Most of the corn has been planted in southern Iowa and Illinois, but in southern Iowa, Missouri, northern Indiana and Ohio work is far behind, with considerable plowing still to be done.

Horse Trade

Horse trade was active and firmer this week, but largely because only 925 head were offered for auction. A top sold at $255. Best drafters, which means sound and 1,700 lbs. up, are quoted at $265 to $255. It takes a pretty good type of young farm horse to bring $100.

Four-Row Corn Machinery

Four-row corn planters are being used in some communities for the first time this year. They are reported very successful where the land is level. Fifty to 55 acres a day were planted by one farmer who used a tractor that had considerable speed. Some four-row cultivators will also be used.

Old Horses

In an Indiana town 12 farmers were interviewed as they came in to trade. It was found that their farms averaged 230 acres. Ten of them were found only eight horses and colts under five years of age. Those between five and 10 years numbered 21; between 10 and 15 numbered 34, and there were 11 over 15 years of age. These 12 farms now use nine tractors, only three farmers using horses exclusively.

40 Cents for Fryers

Early sales of young chickens in Iowa have been at 40 cents a pound. One man sold some weighing five pounds at this price.

Buy Fire Apparatus

Farmers in one Iowa community are completing the purchase of a fire truck. The truck will be equipped with a four-pump capable of throwing 200 gallons of water a minute; a suction hose which can be thrown into a nearby stream, trough or tank, and two 60-gallon tanks for use in case water is not conveniently located. The truck will carry a sufficient amount of various sizes of hose to fight any farm fire, an extension ladder, roof ladder, fire extinguishers, fire buckets, searchlights and all other regular equipment.

The sum of $900 was donated toward the purchase price by the city council and the balance of $1,950 is being raised by selling shares to farmers within a radius of six miles at $25 a share. The new truck will be housed by the city, which will maintain it and furnish men to operate it.

Packers' Consent Decree

By decision of the United States Supreme Court the packers consent decree was upheld, and packers must continue to confine their business to meats and related products. Aside from the desire of western farmers to have the consent decree set aside, there has been an increasing demand in recent months on the part of other interests that the decree be set aside. Within the last six months many livestock and wool growers' associations, comprising most of the leading groups in the business, adopted resolutions asking that the decree be dropped, to permit packers to retail meat products and distribute food products other than meats.

This action was taken because it was the belief of these groups that great economies could be effected through the use of the packers' unusual distributing system.

Chicago, May 25, 1928. WATSON.

Miscellaneous Produce

Lancaster

Butter.—Country butter, 32@35c; creamery, 50@55c.

Poultry.—Chickens, dressed, $1.25@2.50 each; springers, 75c@$1.25 each; ducks, $1.50@2.50 each; squabs, 25@50c each.

Eggs. Fresh eggs, 30@34c.

Vegetables.—Asparagus, 12@20c per bunch; beets, 10@15c per bunch; egg plants, 15@30c each; string beans, 20@25c; per ½ pk.; beans, Lima, 35c per pt.; box; cabbage, 10@20c per head; carrots, 8@15c per bunch; cauliflower, 20@35c per hd.; celery 15@25c per bunch; cucumbers, 5@10c each; spinach, 12@15c per ¾ pk; rhubarb, 5@10c per bunch; peppers, 3@8c each; endive, 10@15c per head; lettuce, 10@20c per head; radishes, 5@10c per bunch; mushrooms, 25@30c per pt. box; peas, 20@25c per ½ pk.; green onions, 8@10c per bunch.

Potatoes.—Old, per bu., 60@75c; new, 20@25c per ¼ pk.

Sweet potatoes.—20@25c per ¼ pk.

Philadelphia

Eggs.—Firsts, 33c; seconds, 28@29c.

Butter.—Creamery, tubs, 92 score, 44c; 90 score, 42@42½c.

Poultry.—Fowls, 33@36c; broilers, 35@47c; old roosters, 18@21c; pigeons, per pr., 33@50c.

Apples.—U. S. No. 1, per bu., nearby, Romes, Winesaps, 82@2.50.

Strawberries.—Md., Dela. and Va., 32-qt. crate, 83@4.

Asparagus.—Pa., N. J., Dela. and Md., doz. bunch crates, green, large, $3@4.25.

Beans.—Lima, Fla., ¾ bu. hmps., $2@3; S. C. bu. hmps., green round, 50@75c; N. C., 75c@$1.50; wax, 15c@$1.

Cabbage.—E. S. Va., ½ bbl., hpr., 50@65c.

Cucumbers. Va., ¾ bu. hmps., choice to fancy, $2@3.

Onions.—Texas crates, yellow U. S. No. 1, $1.50@1.65; yellow bulbers, 75c@$1.

Potatoes. Pa. round whites per 100 lbs. $1.25@1.50; new stock per bbl. Spaulding Rose, U. S. No. 1, $6@6.75.

Sweet potatoes. N. J. bus. yellows $1.25@2.75; Tenn., bu. hmps., Nancy Halls, $2.25.

Tomatoes. Fla., choice to fancy, $2@4.

Radishes. Nearby bus., 25@75c.

Rhubarb. Nearby bundles, 1½@3c.

Broccoli. Nearby bus., 50c.

Cauliflower. Fla., crates, $1.25@1.75.

Escarole. Nearby bus., 30@75c.

Kale. Nearby bus., 15@35c.

Peas. Calif., bu. hmps., $2@2.25; Va., bu. hmps., $1.50@1.75.

Spinach. Nearby bus., 25@50c.

Baltimore

Butter. Creamery fancy, 45@45½c; rolls and dairy prints, 34@35c; packing stock, 30@31c; butterfat, lb., 43@43½c.

Eggs. Md.-Pa. nearby firsts (loss off), 29½c; western firsts, 29½c; southern, 28½c.

Live poultry. Hens, old, 4½ lbs. and over, 34@35c; small to medium, 33@34c; Leghorns, 25@30c; guineas, young, 1¾ lbs. or over, each 75c@1.10; roosters, 18@20c; ducks, 23@30c; pigeons, pair, 35@40c; squabs, 30@50c.

Potatoes. Old, 150-lb. sack, $2@3; new, No. 1, bbl., $7@8.

Apples. Fancy pack, bu., $1.75@3.

Asparagus. Per crate, choice to fancy, $1.25@3.

Onions.—100-lb. bag., $1.25@1.50.

New York

Butter.—Creamery, higher than extras, 43½@44c; extras, 43c; firsts, 40½@42½c.

Eggs.—White, eggs, current receipts, orange extras, 35@35½c; extra firsts, 33½@34c; mediums, 31@32c.

Poultry. Live, by freight, fowls, 30c; broilers, 30@42c; ducks, 26c; old, 20@30c.

Apples. Eastern and Southern, bskts., $1.25@3.75; barreled stock, $

York

Butter. Country, 30c; separator, 3

Eggs. Fresh per doz., 28@31c.

Poultry. Hens, per lb., 28@3

lbs., dressed, $1.25@1.50 each; $1.50@2; springers, 35@40c.

Vegetables. Potatoes, 75@90c per bu.; cabbage, 5@12c per head; lettuce, bskt., spinach 15@15c ¾ pk.; celery, stalk, onions green, ¾ bunch; asparagus 12c per bunch; rhubarb, 4@5c; radishes, ¾ bunch; carrots, 8@10c; turnips 15c ¾ pk.

Apples. Per bu., $1.50@3.50.

Strawberries. Shipped 20@25c qt.

Pittsburgh

Butter. Creamery prints, 42@

50@50½c; tubs, 40@40½c; local tub

48c.

Eggs. Fresh, select, white, 3

brown, 30@32c; current receipts, 2

Poultry. Heavy hens, 32@34c; Leg

30@33c; broilers, 43@47c; roosters, 1

ducks, 30@32c; geese, 20@22c; pig

@ 40c per pair.

Apples.—Bu. bskt., U. S. No. 1, $

Baldwin, $2.25@2.50.

Cucumbers. Ohio hothouse, 2 doz.

@2.

Kale. Md., bu. bskt., 85@90c.

Peas. Md., bu. hamper, $2.25@

Potatoes. Per Pacific sack, U. S. N

Main Rurals, $1.90@2. Maine Green

$2.25@2.50.

Spinach. Virginia, bu., $1.25.

Strawberries. Md. 32-qt. crate, $

WEEKLY WOOL MARKET REVIEW

Boston, May 24. The activities of wool market during the past week considerably broader than for some past, says the U. S. Department of Agriculture Market News Service. The fabrics showed more willingness to purchase wools and fairly large quantities changed hands. Sales, however, were at prices on the low side of the ranges quoted for the previous week and a number cases lower prices were evident. Large quantities of new western wools are beginning and some sales of these wools have been made.

The movement of wool in the primary positions. It is estimated that 30,000,000 pounds has left the growers' hands. This is at good time to fine medium quality, costing about 90c, clean, landed at Boston. Sales generally range around 36@38c, grease. In the bright wool states the movement of the new clip is slow. Inquiry has declined to bid 35c per medium wool, 100s and 36c for fine wools, but as yet growers are not inclined to sell.

Domestic Wool Quotations

Grease Basis, Ohio and Similar

44s 70s 80s (three) strictly combing 6

44s 70s 80s (three) French combing 5

44 50s 80s (three) clothing 2

38s one-fourth blood) strictly combing 6

38s one-fourth blood) French combing

38s one-fourth blood) clothing

36s three-eighths blood) strictly combing 6

36s three-eighths blood) French combing

36s three-eighths blood) clothing

40s one-half blood) strictly combing 6

40s one-half blood) clothing

36s one-half blood) strictly combing 6

36s, 40s, 44s, commoon and braid

CHICAGO CASH GRAIN

Chicago, May 27.—The following prices ruled here today: No. 2 yellow corn 87¼@87½c; No. 2 mixed corn 84½@85c; No. 2 white corn 84@84½c; No. 3 yellow corn 84½@85c; No. 3 mixed corn 84@84½c; No. 3 white corn 84@84½c; No. 4 yellow corn 82½@83½c; No. 4 mixed corn 82½@83½c; No. 4 white corn 82½@83½c; sample grade yellow corn 80@82½c; sample grade mixed corn 80@82½c; sample grade white corn 80@82½c.

SUPPRESSION OF COUNTRY G

WM. J. BURNS, former direct of the United States Secret Service present head of the Burns Interna Detective Agency in New York, a current radio talk through the NBC during the Montgomery Ward Long mined five steps for the apprehens criminals and the prevention of crime:

1. Using warning signs extensively.
2. Instilling citizens to keep a sharp out for suspicious characters.
3. Report every known case of promptly to the sheriff or the V Committee.
4. Let the sheriff and his force be far with every avenue of escape in counties.
5. Closest cooperation between and Vigilant Committee and frequent fervences as to methods.

Produce Market Review

...ket for both new and old po... showed some improvement dur... ek. Prices were slightly higher ...d and lower, appointed to have ...ence in the potato situation. ...e southern states retarded har... resulted in somewhat lighter ...than could have been expected ...rather conditions. The drop in ...at the close of last week ...ed to move more freely and ha... the week under review the mar... a stronger tendency.

...are not very many Pennsylvania ...offered in the eastern markets ...sales were reported in Philadel... 25@1.50 per 100-pound sack. New ...y good whites were quoted at ... per 120-pound sack and Maine ...tatoes at $2@2.10.

...ate prices average considerably ...at this time last year. South ...Robbers brought $6 per barrel in ...at $2.50@3.75 in New York and ...in Baltimore.

...Continued light receipts of ...strengthened the market and ...sold at higher prices. In spite ...other unfavorable weather the ...the asparagus offered was gene... and there was a fairly active ...Very large green stock sold as ...$2.25 per dozen bunches with a ...as high as $5.50. Large stock ...$2.50@3.50 with medium and small ...@2.25. The situation in ...Philadelphia was the same as in Phila... and there were some lots of fancy ...Jersey and Delaware stock that ...

...of apples were light in both ...and New York and good fruit ...higher prices. Romes and Wine... sold @2.50 per bushel in Philadelphia ...bushels $3. This price, however, ...represent the regular market for ...but few apples good enough ...such quotations. In New York ...sold at $1.50@3 per bushel. Stay... and McIntosh $1.75@3.75. In ...though the apple season would ...with high prices, as available sup... comparatively light for this sea... year.

...of strawberries by truck from ...Delaware, Virginia and New ...turned considerably during the ...the one day early in the week ...ots in Philadelphia were esti... 21,000 crates. This was the heav... of the season and was entirely ...ed. Prices dropped sharply and ...ons could be bought for $3 per ...

...the market a few days to recover ...ery close but fates in the week ...ots running around 6,000 to 10,000 ...day's arrivals improved and the best ...sold around $3@4.50 per 32-quart ...Some Laptons and Big Joes sold ...

...New Jersey growers appear to be ...ious to cash in on their berry crop ...picking the berries too green. Most ...the Jersey berries bring higher ...than those from Maryland and Dela... and this year they are selling con... lower. The wide-spread pub... of the Del-Mar-Va section for im... grading and packing is having a ...effect on their output this season.

...—There has been an over-sup... dishes on the Philadelphia market ...of week and they have been very ...sell. Prices of both white and red ...have dropped as low as 25c per ...with the best bringing around 75c. ...York New Jersey radishes have ...fruitful but prices were considerably ...averaging around $1@1.25.

...such as spinach, kale and escarole ...dragged as there was strong com... with pear, asparagus and other ...s. Most of these greens have sold ...20c to 60c per bushel.

...There were heavy receipts of peas ...delphia from the Norfolk section of ...and other southern states. Prices ...from $1 to $1.75 per bushel. It now ...that the early pea crop in New ...will be very light and in some per... failure. The situation has been due ...ry runs, unfavorable weather and ...gury. A few fields planted late in ...or the first few days in April look... well. The crop in South Jersey ...ubt that it is doubtful if the can... will attempt to open their plants for ...crop.

Butter markets were irregular dur... week although prices showed little ...variation. Receipts were heavier ...the week previous and considerable ...was placed in storage. There was a ...consumer demand, as retail prices ...ver that, during the winter months. ...crease in arrivals of butter was ...estion of the trend of production.

Weather conditions have been ideal for the development of pastures and the comparatively low temperatures have curtailed the use of ice cream and milk drinks. All those factors have had a tendency to divert more milk to butter factories.

The live poultry market in New York was steady. Receipts of fowl were light and prices held from under a good demand. Broilers were in liberal supply with prices averaging higher. Good heavy broilers were in demand but poor stock was hard to sell. Leghorn fowl were quoted at 25@37c per pound and colored 31@32c. Rock broilers ranged from 40c to 56c per pound. Reds from 35 to 45c and Leghorns from 25 to 40c.

Dressed poultry was in light supply from both nearby and western sections. The demand was slow and the market steady. Fowl were quoted at 30@40c, broilers at 47@55c and ducks at 24@25c.

Eggs.—Fancy nearby white and brown eggs were firm on the New York market during the week and sold well. Lower grades moved slowly and at irregular prices. Western and southern brown eggs showed a slight advance. Prices on Pacific coast white eggs advanced at the close of the week. Nearby white eggs ranged from 36c to 38c per dozen while browns brought 34@37c. Mixed colors were quoted at 28½@33c and Pacific Coast white eggs at 32@38½c.

The egg market in Philadelphia was steady with a good demand for desirable eggs. The best nearby mixed colors sold mostly at 32½c. White eggs were held at 33c@34c with storage packed cars firm at 33@34½c.

W. R. W.

LIVESTOCK

PITTSBURGH

Cattle

With 50 carloads on sale the cattle trade was not marked by much enthusiasm. Steers sold at about the same range as last week tops going at $14.50 and few good enough to command it. Good weighty steers brought $14@14.25 largely, good handy weight steers $13.75@14 and ouds fair kind $13.25@13.50. Some plain weighty cattle went at $13.50. No choice handy weight steers were here, such as brought $14.50 last week. Heifers were scarce and about steady. Good fat cows sold at last week's figures, but medium class and canners were generally lower. A few choice cows brought $10.75@11, not many above $10.50. Canners went at $6@6.50 mainly, a few inferior down to $5@5.25. Bulls were plentiful and lower with best beef bulls $10.25@10.50 and bologna mainly $8 @9.50, a few inferior around $8.50.

Choice grain-fed steers, 1,200 lbs. or over $14 25@14 50
Good to choice 14 00@14 25
Fair to good do. 13 50@14 00
Plain heavy steers 13 00@13 50
Choice handyweight steers 14 25@14 50
Good butcher steers, 1,000 to 1,150 lbs. 13 75@14 15
Fair to good do. 13 50@13 75
Ordinary to fair, do. 13 00@13 50
Common, do. 12 25@12 75
Good light butcher steers 13 75@14 00
Fair to good light steers 13 25@13 75
Common to medium, do. 12 50@13 00
Inferior light steers 10 00@12 00
Feeders Nominal
Steckers Nominal
Choice heavy bulls 10 10 50
Choice handy butcher bulls 10 25@10 50
Good handy bulls 10 00@10 25
Fair to good bulls 9 25@ 9 75
Common to fair bulls 8 75@ 9 25
Inferior bulls 8 00@ 8 50
Choice fat heifers 13 25@13 50
Good to choice heifers 13 00@13 25
Fair to good heifers 12 50@13 00
Common to fair heifers 10 00@12 00
Choice fat cows 10 50@11 00
Fair to good cows 10 00@10 50
Common to fair cows 9 00@10 00
Canners and cutters 7 00@ 8 50
Fresh cows, calf at side 50 00@150 00

Monday's Representative Sales

Steers

18	1250	14.50	21	1274	14.35	4	1287	14.25
14	1202	14.25	4	1080	14.25	8	1390	14.10
16	1278	14.05	22	1260	14.00	17	1119	13.85
8	1051	13.85	12	960	13.85	15	923	13.85
13	920	13.85	6	813	13.85	16	1227	13.75
11	1029	13.75	4	1000	13.75	4	1140	13.75
12	1043	13.60	20	1211	13.50	8	1094	13.50
10	1106	13.25	13	1075	13.25	5	1032	13.25
4	997	13.25				8	681	11.00

Cows and Heifers

5	848	13.20	5	826	12.50	2	880	12.00
1	1210	11.25	2	835	11.00	1	720	11.00
2	655	11.00	1	1240	10.50	1	1160	10.50
1	1120	10.50	1	820	10.50	1	1200	10.25
1	1110	10.25	1	1100	10.00	2	1020	10.00
1	1060	10.00	1	870	10.00	1	860	10.00
2	1110	9.75	2	1085	9.50	1	1070	9.50
2	1025	9.50	1	950	9.00	3	793	8.75
1	1020	8.50	3	977	8.50	1	870	8.50
1	850	8.00	3	983	7.00	1	825	6.75
1	870	6.75				4	745	5.25

Hogs

Monday's supply was about 55 double-deck carloads. After concessions of 10@15c per cwt. trade was active and all sold promptly. Heavy hogs were not numerous, going in with mixed lots as a rule. A few good hogs of around 250 lbs. brought $11.25@11.40, with extreme weights, 300 lbs. or over, down to $11. Good mixed lots sold up to $11.50 and sorted handy weights mainly at $11.60. Light Yorkers and pigs were rather scarce and sold close to prices of handy weights, light Yorkers at $11.25 largely but some up to $11.50 and if well finished sometimes going in with handy weights. Pigs were few, selling at $11 largely. Sows were in demand at $10 for anything straight.

Heavy wts., 250 lbs. or over	$11 40@11 50
Heavy mixed	11 40@11 50
Medium wts., 180-200 lbs.	11 55@11 60
Heavy Yorkers, 165-180 lbs.	11 55@11 60
Light Yorkers, 125-150 lbs.	11 25@11 50
Pigs, 90-100 lbs.	10 50@11 00
Roughs	9 50@10 00
Stags	6 00@ 8 00

Sheep and Lambs

Monday's supply was around 8 carloads, nearly half consisting of sheep. The sheep trade was very slow, bids being few and below recent prices. A few sheep were taken at $8 per cwt. and the good ones were held at this price, but there was little outlet on this basis. Probably good sheep could be had at $7.50@7.75, and medium kind at $5.50@6.25. Clipped lambs were steady for good ones and weaker for others. Good to best handy weight lambs brought $13.50@14, with medium kind largely $10@11 and inferior on down to $6@8. Only a few spring lambs were offered the best of them going at $17.50 per cwt.

Good to best wethers	$ 7 50@ 7 75
Fair to good wethers	7 00@ 7 50
Good mixed	6 75@ 7 00
Fair to good, do.	6 00@ 6 75
Common to fair	4 50@ 6 00
Inferior sheep	3 00@ 4 00
Good to best lambs	13 50@14 00
Medium lambs	10 00@12@00
Culls and common	7 00@10 00
Early lambs	13 00@17 50

Calves

Monday's receipts were about 1,200 head. Demand was good and trade active at $14.50 for tops, $10@12.50 for medium kind and $7@9 for inferior.

LANCASTER

Cattle

Lancaster, May 25.—Receipts totaled 650 head. Market dull at steady to stronger prices. Bulk of sales was at $12.50@13.25.

Good steers	$13 00@13 75
Medium to good	12 00@13 00
Common to medium	8 75@12 00
Good to choice heifers	10 50@12 00
Medium and common	7 75@10 50
Good to choice cows	8 25@10 00
Common and medium	6 75@ 8 25
Low cutter and cutter	4 00@ 6 75
Good to choice beef bulls	10 50@11 75
Cutter, common and medium	7 75@10 50
Feeder and stocker cattle	8 25@12 50
Good to choice calves	14 00@16 50
Medium	12 00@14 00
Culls and common	7 50@12 00

Hogs

The supply was liberal, 65,000 hogs being in the yards. The market was 10@25c lower with top at $11.25.

Heavy butchers, 270 lbs. up	$10 55@10 85
Mediums, 225 to 265 lbs.	10 00@11 10
Lights, 190 to 225 lbs.	10 85@11 25
Selected, 160 to 190 lbs.	10 90@11 25
Mixed packing, 270 to 350 lbs.	9 60@10 15
Heavy packing, 350 to 500 lbs.	9 50@ 9 70
Roughs, 300 to 500 lbs.	9 40@ 9 50
Stags, subject 70 lbs. dockage	9 35@10 25
Pigs, best grades	9 75@10 75

Sheep

Receipts totaled about 15,000 head. Market steady, best wooled lambs bringing $15.25, shorn lambs $13.25 and top springers $16.75.

Wethers, all ages	86 00@10 50
Yearlings	7 75@12 00
Western ewes	4 75@ 7 50
Native ewes	4 25@ 7 50
Fed western lambs	12 00@13 25
Native lambs	8 75@13 15
Feeding lambs	11 75@13 25
Native spring lambs	13 00@16 75

Wooled stock $1 to $2 above foregoing quotations.

Stock Movement

	Cattle	Hogs	Sheep
Receipts this week	41,850	118,547	74,115
Last week	39,956	108,390	85,662
Year ago	47,024	150,197	48,099
Shipments this week	13,337	20,988	18,035
Last week	13,103	18,186	26,247
Year ago.	13,518	38,043	12,375

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THOS. D. PHILLIPS,
Sale Manager
2458 Weaver St., Columbus, O.

CHICAGO

Cattle

Chicago, May 27. Nineteen thousand head of cattle were on sale here today. The market was steady to 25c lower.

Common to fair yearlings	$11 50@12 25
Fair to good yearlings	12 25@13 00
Good to choice yearlings	13 00@13 75
Choice to prime yearlings	13 75@14 85
Common to fair steers	11 50@12 00
Fair to good corn-feds	12 00@13 00
Good to choice corn-feds	13 00@13 75
Choice to prime corn-feds	13 75@14 85
Common to good cows	8 00@10 00
Good to prime cows	10 00@12 00
Heifers, common to good	9 00@12 00
Heifers, good to prime	12 00@14 60
Canners and cutters	6 00@ 7 75
Interior light bulls	8 50@ 9 25
Bologna bulls	9 25@10 25
Fair to choice butcher bulls	10 00@12 00
Stockers, common to fair	10 00@11 25
Stockers, fair to good	11 25@12 00
Stockers, good to choice	12 00@12 75
Fancy yearling stockers	12 75@13 25
Stocker and feeder heifers common to choice	8 75@11 00
Stocker and feeder cows	7 75@ 9 00
Feeders, common to fair	10 25@11 25
Feeders, fair to good	11 25@12 25
Feeders, good to choice	12 25@13 00
Fancy selected feeders	13 00@13 50
Milkers and springers	90 00@125 00
Common to best vealers	10 00@15 00

Hogs

Receipts totaled about 15,000 head. Market steady, best wooled lambs bringing $15.25, shorn lambs $13.25 and top springers $16.75.

Wethers, all ages	86 00@10 50
Yearlings	7 75@12 00
Western ewes	4 75@ 7 50
Native ewes	4 25@ 7 50
Fed western lambs	12 00@13 25
Native lambs	8 75@13 15
Feeding lambs	11 75@13 25
Native spring lambs	13 00@16 75

Wooled stock $1 to $2 above foregoing quotations.

Stock Movement

	Cattle	Hogs	Sheep
Receipts this week	41,850	118,547	74,115
Last week	39,956	108,390	85,662
Year ago	47,024	150,197	48,099
Shipments this week	13,337	20,988	18,035
Last week	13,103	18,186	26,247
Year ago.	13,518	38,043	12,375

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IT PAYS in cow comfort, in extra milk yield, and in your own comfort at milking time to drive away the pestering, blood-sucking flies. Cows protected with Dr. Hess Fly Chaser relax and "give down," so you get all the rich strippings.

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they keep you to the fore of modern life. Through advertisements you've laid down the shovel and the hoe. You can buy a whole harvest ready-to-eat in cans. You've hung up the fiddle and the bow, for a radio. There's little old-time work left in this age of amazing short-cuts. Read the advertisements carefully and when answering them, say you saw their ad in Pennsylvania Farmer.

Farm and Dairy

By L. W. LIGHTY

SOME very old fundamentals are yet new all the time to great numbers. A prominent newspaper writer and author of widely read books never lets an opportunity pass in paper, books or speech but he reminds us it is better, easier, pleasanter and altogether more desirable to behave decently at all times than the reverse. He has been at it for three score years and I am sure he has convinced many, but since I read our President's speech to the newspaper folks I am sure many more should be convinced and many more writers should do what this lone one has been doing so faithfully.

We are liable to take the obvious for granted, but that which may be evident to us may not be grasped by the multitude. My friend of many years, Alva Agee, preached soils for soil fertility in season and out of season for years, and I am sure he did a world of good in pressing this fundamental truth from all sides, but I fear he is tired of the good old text. But late observations, since the spring rains came in great volume and the torrents rushed down the hills and countless tons of good soil was carried into the stream beds and the channel was filled so the waters spread to do great damage, emphasize the mistake of naked fields. Not all, but large amounts of this enormous erosion could have been prevented by greater effort to have more and better sods on our fields. It is too common and too old to talk about, but it is too important not to urge it constantly.

Had the sod failed me two score or more years ago all would have been lost. I could not afford to let it fail and the result is I am on top of it today. I coaxed the sod over the area that failed to grow poverty grass or running briers and since the sod has covered it I have crops annually, and today as I watch the tractor puff and snort to turn the heavy sod I am sure of a corn crop and also have the greatest assurance that the soil will not be carried away by water, as it is a great mat of roots. When those decay the soil will be fibrous and in the ideal condition for crop production. Urging more and better sods and [illegible] should always be in order.

It All Depends on Y

No human trait is of [illegible] portance than to have [illegible] ourselves. If we fail in this [illegible] are that no one will have [illegible] in us. Honesty, industry, [illegible] other characteristics are of [illegible] portance and to be prized. [illegible] who is always fearful of [illegible] desires, thoughts and [illegible] ways halting between [illegible] getting nowhere and is [illegible] failure.

It pays spiritually, intel[illegible] financially to have the [illegible] convictions. In the long r[illegible] came those who would ask [illegible] of the great Man of that d[illegible] "When will the kingdom [illegible] come?"

Have you considered the [illegible] answer they got?

"The kingdom of God [illegible] with observation...for behold [illegible] dom of God is within you."

Before me are many [illegible] of the correctness of this [illegible] then shall we doubt our own [illegible] and abilities? Why shall we [illegible] bring forth "authority" for [illegible] action and word? Where [illegible] "authority" go for the truth [illegible] shall we not go to the same [illegible] Every young person should [illegible] realize that within him or her [illegible] great possibilities as any one [illegible] played.

Remember, boastful egotism [illegible] ardice over which failure may [illegible] Self-reliance is modest and [illegible] but always firm and positive [illegible] hance conceives ideals and [illegible] them. Every one who has [illegible] cess had confidence in his [illegible] victions and ideals.

Success comes from within [illegible] from without. "It is only when [illegible] off all foreign support and [illegible] that I see him to be strong [illegible] vail." I quote this sentence [illegible] erson whose essay on Self-[illegible] gem that never grows old [illegible] studied by every young [illegible] much profit.

Central Penn'a Guernsey Breeders' [illegible]

THE Central Pennsylvania Guernsey Breeders' Association finished its fifth year March 1st, 1929, with thirty-four whole year and three part year members. There are three members who finish their year later at which time a report will be summarized for those herds. There were 598 cows in the Association during all or part of the year.

The registered Guernsey herd belonging to Mrs. C. M. Schwab leads the Association in production of butterfat with an average of 444.2 pounds and 8,281 pounds of milk. This herd is followed by Victor Kline's herd which produced 420.1 pounds of butterfat and 9,218 pounds of milk.

The registered Guernsey cow belonging to the Griffith Estate, "Goldies Beauty of Ebensburg" No. 99829, ten years old, leads the Association of the individual cows in production of butterfat with 728.6 pounds and 16,404 pounds of milk. This cow is followed by "Olwen of Ebensburg" No. 99830, ten years old, Registered Guernsey in the same herd with a production of 607.6 pounds of butterfat and 12,969 pounds of milk.

The Association has completed a very successful year with the highest production of both milk and butterfat ever obtained.

The result for the five years' testing is as follows:

Year	Av. No. Cows	Lbs. Milk	Lbs. Fat
1925	188.99	6149	285.3
1926	436.49	6538	294.2
1927	429.17	6[illegible]	[illegible]
1928	525.86	7[illegible]	[illegible]
1929	438.73	7[illegible]	[illegible]

Twenty-two herds with [illegible] of five or more cows exceeded [illegible] age production of 300 [illegible] terfat. A complete list of [illegible] follows:

Owner	Breed
Mrs. C. M. Schwab	R.G.
Victor Kline	R.&G.G.
Griffith Estate	R.G.
S. H. Markey	R.G.
D. A. Morrow	R.G.
E. H. Kartheim	R.&G.G.
H. M. Kelly	R.&G.H.
A. A. Feighner	R.&G.J.&G.
S. D. Mingle	G.B.S.&G.G.
Colver Dairy	R.H.
J. W. Burket	R.&G.G.
W. J. Hoover	G.G.
Paul Hoover	R.&G.G.
Wm. Morrow	R.&G.G.
M. C. Bagshaw	R.&G.H.
Knarr Bros.	R.G.
J. E. Hindman	R.H.&G.G.
Preston C. Smith	R.H.&G.G.
A. J. Yahner	R.J.
Paul Kaelheim	R.&G.G.
E. H. Krumenacker	R.&G.G.Mont.
G. Clair Smith	R.&G.G.

Two herds with an average [illegible] than five cows exceeded [illegible] production of 300 pounds of [illegible] A list of those herds follows:

J. W. Holsapple ..... R.H.
D. M. Bayer ..... R.&G.G.
E. H. Hostetter



, mean a profit on summer grain-feeding ?

Cutting down summer feeding expense according to local milk or cream prices endangers your year's profits. Summer grain-feeding with Linseed Meal is part of a year-round plan of Feeding Management that works in any good dairy district. Get our free Summer Feeding book —whether you buy ready-mixed feeds or mix your own.

Mail the coupon.

MILKING RATION
as abundant pasture (not earliest spring grass)
Ground Corn, Hominy, or Barley....400 lbs.
Ground Oats .....300 lbs.
Wheat Bran .....100 lbs.
Linseed Meal .....100 lbs.
Feed 1 lb. per day for each 3 or 4 lbs. of milk (to good producers only)
If your feed dealer does not mix, hand him this formula.

Look for Linseed Meal on the label of ready-mixed feeds.

Linseed Oil Meal

Linseed MEAL The Universal Protein Feed

Linseed Meal Educational Committee
Fine Arts Bldg.
Milwaukee, Wis.
Send free Summer Feeding Booklet No. E 6
Name
Address

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...he will tell you that few things you buy for the farm serve as long and for as little money as a Unadilla Silo.

Year after year the Unadilla turns home grown crops into sweet, succulent, money saving feed. Well cared for, a Unadilla will last a lifetime.

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UNADILLA SILO COMPANY
Box P Unadilla, N.Y.

ECONOMY SILOS

Every Economy Silo is equipped with Anchoring System that makes it absolutely *permanent*. It can't blow over. Every convenience. All material. Also silos of Tile and Cement Staves. Catalog and [illegible] prices on request.

ECONOMY SILO & MFG. CO.
Dept. A Frederick, Md.

HOLSTEIN JERSEY **50,000** GUERNSEY MILKING SHORTHORN

Transportation and full time fieldman with no cost to buyers. Fifth Counts in 1 & 2 to be accredited. Can generally supply buyers with anything in pure-bred or grade stock that may be in need of.

Crawford Co. Co-op. Dairy Improvement and Sales Association
Market House, Meadville, Pennsylvania

Dairy Topics

By A. G. HUMPHREYS

IN a few days the schools will be graduating a lot of nice young men and women to take their places in business and society. Those young folks will not realize that at their word battleships will be built and junked—not now they will not. They will not realize that the affairs of government both at home and abroad will be shaped largely by their wishes. They will feel that very little has happened after graduation exercises except that they have a diploma showing them to have completed certain work in a certain school.

But some of them will be thinkers; we hope all of them. And from the brain of the thinkers will emanate the shaping of certain ideals. By the time they take the helm of affairs newer ideas will have replaced the old ones. Experience will have taught the world lessons of which we know little now. They will realize that out of every dollar collected by the government eighty cents goes for war, which is wrong. They will realize that every child has the right to be born with a chance in life instead of a handicap, and while some of them will heroically take the place of pioneers they will be able to do miles in the race of life where some of us older ones have been able to do inches.

All hail to the class of 1929! They are the three per cent which fell not by the wayside since beginning school. They are condensed power. May they be able to do some of the big things we expect them to do and do them well.

Digging Holes

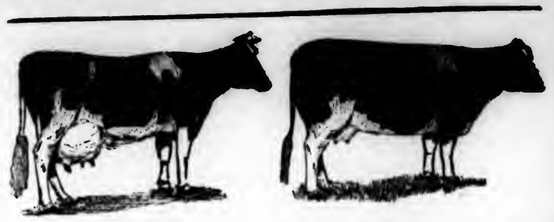
When I was a boy I prepared myself for a telephone lineman. At that time that job paid good wages, and I believe it does yet. My first job consisted of construction work, or to be more specific, digging telephone pole holes. They were dug four and one-half feet deep if we were digging in rock and from five to six feet deep if in soil. We used a spud and a spoon, the latter being a long-handled instrument for removing the dirt after it was loosened. It was not unusual for us to spend half a day on one hole. In fact the big part of construction was in setting the poles.

But telephone companies could not continue to do that in the face of progress. They now dig holes by means of a machine which digs a six-foot hole in a few minutes and pays no attention to rock. But what advancement has the farmer made in the last four thousand years in digging fence post holes? He employs nearly the same methods used by primitive farmers. Either the need of fences must be overcome or he must find more up-to-date methods of making fence. It will do little good for the government to take over his crops at a big profit if he is unable to protect them because he has poor fences.

"Sis Hopkins"

Grammar gives some definite rules about using negatives. I forget what grammar says about it now, but one time I read this sentence in the celebrated Sis Hopkins Magazine "I don't never believe in doin' nothin' for nobody when nobody never done nothin' for me." It makes sense all right if you will take the trouble to study it out. We have seen people putting it into literal use.

When the cows break into the corn and [illegible] we are driving along and see them it will take little time to notify the owner. Of course the owner may never have done anything for us, and maybe he will never have the chance, but it will do a lot of good to everybody concerned if he is told that his cows are in his corn. Going a step out of the way to do a good turn shows on one's face after a while. It is a habit worthy of emulation.



A Novice in Dairying — might pick the heavy cow on the right

But you, as an experienced dairyman, know well enough that the light weight, wedge-shaped cow on the left will give twice or thrice the milk that the heavy, beefy cow can produce. The reason is simple: the light-weight puts her feed into milk production, where it belongs; the heavy individual puts hers into laying on fat.

Heavy weight, in cows, does not mean heavy production. Just so with feeds.

Buffalo Corn Gluten Feed

is light in weight and rich in nutrients. It has a minimum of heavy starch, which is of little value in making milk. But the proteins, the corn solubles, and other parts necessary to milk production are present in Buffalo. And its bulk is a favorable factor in making up a dairy ration. Don't be misled by feeds which are just heavy. You know that heavy feeds, like heavy cows, do not necessarily mean heavy milk yields.

Your complete ration must be light and bulky, rather than heavy and compact. Then why not use light, rather than heavy ingredients, as much as possible?

CORN PRODUCTS REFINING CO.
NEW YORK CHICAGO

BUFFALO has served good dairymen for 35 years—which is proof of its quality



Guaranteed Protein 23%
Often analyzes 25-29%



FRICK

Dairy Farm Refrigeration

Hand-operated or automatic plants, with either electric or gas-engine drive; all types, using cold water tank or brine system, with or without tubular milk cooler, as desired; makes ice when required.

Write Frick Company



WHEELS
Trucks—Wagons
ELECTRIC Steel or Wood Wheels are built to fit *any* skein or axle. ELECTRIC Low Wheel Handy Farm Trucks save high lifts.
Free catalog describes Wheels, Farm Trucks, Wagons and Trailers for all purposes.
Write for it today.
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68 Elm St. Quincy, Ill.

DAIRY CATTLE

Holstein Bulls Sire 1100 lbs. Five direct dams, all above 1,000 lbs. From good dams, [illegible] and younger. Farmers prices.
JOSEPH RENO, Grove City, Pa.

Guernsey Bulls and Heifers, registered, "Border Raider" and "Langwater" breeding. Accredited herd. Roselea Farm, R.2,Box 43, Coraopolis, Pa.

TWO RICHLY BRED, thrifty, registered Jersey bull calves, 2 months old, Accredited herd.
W. F. McSPARRAN, Furnius, Pa.

SHEEP

For Sale 100 young ewes, 150 goats, 80 steers, 50 high-grade yearlings, 40 bred Guernsey Jersey heifers. W. Hundley, Boydton, Va.

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BUCKEYE TIRES

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WHITE LEGHORN HENS and MALES now half price. Thousands of eight-week-old pullets. Also baby chicks and eggs. Trapnested, pedigreed foundation stock, egg bred 20 years. Winners at 20 egg contests. Records to 320 eggs. Low prices and special price bulletin free. I ship c.o.d. George B. Ferris, 980 Union, Grand Rapids, Mich.

PENNSYLVANIA STATE SUPERVISED CHICKS at Utility Prices. Barred Rocks, $12.00; White Wyandottes, White Rocks, $13.00; White Leghorns, $10.00; Heavy Broilers, 75 percent Rocks, $9.50. 500 lots 50c per hundred less. Lincoln Way Hatchery, Chambersburg, Pa.

MARTIN'S CHICKS. Barred, White, Buff Rocks, Reds, Buff Orpingtons, White Wyandottes, 12c; White, Buff Leghorns, Anconas, 10c; Heavy Mixed, 11c; Light mixed, 8c; 100% delivery, postpaid. Martin's Hatchery, Mt. Victory, Ohio.

CHICKS.—9c. From Pure Barron English White Leghorns. One large, trapnested birds will produce profitable broilers and heavy winter layers. Free Catalog. Reference, Farmers' State Bank, Willmcker Leghorn Farm, Box N, New Washington, Ohio.

CHERRY HILL S. C. White Leghorn Chicks from my personal supervised breeders on our farm. They are truly larger, more vigorous, more profitable producers of white-shelled eggs than you will find elsewhere at such reasonable prices. Circular free. Cherry Hill Poultry Farms, Wm. Nace, Prop., McAllisterville, Pa.

CHICKS OF QUALITY.—Barred Rocks, 25, $3.00; 50, $5.50; 100, $10.00. Rhode Island Reds, 25, $3.00; 50, $5.50; 100, $10.00. Mixed Chicks, 25, $2.75; 50, $4.75; 100, $9.00. 100% Live Arrival Guaranteed. Pine Grove Hatchery, F. G. Martin, Prop., Richfield, Pa.

EXTRA QUALITY.—4 breeds: Leghorns, Reds, Rocks, Wyandottes. Our 100-acre Breeding Farm, system of management, equipment and experience assure you a more profitable chick. All breeds State tested. Hall Brothers, Box 61, Wallingford, Conn.

REDUCED PRICES.—Bucher Super Quality Chicks from inspected free range stock. Reds, White Leghorns, White, Barred Rocks, Anconas, Black Minorcas, Anconas, White, Brown Leghorns. Booklet free, low prices. Pure Bressie, Bucher Bros. Hatchery, Dept. D, Bucyrus, Ohio.

QUALITY CHICKS.—White Leghorns, 9c; Barred Rocks, Reds, White Wyandottes, Black Minorcas, 10c; Buff Rocks, Hamburgs, 12c; Heavy mixed, 8c; Light mixed, 8c. Plum Creek Poultry Farm, Sinnbury, Pa.

CHICKS C. O. D.—100 Rocks or Reds, $12.00; Leghorns, $10.00; heavy mixed, $10.00; light, $8.00. Delivery guaranteed. Feeding system, raising 95% to maturity free. C. M. Lauver, Box 43, McAllisterville, Pa.

BEAVER'S QUALITY Large Size Tancred Barron English Single Comb White Leghorn Chicks, from my own flock, $8.00 for June. E. L. Beaver, McAllisterville, Pa.

"PENNSYLVANIA STATE SUPERVISED," officially Blood Tested Tancred White Leghorn Chicks and Pullets. Mickey Poultry Farm, R 10, Alexandria, Pa.

CHICKS, $9.00 per 100, from our big type, heavy laying Barron English Leghorns. Hatch every Tuesday. Immediate delivery. 8 weeks-old pullets. Circular. Maple Acres Farm, Tiffin, Ohio.

CHICKS from heavy-laying strain Barred Rocks, Dc. Mixed, 8c, 100% arrival guaranteed. Circular free. R. J. Ehrisman, Box 99, McAllisterville, Pa.

PENNSYLVANIA SUPERVISED and Blood Tested Barred Plymouth Rocks. Marcus McKnight, Carlisle, Penna.

DUCKLINGS and GEESE

WHITE PEKIN and WHITE MUSCOVY DUCK eggs, $2.00 per 12; $6.00 per 50; $11.00 per 100 postpaid. Fertility Guaranteed. Big Type, Highland Farm, Sellersville, Pa.

MAMMOTH PEKIN DUCK EGGS for hatching, ten cents each delivered. J. G. Kehnel, Atglen, Pa.

EGGS

REDS, BOTH COMBS.—Eggs, $1.50-15; $3.00-30, postpaid. Bred to win and lay. 30th year. Circular free. Line Roberts, Fultonham, Ohio.

GOLDEN BUFF ROCK HATCHING EGGS. 15, $1.50, postpaid. William H Shaffer, Farmington, Pa.

JERSEY GIANTS. 15 eggs, $1.25 postpaid. Wiley Haugh, Bridgeville, Pa.

TURKEYS

12 MAMMOTH BRONZE TURKEY EGGS $6.00 postpaid. Fertility guaranteed. Valuable instructions with each order. Breeders. Catalog. Highland Farm, Sellersville, Pa.

TURKEY EGGS.—From our famous Bucks. Bronze, Bourbon Red, White Holland, Narragansett. Special prices, Eastern Ohio Poultry Farm, Beallsville, Ohio.

"GOLD COIN" Mammoth Bronze Turkey Eggs, from prize-winners. Mrs. Samuel Owen, Seville, Ohio.

MAPLEWOOD FARM MAMMOTH BRONZE. Narragansett, Bourbon Red eggs. Reasonable. Walter Jones, Woodlawn, Va.

BRONZE TURKEYS.—Best of breeding. Eggs, 40c each. Sunnyside, Jonesville, Va.

The MARKET PLACE

By W. R. WHITACRE

IF you want to have a good time, renew your youth and make some one else happy go to the circus and take the children along. We decided that Bill, Jr., was old enough to enjoy the circus this year, so last Saturday we started on our adventure.

Three blocks from the ground were enterprising youngsters with baskets of peanuts, men with varicolored balloons, hula dancers on a stick, cowboy whips and any number of novelties designed to snare the elusive dime. The color, the shouts of the vendors and the laughter and murmur of the crowd blended together in a scene that fills the eye and ear.

Sight and hearing are not the only senses affected, for from the booths that line our way came the aroma of sizzling "hot dogs" and coffee. There were garish booths where the toss of a ring, or the pull of a string brings a prize (perhaps). Impressive stands with orange colored lights sell a mixture of pineapple and orange juice with plenty of water.

The lions in their red and gold cages roared in a good natured way, the sea lion had a deep bass grunt and dozens of monkeys chattered in their cages. Three giraffes stretched their long necks and the "largest tiger in captivity" paced his gilded cage.

The show runs smoothly, the elephants perform their tricks in the four rings and the eye cannot begin to take it all in. The trapeze performers swing through the air from their lofty perches and do unbelievable feats. The tight wire artists, trained seals, dogs and pigeons all add their share and the show ends with the spectacular sight of a man being bred from a huge cannon.

Because this column is supposed to deal with the more serious matters such as markets and in order that its caption "The Market Place" may not seem so incongruous, I want to give you some information that I thought was interesting. The circus is not only a place of entertainment, it is also a mighty good customer.

All foods and provisions for the circus are bought in the local markets. A few items on the daily shopping list are 300 pounds of butter, 300 gallons of milk, 200 pounds of coffee, 35 pounds of table salt, 2,000 loaves of bread, 250 dozen eggs, 1,500 pounds of vegetables, two barrels of sugar, 50 pounds of lard, 100 dozen oranges, 50 tons of hay, 20 tons of straw, 350 bushels of oats and four cords of wood.

Australian Wool Auctions

Continued from page 8)

the world. It has helped the grower to stabilize the markets by offering only wools in quantities that will be readily absorbed by consuming centers, as there is a provision that if sales do not reach the prices which seem to be fair the wools are withdrawn from the sales.

In 1927 the wool clip in Australia averaged 8.8 pounds per head. It netted the grower about 30c per pound. In 1928 the clip was slightly heavier, averaging right at 9 pounds per head, and netting the grower 35c per pound. The 1927 wool clip in the United States averaged about 7½ pounds per head and netted the grower a fraction over 30c per pound. Our 1928 clip averaged about the same number of pounds per head and netted the grower approximately 35c per pound.

When one considers that the American tariff today gives the American wool grower an advantage of 15c to 17c per pound in the grease on medium wools and 8c to 10c per pound on fine wools, it requires but little mathematical calculation to discover that our system of breeding, preparation and selling could certainly be improved to the financial advantage of the American sheepman.

SWINE

Feeding Pigs For
Selected Chester and Yorkshire
shire and Chester crossed.
6-7 wks. old, $5.50 each.
Two months old Chesters, also
ourselated sows, $7.50 each. Ship
C. D. on approval. Pay your
rival if satisfactory, if not, return
pense. My stock have the size, qual
ing. They are easy feeders, fast
will give satisfaction. All orders
W. J. Dailey Farm, Lexington, Mass.

Chester White Pigs
R. L. MUNCE,

CHESTER WHITES.—Pedigreed
blood, all ages, 13 sows farrowed
ed low, must please. C. E. Cassel,

QUALITY BIG TYPE CHESTER
boars and gilts. All hogs shipped
proval. A. H. Crownover, Mt.

50 GOOD CHESTER, BERKSHIRE
CHINA pigs, 6 to 8 weeks old,
prepaid. I. R. Yeager, York

Reg. Berkshires
WOLF CREEK FARM, R. 5, Sh

BETTER BERKSHIRES.—Bo
ter. Bred gilts, young pigs, p
Near-By Stock Farm.

REG. SPOTTED POLANDS.—P
$15.00, either sex. Express paid
or more. Boars and sows not
A. M. KENNEL, R. 2,

POULTRY

Special Fall Prices on high-class
geese, Ducks and Guineas, write
for mating list. Pioneer Stock Farm,

CATTLE

BEECHWOOD SHORT
BULL CALVES
of Merit at Attractive Prices.
C. C. LEWIS, Point Pleasant,

D. S. POLLED HEREFORDS.—A
Cows, heifers, bulls. Come or
CHAS. D. GILL,

HEREFORD BULLS.—Yearling bulls,
of our herd. Ready for service
GEO. O. COCHRAN,

BUCK & DOE RUN VALLEY
Hereford Cattle—Poland-China
Percheron Draft Horses.
COMPANY,

Angus Cattle
Write BAYARD BROS.,

MILKING SHORTHORNS. Herd
freem sire (sweepstakes 9 months old, of
to 945 lbs. each. Also 1-year-old
GEO. L. MARVIN,

Milking Reg. Shorthorn Bull, 9 mo. old,
sire 14,469 lbs. milk. Accredited herd.
Lee R. Scott & Sons,

May-Dale Shorthorns—three yearling bulls
sired outstanding excellence, breeding
sonably priced. W. G. Fisher & Son,

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PROTECT YOUR FAMILY and property
an intelligent Police Dog. Literature
request. Rush. Daniel Glick, Lenoxville,

FOR SALE—Collie puppies, pedigreed
raised. Illustrated circular. Brae
Chambersburg, Pa.

COLLIE and FOX TERRIER PUPS
and intelligent. Leedon Kennels, Somerset,

FEMALE AIREDALE, one year old,
$100. Flora Long, Dayton, Pa.

HELP

WANTED—MAN WHO KNOWS
to travel in country. Steady work.
McCannon & Company, Room 4
Minn.

GIRL FOR GENERAL HOUSEWORK,
15 and 20. Family of two. Wash
country. Mrs. L. M. Brown, 337
Pittsburgh, Pa.

WANTED—Man and wife, room and
nished. Herman Farm, Voorhees, Pa.

COCKERELS

SPECIAL SUMMER SALE Tancred
Leghorn Breeding Cockerels from
State Certified flock. All Cockerels
with 305 day trapnest records of
Booklet. North Poultry Farm,

FERRIS-BARRON STRAIN 10-inch
els. Mrs J. A. Hamilton, Greenville,

PULLETS

LEGHORN PULLETS.—Well grown,
high producing ancestry. Buy
eggs. Flight week, $1.00 each.
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are short-cuts to finding truths. The truths about thing you want to buy. The in advertisements are name sold reputation. The best advertisements are symbols satisfaction. It pays to read advertisements, for the know what is good. The ucts they tell you about ing bought, tested The fact that they're still advertised is alone proof worth

AND NURSERIES

FIELD-GROWN VEGETABLE plants
and Charleston, Wakefield,
Danish Ballhead, Copenhagen Mar
Baltimore, Stone, Matchless,
100, 35c; 500, 90c; 1000, $1.20;
Potatoes, Porto Rico and Nancy
Pepper, 100, 75c; 500 $1.25;
$2.50. All prepaid Cabbage,
Beets, $1.00 per thousand. Ex
Immediate shipment guaranteed.
Franklin, Va.

FIELD-GROWN VEGETABLE
Copenhagen, Danish Ballhead,
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Tomatoes, Baltimore, Stone and
Beets, 100, 35c; 500, 85c;
postpaid. $1.85 postpaid. Ruby King
Ruby King and Nancy Hall Potato
100, $1.25; 500, $2.00; 1,000
Cabbage and tomatoes, $1.25
delivery. Safe arrival guaranteed.
& Sons, Franklin, Va.

CABBAGE, CAULIFLOWER Plants.
Danish Ball Head. Chemically treated.
or money refunded. Golden Acre,
Succession, Enkhuizen
Ballhead, Red. Postpaid, 100, $1.25; 1,000, $2.00. Collect:
Cauliflower: 50, 60c; 200,
1,000, $3.50. Transplanted To
$1.25; 450, 1,000, $1.00. Yellow Yams:
25, 50c; 100, $1.00. Yellow Yams:
Improved, 25, 50c; List free. Port
Dept. FF, North Lima, Ohio.

VEGETABLE PLANTS—Cabbage,
Early Jersey Wakefield, Flatdutch, Danish Ball
Wakefield, $1.00; 500, $2.25; 1,000,
200, $1.00; 1,000, $2.00. Sweet Potato
Express, $1.25 per 1,000. Tomato
Matchless, Stone, Marglobe, Price
Nancy Hall and Cuban Yams sweet
Ruby King pepper plants,
1,000, $3.00 postpaid. We guarantee
every order or money refunded
Ideal Plant Company, Franklin,

POSTPAID—All varieties: Beet, Cauliflower,
Lettuce, 3 doz., 25c; 100, 50c;
Collard, Flatdutch, Danish Ball
200, $1.00; 500, $2.00; 1,000, $3.50.
3 doz., 25c; 100, 65c. Celery, 50
Plants, 3 doz., 25c; 100, 65c;
Onion Sets, Colonia, Coreopsis, Egg
Dahlias, Peonies, Plantbox, Seed
Vegetable and Flower, 3 doz.,
Ideal Plant Farm, Smoke

CABBAGE PLANTS Copenhagen,
Early Jersey Wakefield, Flatdutch, 300,
$1.25; 1,000, $2.00 postpaid. Ex
1,000. Tomato plants, Baltimore,
Matchless, same price. Potato plants,
and Nancy Hall and Ruby King Pepper,
100. Satisfaction Guaranteed. Canners,
or resale prices. Service Plant Com
Franklin, Va.

PLANTS—Millions, June, July delivery
Copenhagen, Wonderful, Flat
Prepaid. 200, 60c; 500, $1.00;
Express, 1,000, $1.50; 10,000, $12.50
Express, prepaid, 1,000, 50c; 500,
$1.00; 1,000, $1.50. Buy near home
carefully assorted, guaranteed plants,
and largest northern grower.
R. L. Middleton, Ohio.

VEGETABLE PLANTS, Cabbage,
Ballhead, Flat Dutch,
200, $1.10; 1,000, $1.75 prepaid.
Cabbage, Pepper, sweet potatoes,
$1.75; 1,000, $3.25 prepaid
delivery guaranteed.
Lambert, Franklin, Va.

FIELD-GROWN VEGETABLE plants,
Wakefield, Copenhagen, Flat Dutch,
Beets, Lettuce, Tomatoes,
1,000, $1.75 postpaid.
expressed. Pepper Celery, Sweet
100, 50c; 500, $1.75; 1,000, $3.25 pre-
delivery guaranteed. Mrs. Julia
Franklin, Va.

Plants that are free of disease, quality means
crop yield at harvest. Copenhagen, Jersey
Wakefields, Flat varieties, cab-
Baltimore, Stone Matchless, tomato. Prices,
200, $1.00; 500, $1.25; 1,000, $1.75
collect express, 1,000, $1.25; 10,000, $10.00
delivered. Good order delivery guar-
Maple Grove Plant Farms, Franklin, Va.

OUTDOOR GROWN CABBAGE PLANTS
25c; 300, $1.00; 1,000, $1.50 prepaid. 5,000
Tomato and onion Plants, $1.50
Pepper and Sweet Potato Plants, $2.50
All now ready. Prompt shipments,
delivery guaranteed. Old Dominion Plant
Franklin, Va.

PLANTS—Six varieties. By express,
1,000 by prepaid mail. 500, $1.50;
Sweet peppers by prepaid mail,
300, $1.25; 500, $2.50; 1,000, $4.50
$7.50 thousand. Also Cabbage postpaid
varieties, including Copenhagen and Golden
$1.00 thousand and charges.
Penn, Tifton, Ga.

PLANTS—Charleston and Jersey
Copenhagen, Ballheads and Flat
$1.00; 500, $1.50; 1,000, $2.00 post-
Tomatoes same price as cabbage. Cabbage
Tomatoes, $1.50 per thousand express col-
Sweet Potatoes and Pepper, 300, $1.00;
1,000, $2.50 postpaid. Prompt ship-
Satisfaction guaranteed. Frost Brothers,
Va.

SEEDS AND NURSERIES

FROSTPROOF CABBAGE, TOMATO, ONION plants, dozen leading varieties. Not the cheapest, the best, new land grown, sprayed for dis-ease, insuring greater crop yield 300, $1.00; 500, $1.25; 1,000, $1.75, delivered. Express, 1,000, $1.25; 10,000, $10.00. Quick delivery, satisfaction guaranteed. Maple Grove Plant Farms, Franklin, Va.

MILLIONS CABBAGE PLANTS—Copenhagen, Danish Ballhead, Wakefield, Flatdutch Tomato Plants, Baltimore, Stone, Matchless, 300, 75c; 500, $1.00; 1,000, $1.50; postpaid. Express, $1.00, 1,000; 5,000, $4.00; 10,000, $7.00. To gain new customers and show you what we send out, rush orders. Satisfaction Guaranteed. H. A. Lankford Company, Wholesale Growers, Franklin, Va.

PLANTS—We have best leading varieties, cabbage, tomato, for late planting, same choice, 200, 65c; 500, $1.10; 1,000, $1.50 prepaid. $1.00 expressed. Sweet potato, sweet peppers, $3.00, 1,000; 500, $1.75, paid. New land grown, sprayed for greater crop yields. Satisfaction quick delivery. J. T. Council & Sons, Franklin, Va.

MILLIONS TOMATO and CABBAGE PLANTS Cabbage, Wakefield, Flat Dutch, Tomatoes, Baltimore, Stone, Matchless, 200, 75c; 500, $1.00; 1,000, $1.50. Ruby King Peppers, 100, 40c; 500, $1.00; 500, $1.75; 1,000, $3.00 Prepaid Quick service guaranteed. Walter J. Burgess Company, Courtland, Va.

EXTRA NICE CABBAGE PLANTS—Charleston and Jersey Wakefield, Ballhead and Flat Dutch, 300, 65c; 500, $1.00; 1,000 $1.50 postpaid. Tomatoes, Leading Varieties, 300, 65c; 500, $1.00; 1,000 $1.50 postpaid. 1,000 $1.00 express collect. Hy-grade plants at low cost. Drake Plant Co., Franklin, Virginia

NEW STONE and GREATER BALTIMORE tomato plants, 200, 75c; 500, $1.75 postpaid Express Collect $1.00 per thousand. Ruby King Pepper, 500, $1.00; 1,000, $1.75 postpaid. Bermuda onion plants, 75c per thousand Satisfaction Guaranteed. Southeastern Plant Co., Pitts, Georgia

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MILLIONS OF TOMATO PLANTS—Baltimore, Stone, Marglobe, 500, 65c; 1,000, $1.00; 5,000, $4.50. Certified Porto Rican potato plants, $1.75, 1,000. Ruby King Pepper plants, $1.75, 1,000. Ruby King Pepper plants, $1.75, 1,000. Ready now. Prompt shipments, good delivery guaranteed. Farmers Supply Company, Franklin, Va

TOMATO PLANTS—Open-field grown, Greater Baltimore, Bonnie Best Stone. Postpaid, 200, 65c; 500, $1.00; 1,000 $1.50 Wire for price on large quantities Satisfaction guaranteed. Immediate shipments Frank Patterson, Hawesville, Ky.

PLANT ASSORTMENT—200 Frostproof Cabbage, 200 tomato, 200 onions and 25 pepper plants, all $1.25 prepaid. Large, tough plants that will reach you in growing condition Quick shipment satisfaction guaranteed. Jacksonville Plant Co., Jacksonville, Texas.

SPRING GROWN VEGETABLE PLANTS Cabbage and tomatoes, 300, 75c; 500 $1.25; 1,000, $2.25 postpaid. Sweet Potatoes and Pepper, 300, $1.00; 500, $1.50; 1,000, $2.50 postpaid. Both day and night service. Sedley Plant Co., Sedley, Va.

SPECIAL FOR JUNE—Millions of vegetable plants Cabbage, Ballhead, Copenhagen, Wakefield and Dutch, Baltimore, Stone, Matchless Tomatoes, Cresby's beets, $1.00 thousand, charges collect. Prompt shipments. Moss Packed. Cedar Hill Plant Co., Franklin, Va

SEEDS AND NURSERIES

MASTODONS $1.50, 100 ($1.75 postpaid). Prolific, Cooper, Pearl, $4.50, 1,000; 100, 90c; Gibson, Eaton, Burrill, Aroma, $4.00 (100, 85c). Dunlap, $3.50 (100, 75c). Cloverleaf Nursery, Three Oaks, Mich.

FINE LARGE SIZE TOMATO PLANTS. Greater Baltimore, early large redi, 250, 60c; 500, $1.00; 1,000, $1.75; 5,000, $7.50. Guaranteed to reach you not wilted. Also cabbage, onion, pepper and sweet potato. Catalog Free. Progress Plant Co., Ashburn, Ga

BUY GENUINE GRIMM ALFALFA SEED direct from the introducer at reduced prices. Hardiest of alfalfas. Yields for years without replanting A. H. Lyman, Introducer, Excelsior, Minn.

HIGH GRADE PLANTS, carefully packed, large, well rooted, open field grown, leading varieties Cabbage, 75c, 1,000; Tomato, $1.00; and Porto Rico Sweet Potato, $2.00, 1,000. Acme Plant Co., Quitman, Ga.

FROSTPROOF CABBAGE PLANTS, 75c, 1,000; Collards, 75c; Tomato, $1.00; Ruby King Pepper, $2.00; Porto Rico Potato Plants, $1.50. Quitman Plant Co., Quitman, Ga

RUBBER GOODS of every description, sealed in plain wrapper, postpaid by us. Write for rush order catalog, saving 50%. Novelty Rubber, 11 Chatham St., Hamilton, Ont.

SEVEN HORSE POWER GASOLINE ENGINE, same as new, cost $150, sell for $75. P. D. Thompson, R. 2, Norristown, Pa

HAY AND GRAIN WANTED

WANTED.—Hay, Straw, Grain, Potatoes, Apples, Cabbage, etc. Carloads. Pay highest market prices. The Hamilton Co., New Castle.

SITUATION

DO YOU NEED FARM HELP.—We have Jewish young men, able-bodied, some with, but mostly without experience, who want farm work. If you need a good, ready man, write for an order blank. Ours is not a commercial agency. We make no charge. The Jewish Agricultural Society, Inc., Box C, 301 E. 10th Street, New York City.

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EXTENSION LADDERS for every purpose, 12 to 60 foot, light, strong and durable. Describing circulars, prepaid freight prices, prompt service. Fre Patton, Jewett, Ohio.

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RICH MAN'S CORN HARVESTER, POOR Man's Price.—Only $25.00 with bundle tying attachment. Free catalog showing pictures of harvester. Process Co., Salina, Kans.

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REGISTERED THOROUGHBREDS, fresh, $80; grades, $45; bred yearlings, $30; fine buck, $25. Pairs, trios, herds, wholesale. Eastern Headquarters Worlds Best California heavy milkers. Goldsborough Goatery, Mohnton, Pa.

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100 ASSORTED dishes packed as first quality consisting of cups, saucers, plates, bowls, oatmeals, platters, etc. All useful. Slightly imperfect. $5.50, prepaid. Send money to us for immediate shipment. Home China Co., Millis, Mass.

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MAKE BIG PROFITS with Chinchilla Rabbits. Best money makers. Write for facts. 848 Conrad's Ranch, Denver, Colo.

3 PEDIGREED RABBITS.—List and circular, 10c. Small Stock Exchange, R. 2, Auburn, New York.

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Advertisements in these columns cover farms for sale or wanted, help or situations wanted, pets, bar, seeds, honey, used implements and machinery, in fact anything that the farmer wishes to buy, sell or exchange.

Cash must accompany order Count as one word, each initial, abbreviation and number. Include name and address. All advertisements set in uniform style, no display type or illustrations.

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OWNER BANKED $21,000 in 18 years from this 153 acres besides abundant living; excellent 7-room house, new 28 ft. basement barn, delightful stream, 120 acres tillable, fruit, woodland. Only $7,800 including new tractor, horses, cows, implements, growing crops; part cash. Gn 74 Strouts catalog. Write today for free copy. 1,000 bargains, 593 pictures. Strout Agency, 1422-BK, Land Title Bldg., Phila. Pa.

BUY OR SELL your properties through me. Quick Service. Real Estate Specialist, 19 N. 15th, Harrisburg, Pa.

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LIVE GOOD WHILE MAKING A GOOD LIVING on the Del-Mar-Va Peninsula. Low-priced, productive land, town and waterfront homes. Three to ten hours to largest Eastern markets by motor or Pennsylvania Railroad. Very little snow and freezing. Finest concrete highways. Good schools, low taxes. Handsome descriptive booklet, Free. Address 103 Del-Mar-Va Building, Salisbury, Md.

SALE or EXCHANGE.—Forty acres, very rich, irrigated land in Southern Idaho. Good buildings. D. E. Weatherwax, Farmers Bank Building, Pittsburgh.

NATURAL MUSKRAT MARSH, 75 acres, wonderful location, northwestern Pennsylvania. Bargain Ralph Brant, 1502 Buena Vista, Pittsburgh, Pa.

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GUARANTEED HOMESPUN TOBACCO.—Chewing, 5 pounds, $1.50; 10, $2.50. Smoking, 10, $1.75. Pipe free. Pay Postman. United Farmers, Bardwell, Kentucky.

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WHY BLAME THE BULL when your cow does not breed? Use Cow Catch 1 hour before service. Results or your money back; 85 cents for one cow, $2.00 for five cows, postpaid. Whitelock Square Deal Co., Box 59-C, Roanoke, Washington.

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EXTENSION LADDERS for every purpose, 12 to 60 foot, light, strong and durable. Describing circulars, prepaid freight prices, prompt service. Fre Patton, Jewett, Ohio.

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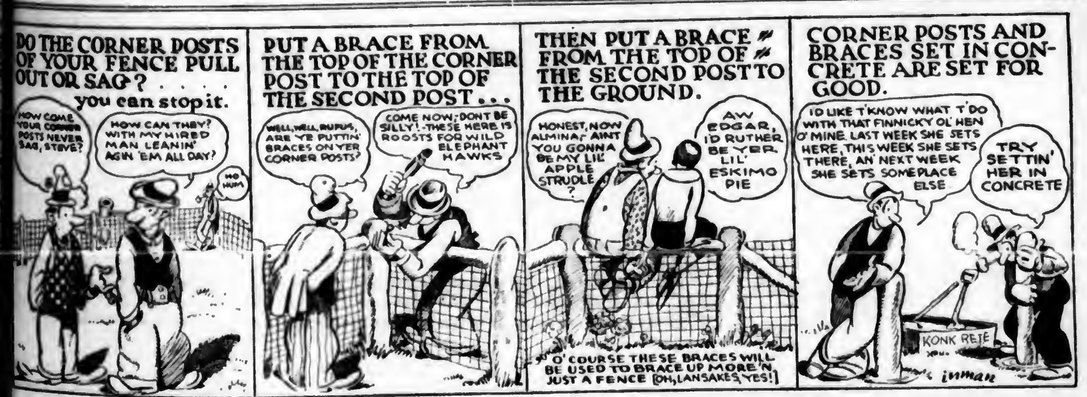
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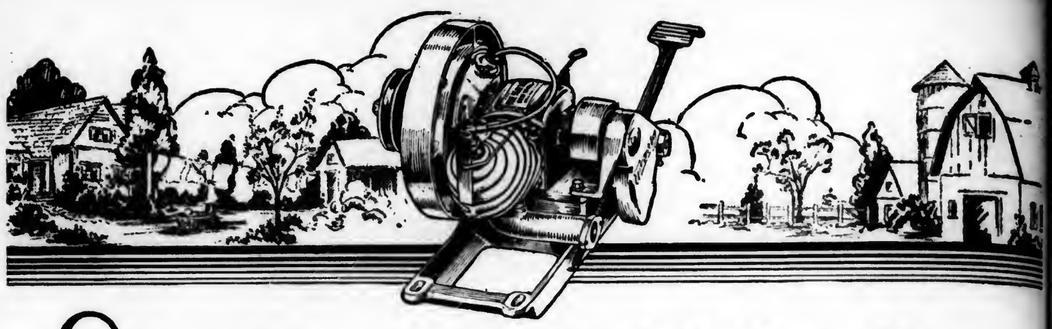
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MAKE BIG PROFITS with Chinchilla Rabbits. Best money makers. Write for facts. 848 Conrad's Ranch, Denver, Colo.

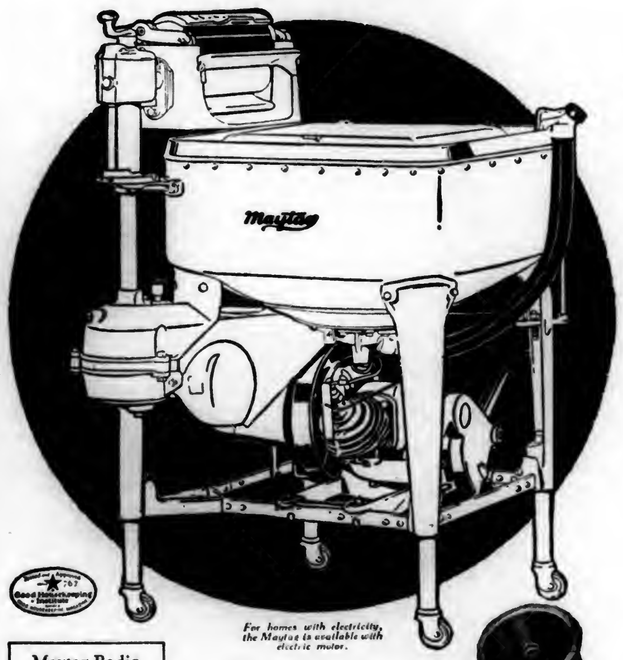
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TIGHT BINDING TEXT CUT OFF



The Finest Washer *has the* Finest Engine



For homes with electricity, the Maytag is available with electric motor.

Maytag Radio Programs

Boston-WBZ-A, Chicago-KYW, Cincinnati-WLW, Cleveland-WTAM, Denver-KLZ, Des Moines-WHO, Detroit-WJR, Fort Worth-WBAP, Kansas City-KMBC, Los Angeles-KNX, Milwaukee-WTMJ, Minneapolis-WCCO, Omaha-WOW, Philadelphia-WCAU, Pittsburgh-KDKA, Portland-KGW, St. Louis-KMOX, Salt Lake City-KSL, San Francisco-KFRC, Toronto-CFCA.

Over 50 stations now on the schedule; watch newspapers for date and hour.

The Maytag Has a Churn Attachment

The three-gallon aluminum churn sets over the Maytag gyratator post and is operated by the same power that runs the washer. A valuable, exclusive Maytag feature. Ask about it.

—An Engine Worthy of the MAYTAG

YEARS before any other washer offered in-built power to the farm wife, Maytag introduced the Gasoline Multi-Motor. Success always brings imitators, but Maytag still remains the only washer company that builds its own engine and the demand for self-powered Maytags makes The Maytag Company the world's largest producers of single-cylinder gasoline engines.

Fifteen years' development have brought the Multi-Motor to a high state of perfection. It is a time-tested product. Only the finest workmanship and materials enter into its construction. There are only four moving parts, and each part is as finely engineered as a fine automobile. By removing only four bolts, this compact, simple engine is interchangeable with an electric motor.

Compare the Maytag with other washers. Compare the Multi-Motor with other engines. You will, doubtless, decide as the majority of other farm homes have decided. You will want the Maytag.

FREE for a Week's Washing

Write or Telephone the Nearest Dealer

Ask for a trial Maytag washing. If it doesn't sell itself, don't keep it. Deferred payments you'll never miss.

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Maytag Aluminum Washer

PENNSYLVANIA FARMER

Published Weekly — Established 1877

Consolidated with

PENNSYLVANIA STOCKMAN *and* FARMER

June 8, 1929



Philadelphia *Pittsburgh* *Harrisburg*

TIGHT BINDING TEXT CUT OFF

The MAN who couldn't make GOOD



Shiftless, down-at-the-heels, lazy,—Old Straw-Tick never held a job in his life. He just got by.

You could hire him cheap, but would you? He'd waste time, make costly mistakes and cost you more than a man whose wages were bigger.

Some dairymen who wouldn't hire Straw-Tick on a bet, make a more expensive mistake when buying feed. They buy solely on price—and forget that they make money only to the extent that their feed produces milk, keeps cows healthy and makes veterinary bills unnecessary.

There are Straw-Ticks in dairy feed as well as in men. You can't call a dairy feed a bargain because the price tag says it's cheap—you've got to wait till you feed it, and let your milk production and your herd health tell you.

For sixteen years Larro has been making records, producing milk economically and keeping cows healthy. It is called the safe ration, not merely because it was the first feed to be passed over electro magnets to remove dangerous iron and steel particles, but also because it is safe in the kind and quality of ingredients, and in having the safe amount of protein for all conditions.

When you buy Larro you get the same feed time after time—not merely the same name with ingredients or analyses shifted to suit a price or selling condition.

When you think of the feeds that haven't made good over these sixteen years, and have shifted and shifted to catch public favor—you'll understand why experienced dairymen take no chances, but use Larro—the feed that does not vary—and makes the biggest possible profit from dairying.

THE LARROWE MILLING CO.
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Larro
FEEDS THAT DO NOT VARY
FOR COWS · HOGS · POULTRY



Farm Facts and Fancies

By ALVA AGEE

I WISH that some soil scientist who knows all about the use of lime on land would tell us why the need of much land for lime seems to have developed within the short period of our own lifetime. Of course we know that quite a large part of our tillable farm area was acid when it first was brought under cultivation, or at least we assume that it was, but I am referring to the land within our northern states that has provided, and still does, our chief farm production.

Forty years ago this land was growing red clover finely, and then the need of lime developed in the eastern part of this area, but the cause for it never was called to our attention in the Mississippi Valley states. Today it is impossible to publish bulletins advising the use of lime just as was done by the experiment station a quarter of a century ago. They are telling the farmers that liming is essential for production of red clover and one infers that the need was not great when farther east red clover was failing to grow as well as formerly.

Leaching Out

I used to tell a farmers' institute audience that leaching must be reducing the stock of lime in the top soil, and that it was only a matter of time until all land must be limed. That was a guess, but we did a good deal of guessing in those days if we did much talking. Then a man called attention to the fact that the soil had been lying outdoors, subject to the leaching effect of rains, for millions of years, and he found my statement unconvincing as a substantial reason for the new soil conditions we were finding.

There is plenty of evidence that lime does leach out of the top soil. Many of us know land that was naturally rich in lime and that now has an acid surface and an alkaline subsoil. The Wisconsin Station applied ground limestone on a permanent pasture and within a year found that some of the lime had moved down as far as six inches.

If we grant that leaching is a chief factor in producing soil acidity, it seems a curious fact that the deficiency should come about while we are looking on. Our span of observation is such a trifle in the lifetime of a soil that one wonders at the coincidence. An element of unreasonableness is in the explanation. Leaching must be a factor, but it is not easy to accept as a primary one.

The Clover Test

Years ago I grew a heavy crop of red clover on a field that had been in permanent pasture and the soil was not alkaline. Others have had the same experience with clover for a time on acid land. The Wisconsin Station tells us that it has found a number of highly acid soils that produced good alfalfa. It appeared to be a matter of available calcium, and the Station concludes that "two tons of ground limestone will supply all the calcium need per acre on practically all calcium-deficient soils, even though this does not completely correct the acidity." It states that repeated tests have shown that a sandy soil having an acidity requirement of three or four tons of limestone per acre gave yields of alfalfa from an application of two tons of limestone that were fully equal to those obtained when four tons were used.

I am not giving these results to try to influence the size of limestone applications on eastern soils—it would be difficult for me to trust the smaller application on any soil—but I want to emphasize the point that ability to grow red clover and alfalfa are not tied up so much to absence of soil acidity as to the presence of available calcium in sufficient quantity to meet needs.

And Yet, After All

We needed the results of these Wisconsin tests and it is interesting to a practical farmer that Professor Truog has isolated the inorganic compound which is the specific cause of soil acidity. And yet the new knowledge does not carry us beyond the need of lime to combine with this cause of soil acidity, and to supply the legumes with available calcium.

Lime must be applied, and the amount to apply grows larger as the years go along, let the cause be leaching, or removal of lime on crops, or whatnot. It is occurring right now while we are here to see it, and the reasons offered appear inadequate. I have seen land grow very heavy clover for a time, then quit growing it in any satisfactory fashion, and after applications of lime began growing it again. Tens of thousands have observed the same thing.

Lime and Phosphorus

We may give too much credit to the lime alone. About the time the practice of liming for clover was spreading the use of commercial fertilizer was growing rapidly, and the chief element in it at that time was phosphorus. The station to which I have referred says that "available phosphorus is in general as important a limiting factor in alfalfa culture as calcium". The soils that were quite acid and gave good yields of alfalfa were relatively rich in phosphorus, and the other soils much less acid, but deficient in phosphorus, gave poor yields.

Again we have confirmation of the belief that lime and phosphorus form the backbone of any good system of soil improvement for most land. The need of nitrogen may be great, but the soil can help itself when its backbone has been strengthened. Applications of potash may be absolutely necessary, but the best yields, but lime and phosphorus are the choicest needs when pulling the soil up out of helplessness.

Superphosphate

Our scientists have been telling us in recent years that phosphorus remains in the soil just about where we put it. The Wisconsin Station applied 20 per cent superphosphate at the rate of three hundred pounds per acre to permanent pasture, and a year later had not moved downward beyond one inch below the surface, and the greater part was in the surface half inch, and in the chemical form of untreated rock.

Applications of superphosphate were made to growing corn, and there was no increase in yield where it was left on the surface, only a slight increase when placed at a depth of half an inch, and a very heavy increase when placed three inches below the surface. Phosphorus is a poor traveler; it needs to be mixed with the soil to the depth of the plant roots.

Big Logs

A STATEMENT was made in [illegible] paper of May 18 by C. B. [illegible] man of Marshall county, W. Va., about a big hog, so I thought I would tell you about the logs we have here in Schuylkill county, Pa.

I sold nine logs to our hardware mines which were nearly all of even size. The largest was measured. It was 63 feet long and four feet seven inches in diameter at the bottom and was 37½ feet to the first branch, which length it was almost of equal thickness with the butt. It measured at the length of 63 feet at top 22 inches in diameter.

It took two ten-ton trucks to haul one of these trees out to a loading place. They were all sold whole. White oak trees, straight and sound, are worth more than any other dollar made.

I am sure one wants to see a tree of standing [illegible] to Hubley [illegible] place. We have one that measures [illegible] inches in circumference.

Spare the axe and save the tree.

A. C. Koppenhaver

Farm Practice

By W. D. ZINN

A WEST VIRGINIA [illegible] writes that he has a field which he wants to sow to timothy and clover this spring and follow with meadow. I am the one who will have only about one chance in a hundred of getting a stand of timothy and clover. I have tried sowing grass seed in soy beans on a small scale several years and have never succeeded. The beans make too dense a growth and choke out the grass.

Our correspondent doesn't [illegible] what following the soy beans and in the spring sow the clover. If he will cut his wheat just as soon as it comes into head he will be able to get a crop of hay [illegible] the wheat.

• • •

Nitrogen Again

I WAS in our commercial orchard yesterday (May 22nd). I found the grass under the apple trees more than knee high and ready to cut, while the grass between the rows of apple trees was not more than half that high. It was of a yellow color, while the grass under the trees that had received the sulphate of ammonia was a rich dark green. If the grass was cut today that under the trees would make three times as much as that between the rows and the latter ought to be the better because it is in the sunshine while that under the trees grew in the shade.

We applied at the rate of 480 pounds of sulphate of ammonia per acre, which cost about $14 40 per acre. If I were to ask some farmers to apply $14 40 worth of fertilizer on an acre of meadow it would take their breath, but let us figure whether it would pay. I said that the grass under the trees is ready to cut now. It would make more than a ton to the acre, perhaps one and one-half tons, and it should be borne in mind that the hay would be very digestible and for that reason worth much more than ordinary hay.

By cutting the grass now a very good second crop can be grown to be cut the first of August. That should make from two to three tons per acre and it too would be very good hay. The meadow untreated I would rate less than one and one-half tons per acre.

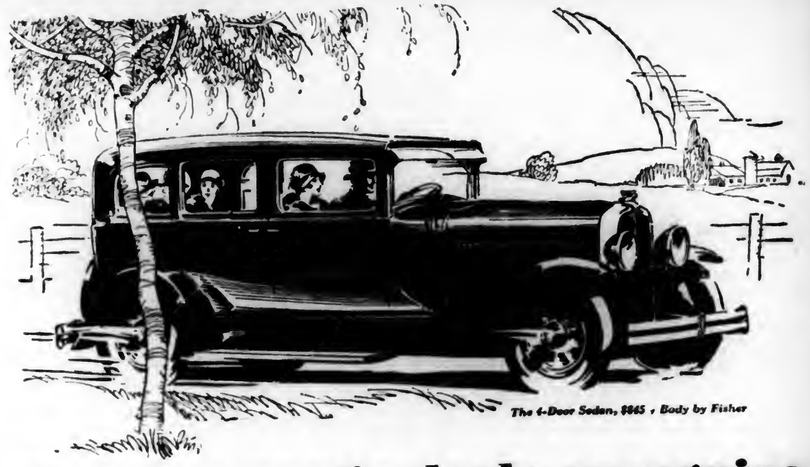
I am not asking my readers to treat all their meadows, but I would like to induce them to try treating at least one acre next year as I have suggested. Through my recommendation a farmer last year applied 100 pounds of nitrate of soda to an acre of his timothy meadow. His report was that the treated acre produced three tons of hay and the untreated along side of it produced two tons. In making his report he said, "This was no guess. The land was measured and the hay was baled and weighed."

• • •

Fertilizer for Wheat

Would you suggest putting [illegible] pounds of 1-8-10 fertilizer on [illegible] of spring wheat? It was sprouted heavily and doesn't seem to be doing well. Would this analysis be [illegible] harm it if it were spread over the grain? The field is also seeded to red clover. Nicholas Swader

NO, I never recommended such a formula for any crop. In the first place I would never buy a fertilizer that contained but one per cent of any of the elements of plant food. Few manufacturers of fertilizer put out a one per cent goods. Again the proportions of plant food are bad. Soils in the East are deficient in phosphoric acid more or less, but all soils are not deficient in potash. For that reason there should be more of the former than the latter in every fertilizer. I would much prefer a 3-16-3 goods, but of that I would not apply more than 300 pounds per acre on wheat. I think it is now too late to apply fertilizer to wheat.



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Keeping the cost down . . . whether it's the cost of raising a litter of pigs or of running an automobile . . . that's how a farmer gets ahead nowadays. And that's why so many farm families are riding in the New Pontiac Big Six. For they have found that its value and economy give them more for their money than any other car they can buy.

Take, for example, the value offered in its bodies by Fisher. Big car durability. Big car comfort. Plenty of room for everybody in a husky body that's bound to stand up because it's built of the best obtainable hardwood and heavy gauge steel.

Take its new, larger, more efficient engine. It has a special camshaft quieting curve which keeps valve operation free from noise. It has an improved Harmonic Balancer to neutralize torsional vibration in the crankshaft.

It's the same with its big car four-wheel brakes. Linings wear much longer than in ordinary brakes because there is plenty of clearance between drum and shoe, to prevent shoes from dragging and drums from overheating. And they are noiseless, too, and fully protected against rain, ice or mud.

Investigate the New Pontiac Big Six. Any Oakland-Pontiac dealer will show you how easily you can *step up* the quality of your car, without stepping out of the low-priced field.

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If you prefer a medium-priced car, investigate the New Oakland All-American Six. Oakland engineers produced this car to meet every motoring condition which America presents. Power and deceleration for the mountains . . . speed and balance for the prairies. . . . smoothness, silence and fast acceleration for the city traffic—all were engineered into the New Oakland All-American Six as features of its basic design.

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Consider the delivered price as well as the list price when comparing automobile values . . . Oakland-Pontiac delivered prices include only reasonable charges for handling and for financing when the Time Payment Plan is used.

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Pontiac Big Six, $745 to $895, f. o. b. Pontiac, Michigan, plus delivery charges. Bumpers, spring covers and Lovejoy shock absorbers regular equipment at slight extra cost. General Motors Time Payment Plan available at minimum rate.

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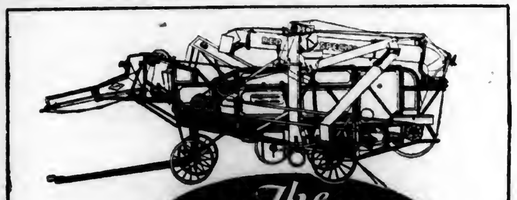
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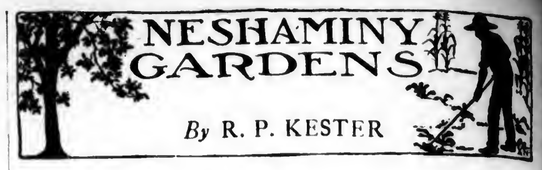


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OWING to stress of work, and because I believe the art will be appreciated by the public, even if it is not approved by one of the parties involved, I am going to commit an act of plagiarism. This is how it is being done. Our daughter who lives in the home at Neshaminy Gardens, has written several stories for the children's page of Pennsylvania Farmer. She is the mother of the two grandsons of whom I am so fond. She frequently gives these stories to me to type-write and mail. This morning she handed me another. I find that it tells a true story of something that occurred not long ago at Neshaminy Gardens—something that has to do with two intelligent beings on the farm, viz., Mitzie, the German police dog, and little "Buddy" of anti-spinach fame. My part in it is the crime of diverting the story to this column instead of sending it for the children's page. I salve my conscience by thinking that the suggestion contained in it may have a practical value as well as provide entertainment. Here it is:

• • •

Mitzie and the Roosters

By Mrs. M. K. Mammel

MITZIE was in disgrace. For two days she had been tied to the garage with a dead chicken dangling from her neck. Though only a dog, she knew it had been very, very wrong to kill the chicken, and she hung her head in shame every time her master or mistress came near her. Her pleading eyes sought their forgiveness, and when little three-year-old Buddy romped about the yard her punishment was almost unbearable.

At last one fine morning her master came out and took the chicken from her neck and told her she might go. You may well believe she did not want to see another chicken very soon. She thanked her master with glad yelps and bounded away to find Buddy.

Great was Mitzie's dismay in rounding the corner to find a flock of roosters scratching in the loose dirt for worms. Mitzie, in her surprise at seeing them there, started to dash right through. As one defiant rooster flapped his wings and started toward her, Mitzie was about to grab him in her mouth when a booming voice sent her crouching to the ground in shame.

"Mitzie, Mitzie, none of that," her master called. "She'll learn to let them alone, I think, but master said. "If she kills any more we will have to get rid of her. We can't afford to lose chickens like that."

Mitzie found Buddy and forgot all about chickens for the time being. She and her beloved playmate had a wonderful romp together. But that flock of roosters was a trial to Mitzie. They always seemed to be in her way, but she learned to chase them off the lawn without touching them. Her master watched her with satisfaction for he felt sure she was learning her place among chickens.

The big test came one morning when Mitzie heard Buddy crying in great fright. She dashed toward the sound and found Buddy in the midst of the flock of roosters. The leader was circling around him, flapping his wings angrily and rushing on the poor, frightened little fellow every time he started to run.

Mitzie did not stop to think, but leaped into the flock, scattering them in all directions. The bold, angry leader did not run away, but Mitzie kept between him and Buddy until they reached the house. Buddy's mother flew to him and gathered him in her arms. The cocky rooster, defeated, walked away in great dignity, while Mitzie, petted and praised, was wild with joy.

Master shut the annoying flock away, for they had served their purpose in teaching Mitzie the lesson she had to learn—not to kill chickens.

• • •

NOW, I think that is pretty good, and I have filled my space to the satisfaction of all. But one thing troubles me. Will I be called on to pay for the story?

Well, we are still having weather in this eastern section—weather that is causing real anxiety. Rain, cold, sleet, hail, slight frosts and floods, all these are sandwiched between occasional fine days. Some corn was planted the week of May 13th, but a heavy rain storm came and washed out or covered up so much of it that corn planted on comparatively level fields has to be replanted, provided it gets dry enough to do it. Through our section had which fell for only three or four minutes knocked off little peaches, nicked the apples and ruined that particular cutting of asparagus. Otherwise, we are all right.

Friendly Talks

By Edgar L. Vincent

A GOOD many things are best done as we go along. It may be we intend to make a trip to the barn. Are there any tools that belong down there? It saves time to pick them up and carry them along, and not be compelled to make an extra trip. One of the smartest little Scotch women I know is a doctor, and she talks a lot of sense. One of her shrewd sayings is, "Let your brains save your heels." If we would get in the habit of doing that more often we would live longer and be a lot happier.

But this works just as well when we come to doing some other things as it does about odd jobs about the farm. For sometimes we get so busy, or is it so careless? that we fairly forget to be decent to one another. You know how that is. You are in a hurry. Lots of things to do. Sun climbing toward the sky as if the Old Nick were after it.

Then you have a chance to do somebody a good turn as you go along. Do you do it? A man most broke my boy heart once by driving right past me lickety brindle when I was going the same way and he was alone and it was a hot morning. I was too proud to ask for a ride. I suppose that old fellow thought what was worth having was worth asking for; but it comes like pulling teeth to me sometimes to have to do that. Anyway, he didn't stop for me; but I was boy enough to grin my teeth and keep right on. He has left the road behind him. That was all I needed, and a bit of time.

But how it does warm a boy's heart to have somebody do him a good turn; and I know a man is just the same way. Don't we all like folks better when they show a bit of kindness? And we can just as well do it as we go along as not. And here is another thing: The man who puts a bit of himself into being good and kind and honest gets the best of it. Somehow he has more goodness to give after that than he ever had before. Kindness grows like yeast in bread. We need not worry about that; God will attend to that part of it.

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Landless Farmers

By SAMUEL M. HOUSE

A N amazing movement is in progress and the end is not in sight. It has become more and more difficult to [illegible] offered to landless farmers almost everywhere in the United States today. In every industrial district of the whole country there is a tendency going the opposite way to that followed by ex-agriculturist [illegible] establish himself in a business that lacks many of the pitfalls [illegible] so common [illegible] who embark in [illegible]

I speak of the [illegible] name to be sure [illegible] potential figure in agriculture [illegible] his up-to-date implements [illegible] has modern [illegible] does not own a single [illegible] ishes industrial [illegible] fact that almost every industrialized area in the United States [illegible] untilled lands.

Once these lands [illegible] they are abandoned [illegible] most cases when [illegible] gainful occupation moved [illegible] speed to create this [illegible] land owners in many [illegible] of their lands for [illegible] prices which when [illegible] them to live in leisure. With the proverbial rainy day well cared for there was nothing more natural than to let the remainder of their land stand idle.

In such localities the small land owners' premises are usually idle too. Why? Because, with the advent of mills into his locality it was much easier for the man with a small farm to go into the mills and earn his living than to work his farm which was too small to permit the installation of the modern methods and equipment which makes farming a business at once profitable and pleasant. As a rule the small farmer's methods are today little changed from those of his father and grandfather and this practice will no more work in farming than it will in manufacturing. Competition and progress have literally forced the hand of habit. Initiative is required where once dull plodding sufficed.

Probably there is no greater source of idle land of high productivity for the landless farmer than in those regions where gas and oil well drilling has tapped the munificent mineral riches in the earth's bowels. When a rich oil or gas strike is made on his premises the land owner usually surrenders unconditionally to the somewhat general human urge to lead the life of a gentleman of leisure. The acres that once yielded his livelihood are permitted to rest untouched while the unseen wealth beneath them pours out a golden stream of dollars.

Many large corporations owning mills and mines in communities formerly devoted to agriculture have a well-known practice of buying large acreages in excess of present needs for possible extension of their plants. Frequently this land is rich bottom land due to the proximity of corporations to locate their plants along rivers or other large sources of water.

There are countless other sources of idle land available to the landless farmer. And this land is readily available at a most considerate pro-rata crop or money rental and [illegible] required. The most satisfactory form of rental is that of an initial short period with a much longer period optional and at a price proportionate to the yield. The readiness of owners of this form of idle land to rent their premises can be readily understood when it is considered that the same amount of taxes must be paid whether the land is being tilled or not and that with proper tilling the land actually increases in value over the same land standing idle. In letting out his land the owner has nothing at stake and whatever he gets in money or a percentage of the crops as rental is just so much clear.

One of the very greatest advantages of being a landless farmer and obtaining for farming purposes idle land adjacent to manufacturing enterprises is the very ready market that is afforded in the towns and cities which house the workmen and their families. Hardscrabble is essentially profitable for the good reason due to his never failing market and the quick, easy and expensive handling of his harvested products.

[illegible] of the landless farmer bears the carry-over [illegible] being a real remedial force in such knotty problems as unemployment and the high cost of living. The possibilities are manifold and the rewards not inconsiderable.



Here is a photograph of a stone-picker which has been developed recently. We have not had any experience with the machine, but show it for the purpose of informing our readers of what is going on. We have had a good many requests for stone-picking machines, and evidently there is need for such a device if it will do the work. The stones that are removed can be used to build township roads. R. U. B.

Landless farming has, after a manner, been practiced for countless ages. It began, probably, in the days when the earth was young and some by act or chance became owners while others, by the same agencies, became workers. But never until today has landless farming offered real opportunities for its followers to build a lasting and profitable business at a minimum expenditure.

The age of machinery has made it all possible. Twenty years ago it was impractical in its broad present sense. The tractor and its accessories are the agencies that put opportunity into landless farming as an exact science. The landless farmer now can stand shoulder to shoulder with the manufacturer who leases his plant, the mine operator who leases his mine or the merchandiser who leases his store.

Physical equipment for this branch of farming consists of but little when the potential rewards are considered. A tractor and the necessary plowing, planting, cultivating and harvesting equipment are the main items. A little money for seed and necessary other items is, of course, required.

The speed with which it is now possible to plow, seed and cultivate makes it entirely feasible for a maximum acreage to be farmed successfully with a minimum of manpower. Horsepower as measured by stroke and bore has emancipated manpower and actual horsepower.

Landless farming in the not distant past was a precarious method of providing the daily bread. Only a small acreage could be tilled. The portion or its equivalent in money that went to the owner as rent and the sustenance for the worker and his family left scarcely a sufficiency to sustain the livestock through the unproductive months. In that day money was the one commodity conspicuous by its absence in the hands of the landless farmer.

All of this has changed. Landless farmers have the choice of living in towns, suburbs or even cities. They own not an acre, have no land tax bills to concern them. They have their tractor and its equipment housed not unlike the family car. It consumes only when it works.

There are several months in the year, starting after harvest and extending until the time for spring plowing, when the landless farmer is absolutely fancy free so far as farming is concerned. If he has managed his business right his earnings made in the months of his labor have been commensurate with the year-around earnings of small tradesmen, many lawyers and doctors and well-paid workmen in mines and factories.

Yes, the landless farmer can go to Florida or California and spend the winter if he is so inclined, and has managed properly.

Acres are never lacking. The same qualities of enterprise, common sense and practicability that enable a man to succeed in almost any legitimate field of endeavor will bring him success in the science of landless farming. And he will have the advantage of having an avenue open for success in a field which may possess very few if any other opportunities for success on a similar scale.

The Farm Relief Bill

A DECIDEDLY objectionable feature of the McNary bill is the provision authorizing the Farm Board to organize statistical bureaus, thus duplicating services now adequately performed by well organized, disciplined and experienced bureaus and divisions of bureaus in the Agricultural Department.

Every service of that nature that can be needed for the Farm Board to function as well as it will ever be possible for it to function at all has already been provided in the Department:—bureaus of marketing, agricultural economics, crop reporting, statistics of foreign crops, local movement and prices, exports (Department of Commerce), with ample provision for publicity of all such information in "Crops and Markets" (monthly) and in "Foreign Crops and Markets" (weekly). There is too a division of "Co-operative Marketing" in the Bureau of Agricultural Economics, with a bi-weekly publication devoted to that subject alone. Not to mention also innumerable bulletins of all sorts, including those of the Grain Futures Administration, the grain inspection service, etc.

To duplicate any or all of these services, or to transfer them to the jurisdiction of the Farm Board, would be a legislative blunder of the first order, not to say a crime.

The penchant of the Congress is to increase the number of government employes, already numbered by the hundred thousands (outside the Army and Navy), and no disposition is ever shown to abolish obsolete and needless positions.

It is not to be expected, by the present generation, at least that the experiment of the Farm Board will be abandoned, no matter how futile it may be found as an intended benefit to agriculture; but at least the Farm Board should be conceived of as an experiment and so treated as to its organization, and not so constituted that it cannot be abolished if (or when) it shall have been shown to be (as most economists expect it will be shown to be) only another pragmatic—a "busybody nuisance."

Eaton G. Osman.

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GREAT CATTLE SHOW

THE entry list for the Lancaster Fat Cattle Show, to be held June 19-20, is not yet available, but between 1,200 and 1,500 head are expected to compete. Considering the fact that all are commercial cattle, and that there are only six classes, this is a goodly number. Can any other county in the country put up such a show at this season—or at any season?

IN REVERSE

FOR several months low and medium grades of cattle have sold very high in comparison with good ones. But a change is coming and it is not very far away. When grassers come we shall witness the reverse of recent conditions, or more of the lower grades and not so many of the higher. The market may easily go two ways at the same time on these different classes, but we expect to see it go farther on the low grades than on the good cattle.

LATE WOOL MOVEMENT

WHILE considerable wool has changed hands in the range territory very little has moved in this region. Buyers and producers have different ideas about prices, but they will get together in due time, for all the wools will be needed. The Ohio Cooperative Association reports a few sales of half, quarter and three-eighths at 43@44c delivered at eastern mills. Nothing has been done in fine wools in eastern Ohio and western Pennsylvania, where prices usually compare favorably with Boston prices.

BELOW A DOLLAR

FOR the first time in nearly fifteen years wheat is below a dollar a bushel in Chicago. The situation is natural, the result of an accumulation from past production and a big crop in prospect. But it will be no surprise if sundry well-meaning gentlemen in Congress discover that the low price is due to speculation or manipulation and come forward with some half-baked scheme to protect growers from these or from the consequences of a surplus. The truth is that wheat is cheap because farmers in this country, in Canada, in South America, in India and elsewhere raised more than a-plenty of it. And they did that because the price for years has been rather attractive. There is no legislative remedy. There is no palliative even, unless the season provides one in the form of crop disappointment somewhere. Those who promise any man-made solution for such a problem are merely fooling themselves, and we should not allow them to fool us. Below a dollar wheat is too cheap in view of its cost, too cheap in comparison with other things related and unrelated, but there is no way to advance the price except to depend on Nature and reverse the policy which produced too much. There isn't much comfort in all this but there is some sense, and that is where it has the advantage over any artificial plans that may be proposed.

SAFE DEMONSTRATIONS

CROP demonstrations intended to enlighten the public should be carried on by or under the direction of our research institutions, so that the conditions may be right and the conclusions without error or bias. This applies especially to demonstrations which involve comparisons whereby injustice may be done to somebody if conclusions are not correct. Some field demonstrations have been made without proper direction or attention, without actual knowledge of materials and without competent interpretation of results. Let us so safeguard our demonstrations that they may not be misleading and subject to misuse. The way to do that is suggested in the first sentence of this paragraph.

TIME TO NOMINATE

ON Page 7 of this issue we republish the entry blank for the convenience of those who wish to make Master Farmer nominations. No matter how well known a farmer may be, he cannot be a Master Farmer candidate until some one sends in his name. No nominations are made by the editors of Pennsylvania Farmer. The judges welcome nominations from neighbors and friends of outstanding men. For no one can have a better knowledge of their character and achievements, the two things by which a Master Farmer is judged. Complete information about the project appeared in the issue of May 11th, a reprint of which will be mailed on request. This is simply a reminder that the last day for making nominations, June 17th, is close at hand.

TOO CHEAP

IN a recent discussion in Iowa one speaker declared that "the day of profits from advancing land values alone is past; and in the future profits, if any, must come from operation of land alone." That may be correct for Iowa but it is certainly not so for all good farming territory. Just now good land is too cheap in many places simply because there is nobody to buy it except active farmers, most of whom have all they can properly finance. This too cheap land will show a profit some day by an advance in price, though nobody can say when. Probably the turn will come when farmers and their alleged leaders quit representing agriculture as a hopeless and busted business and learn to express some confidence in it. Incidentally this is the time for the man who knows the real value of land to buy some.

COSTLY WORDS

WHATEVER Congress does we hope its action will relieve us of the eternal repetition of the words "farm relief," which have no definite meaning but are tagged onto about every agricultural scheme or plan. Their constant use is misleading the public about the real status of agriculture and those who follow it. It creates a wrong impression of farming and a wrong conception of the value of farm property, and it has already done more damage in dollars than all the legislation proposed can ever do good. Another term that should either be defined or dropped is "orderly marketing." For ten years or more it has been in use and yet no two persons agree on its exact meaning. But it sounds good, so our orators go on mouthing it and our writers ring it in whenever they can. Both expressions should either mean something definite or should go into "innocuous desuetude"—which older readers will remember as a badly worn term of other days.

A BULL'S REPUTATION

ON May 20th Maurice Masemore, 22 years old, led out to water his father's Guernsey bull, which the reports tell us "had a reputation for being peaceful." Nobody witnessed the attack on the young man but he was so terribly battered that he died on the way to the hospital at York, Pa. Two days later Harrison Masemore, father of the bull's victim, was attacked and injured by the same bull, which he was attempting to tie in its stall. Fortunately Mr Masemore's hired man, Joseph Engle, arrived in time to rescue him or he might have been killed. As it was he escaped with injuries to head, chest and back. The bull which had killed one man and injured another was then shot to prevent further tragedy. This case furnishes one example of the danger of trusting a gentle bull and two examples of the risk of being alone with a bull without even a faithful dog to go to the rescue.

Frank Beard of Pratt, Kansas, was recently attacked by his gentle young bull. Mr. Beard managed to get a good hold on the ring in the bull's nose and hung on for his life. Finally he was able to escape, with several broken ribs and many cuts and bruises. He considers himself fortunate and so he is. But he will be careful in the future, as everybody should be all the time.

POINTS OF DIFFERENCE

AFTER the adoption of numerous amendments the House of Representatives passed the tariff bill. It is now before the Senate and further amendment is expected. Several of the changes made in the interest of agriculture are not approved by the farmers of this region. They cannot see the advantage of a tariff on hides and a greater one on leather and shoes. They think that whatever they may gain by a tariff on hides will be more than offset by the increased cost of leather which they use as harness, belting, footwear, etc. They are opposed to the increase in the tariff on cattle, for they are getting many stockers and feeders from the western provinces of Canada and consider these cattle too dear now. They are opposed to a higher duty on sugar, which they all use but do not produce. The same applies to flaxseed, duty on which the House advanced to 63c per bushel after it had been advanced to 56c under the flexible tariff clause. Apple growers are seriously concerned about the effect of tariff revision on countries to which their fruit is exported. A good export trade has been built up, an important relief to our markets in years of abundance, and they fear retaliation on the part of importing countries affected by various schedules of the revised tariff.

We believe the above to be a fair summary of the views of thoughtful farmers in Pennsylvania and adjacent eastern states. In the scramble for tariff favors the point to which fruit growers have directed our attention should not be overlooked. Nor should the probable effect of extreme rates on domestic consumers in case of more agitation over the cost of living. Tariffs which amount to embargoes are very likely to create reactions which will more than offset their apparent or temporary advantages.

New Jersey Farm Comment

By G. W. HARRIS

NEW JERSEY poultry flocks will be vaccinated for protection against fowl-pox this summer under the direction of the State Bureau of Animal Industry. This work was formerly a research project but because of the numerous requests for protection vaccination work will be carried on this year on a state-wide basis.

Fowl-pox lowers the vitality of birds and is often followed by roup and canker. As the disease generally occurs among pullets during their first few months of laying, losses from low egg production are serious. It is at this time of the year that egg production is naturally low and prices high.

The vaccination of birds is done when they are about four and one-half months old and only pullets and breeding cockerels are to be submitted for vaccination. Vaccination will be done as nearly as possible to the date on which the birds reach the following ages: four months in the Mediterranean breeds such as Leghorns and Minorcas; five months in the American breeds, as Rocks, Reds, Wyandottes, and five and one-half months in the Asiatic or straight meat breeds, as Jersey Black Giants, Cornish, Brahmas, Orpingtons, etc.

According to the rules of the Bureau of Animal Industry only birds in sound physical condition and in general good health will be vaccinated. Also adequately fenced enclosures in which to confine vaccinated birds must be maintained and non-vaccinated birds must not mingle with vaccinated flocks.

A fee of three cents a bird is to be charged for vaccination and the work will be done by representatives of the Bureau of Animal Industry and by veterinarians in private practice on request of owners. Application for vaccination must be sent to the Bureau by July 15. No vaccinations will be made after September 15.

* * *

SEVERAL changes in the New Jersey extension staff have been announced by Director Baker. Miss Elizabeth Dixon, whose home is in Salem county, has been appointed district home demonstration agent for Salem and Cumberland counties. She will start her new duties on June 17. Miss Alice R. Decker has been chosen district assistant home demonstration agent for Camden and Gloucester counties. Her appointment is effective July 1.

J. Lloyd Glass, who is now assistant agricultural agent for Hunterdon county, will on July 1 become junior club agent in Gloucester county.

Two resignations have been received but their successors have not yet been announced. The resignation of Miss May Truman, home demonstration agent for Middlesex county, becomes effective on July 31 and that of Miss Anna E. Seng, district home demonstration agent for Hunterdon and Union counties, on July 30.

* * *

WHEN the members of the National Vegetable Growers' Association hold their convention in Philadelphia on August 19th to 22nd, a one-day tour of Philadelphia county farms in the Bustleton area is planned by the Philadelphia Vegetable Growers' Cooperative Association. This section is an intensive vegetable growing area, spinach, celery, carrots, beets, sweet corn and potatoes being the chief crops. During the past two weeks in May it is estimated that over 2,000 bushels of spinach were shipped daily from Bustleton.

T. Herman Fleming, William G. Wenker and Stanley Q. Becker will have charge of the entertainment that day.

* * *

DR. J. G. LIPMAN is sailing for England on June 15 to participate in the opening ceremony of the experimental farm which is being established near Maidenhead, England. This farm will be a center for research in fertilizers and allied agricultural problems.

* * *

SOUTH JERSEY Holstein breeders are fostering a program to promote greater interest in that breed through 4-H Club boys and girls. Cash prizes of $150 will be distributed to those boys and girls, owners of registered pure-bred Holsteins, who excel in their dairying activities.

Awards will be made for the best three sets of milk production records and for the best three sets of records on the cost of growing calves. Those who show skill in fitting club-owned Holsteins for shows and show proficiency in dairy cattle judging will also receive prizes.

The committee in charge of this educational program is composed of Russell Skinner and William R. Lawrence, dairymen of Mullica Hill and Bridgeton, and R. C. Noble, 4-H Club leader in Salem county.



To find the right kind of hired help on the farm to handle livestock is often a serious problem. Abuse of animals is not rare. On the farm of Willard Kille, Gloucester county, N. J., this is no problem. Above the door leading into the horse stables is the sign "Kindness Is the Word" which shows the spirit of the owner. Mr. Kille says his help seem to enter into this same spirit, as he has had no trouble of this kind.

Maryland Notes

THE members of the University Livestock Club staged a very pleasing and successful Livestock Day at College Park on Saturday, May 4. The fitting and showing contests; sheep-shearing contest, and milk-can-rolling contests were carried out as scheduled. Winners were as follows for first prize:

Fitting and showing contest.—Ayrshire cows, S. H. Holter; Jersey cows, H. Hoopes; Guernsey cows, Ralph England. Duroc-Jersey hogs, S. P. Stabler; Poland-Chinas, W. Naill. Crossbred Merino and Dorset sheep, Miss Mary Ingersoll; Hampshire sheep, W. R. Teeter. Sweepstakes, all champions competing, Miss Mary Ingersoll, showing a crossbred Merino and Dorset yearling ewe.

Milk can rolling contest.—Kenneth Remsburg.

Sheep shearing contest.—Stanley P. Stabler.

* * *

THERE is a good prospect of a feeder and fat cattle show at the Union Stock Yards in Baltimore in October of this year, says a report from the Maryland Stockmen's Association. A committee of the Baltimore Association of Commerce has been working on the plans and details for the show. It is expected that a full report will be made later.

* * *

MR. GEORGE W. MOBLEY of Montgomery county, Md., has recently sold for early delivery his Angus baby beef crop. Mr. Mobley has an excellent herd of Angus cattle, and he raises and fattens the calves, instead of buying feeders for fattening. The fact that his cattle sold for 15 cents per pound indicates that he has good cattle which have been well grown and fattened, and that he has found an appreciative buyer. There are many consumers in and close to Maryland who want and will gladly pay for beef of extra quality, and there are a number of cattle feeders of the state who have the feeds and the ability to produce cattle which will suit the most exacting buyers.

* * *

MR. FRED J. HUGHES, Barnesville, Maryland, recently shipped to his pastures in Montgomery county 800 yearling steers from Texas.

Jersey Crops Moving

THE New Jersey strawberry season opened during the last week, with several hundred crates reaching market by truck. Rail receipts at New York totaled five cars from New Jersey, all of which came in l.c.l. quantities, according to the New Jersey Department of Agriculture. Truck receipts at New York totaled 227 carlot equivalents for the week ending May 28, compared with 128 carlot equivalents the previous week. Maryland supplied 155 carlots, Delaware 41, Virginia 21, and New Jersey 10. Both New Jersey and Delaware shipments showed a considerable increase toward the close.

Total strawberry shipments decreased temporarily to 2,365 cars for the week ending May 29 from nearly 2,900 the week previous, according to the U. S. Department of Agriculture and the New Jersey Department of Agriculture. The season was waning in Arkansas and Tennessee, and was near the finish in the Norfolk section and Eastern Shore districts of Virginia. Increases in carlot movement were reported for Maryland, Delaware, Kentucky and Missouri. The forecast of production in Maryland has been reduced considerably to 26,000,000 quarts.

The strawberry crop in five late states is forecast at about 52,000,000 quarts, compared with 48,400,000 last season. Most of the increase is in New York and Ohio. First cars are now moving from the 16,000,000-quart crop in the state of Washington.

* * *

THE New Jersey Department of Agriculture reports that shipments of New Jersey lettuce increased during the past week, and when the quality graded good to fancy the market ruled firm. The total carlot movement from the state was 18 cars, compared with seven the week before. A good indicator of the comparative earliness of this season and last is revealed in the total movement to date in both seasons. To May 25 this year 25 cars have moved to market, while last season only one car had been shipped to May 26. Rail receipts at New York totaled nine straight cars from New Jersey, and 13 l. c. l.'s. Truck receipts from New Jersey equaled 29 carlot equivalents at New York. At Newark truck receipts totaled 9,750 crates.

California Iceberg was mostly of ordinary quality, and moved slowly, according to the Department's report. In the northern section of the state the season has been unfavorable for growing, with lack of moisture cutting down the yields. The harvest of spring lettuce in the Imperial Valley has been very unsatisfactory, with sizes small and quality below average. Harvest is practically completed. The Salinas-Watsonville district has passed peak shipments, and yields up to June 1 will average 80 crates to the acre. Production in June will depend on the weather at the beginning of the month, and some of the young fields are already showing some tip burn.

Asparagus shipments during the week ending May 28 were somewhat lighter than during the previous week. Truck receipts at New York equaled 40 carlot equivalents, with the bulk of the supply coming from New Jersey. This state placed 29 carlots in New York, while Pennsylvania supplied seven, and Maryland and Delaware two carlot equivalents each.

Truck receipts at Newark for the week ending May 28 totaled 5,667 crates, compared with 6,238 crates last week.

Nomination Blank

NO FARMER can be considered a candidate for the Master Farmer Awards for 1929 until some one sends his name to the Master Farmer Editor. We are printing this blank for your convenience, so that every farmer may easily be nominated. All nominations should be mailed on or before June 17, 1929, to the MASTER FARMER EDITOR, PENNSYLVANIA FARMER, 7301 Penn Avenue, Pittsburgh, Pa.

To the Master Farmer Editor:

I wish to nominate the following as a candidate for the Master Farmer Award:

Nominee's Name .....

Address ..... R. D. No. .....

County ..... State .....

Name .....

Address .....

County .....

TIGHT BINDING TEXT CUT OFF



Milk Is Inspected for Flavor and Odor

City Milk Delivery

By ELLEN S. BRINTON

THE milk driver is closer to the city housewife than any other person in the dairy industry. He is really the go-between, bridging the gap between the producer and the consumer. He is salesman, deliveryman, collector and very often teacher of how to use the product. He is responsible for the value of the load of dairy products which he takes out daily; for the welfare of his horse and for the collection of the empty bottles. He must build up his route, get new customers and keep the old customers satisfied with good service. He must know every customer, her name, usual order and her favorite place for putting the bottles.

Some of the things that milkmen are asked to do read like a comic story. They are the first arrivals at many households and obligingly do many favors for their customers such as ringing the doorbell "to wake up my husband" and "putting the cat out". Some milkmen carry a key to the kitchen, or refrigerator, or put the bottles inside a certain locked box on a window sill. One man told of going into a certain restaurant and lighting the coffee boiler every morning, so that the owner would find hot water ready when he arrived.

To be successful a milkman must have sales ability, agreeable personality, neat appearance, accuracy in figures, good memory, enduring strength, some interest in horses, ambition and willingness to work at night and long irregular hours. Driving a milk wagon is not a white collar job and for that reason does not attract the high type of salesmen that milk distributors would like to have. Some of the men stick to the job for years, others use it merely as temporary fill-in until something better turns up. Routes that include many apartment houses are considered hard on account of the stair climbing, and it is said that no man can stand it more than three years.

Horses and wagons are still used for city milk distribution despite all efforts of the gasoline and electric automobile designers to replace them with motor vehicles. The horse gets to know the route as well as the driver. In suburban sections where houses run two or three to a block, or where there is a long haul from delivery station to route territory, automobiles are gradually coming into use.



Milk companies are noted for their splendid horses. Some of these horses weigh a ton. The larger city distributors exhibit at all the horse shows that include work-horse classes.

It is the usual practice to pay the driver a small sum to start, say $15 to $20 a week, and expect him to make any more by commission on sales and bonuses on percentage of increase. A good salesman may reach $40 or $50 a week; and a foreman (who is responsible for five or six routes and must know every detail intimately on all of them, so that he can substitute any time for any man off ill) may get $60. Perhaps this may sound like a bonanza, but from what I have seen the milk drivers earn all they get. Most of them live in tiny homes on narrow side streets which country people would call alleys. If they have a choice of an automobile or a better house, "a car to go places" is usually preferred.

There have been many arguments for daylight delivery of milk and some places in winter time only one delivery a day is made. Advocates of the present two-delivery-a-day system claim that the housewife wants her supplies fresh every morning in time for breakfast when cream and milk are most used for cereal and coffee. Then on the second trip she can get another supply if desired.

It is claimed that the housewife has not been trained to buy ahead, and that in the poorer homes there is no money to pay for ice to keep milk over night. Also at night traffic is lighter and the horse can safely move along the street following the driver almost without direction. However, with an increasing number of joyriders peace has vanished from early morning hours. The milk driver's job is now classed as "hazardous". There are a pathetic number of cases where men and horses have been seriously injured or killed from being run into by automobiles.

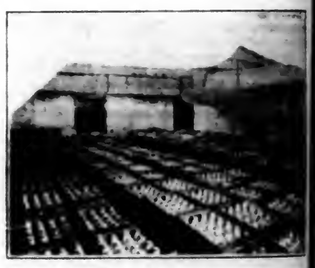
In most companies two trips a day are made except Thursdays and Sundays. The first trip is the regular delivery. The driver may have 15 different articles in various sizes of packages. Accurate record is kept of his load and also number of bottles—and he must return all products or show record of sale. By six or seven o'clock he has served 400 customers perhaps, and stops for breakfast. His horse gets a nosebag and in winter a blanket, while he goes into a restaurant. I always expected that some of these untied horses would run away until I learned that with heavy loads and many miles of travel after a few weeks the trickiest horse was only too glad to rest when he had a chance.

Now, besides the route is covered anew in hopes of further sales. On Monday the weekly collections are made. On each day he collects from those passed the day before. Driven on these days to finish their work perhaps at three p. m., perhaps not until dark. Wednesday, Friday and Saturday they are supposed to call on new customers, going off duty somewhat earlier.

It is a task driver's job to watch his collections and not let unpaid accounts accumulate. Some well-to-do families get to be notoriously poor pay. If he presses too hard for his money every week they may take their large order to a rival firm. Yet as the driver's pay is on a percentage of collections his income suffers considerably by the delay. Some drivers on routes covering wealthy homes find that while business is good in winter, summer bills stand unpaid until the family returns in September, and they must manage accordingly. In poor sections payment is insisted on regularly and sometimes daily.

There is a decided difference in milk consumption according to district. Wealthy families use little milk for drinking but use a large percentage of cream. Colored families use bottled milk only when they have the money. In hard times they buy canned milk, stating that a can of evaporated or condensed milk will last half a week for coffee. The use most milk over the week ends when they have money on hand, and some thrifty ones pay for a week's order ahead to insure they will have milk for the children regardless of what may come.

Italians use very little milk, seemingly to prefer other beverages. The older generations have not been trained to drink milk or to cook with it, but the second generation Italian girl uses a quantity amount as soon as she gets into her own home or away from her mother's control. continued on page 21



Bottles of milk and other dairy products stored in a refrigerator room of a city milk plant ready to be loaded on the wagons. With the various kinds of milk and cream and butter, in different sizes of packages, the drivers often have 25 items on the "load sheet". In summer crushed ice is distributed over the cases before going on the wagon.



Whether there has been fire, earthquake, or flood, milk delivery is continued as long as the supply lasts, regardless of the difficulties. The picture at the right shows a man delivering milk during the Vermont floods.

The Farm Home

Pin Money Contest Ends

Francis and His Burro

VERY slowly we rode across an iron bridge spanning a creek whispering through the foothills of southern Ohio. Then we called. Melons, boys, a friendly dog, and two, a long-eared burro always stop us.

We found the burro to be a native of old Mexico, sent direct from there sixteen years ago, the dog a pal; the boys, Francis Ellison and brother, and the melons reasonably priced and ripe.

This particular "Burro and Boy" couple, Francis Ellison, is as real a business manager as is the wore presiding over the largest corporation in the world. He tells us that one of the routes over the farm raised sugar corn, cantaloupes, beans, potatoes and cabbage, watermelons and tomatoes, and he gets supplies from him.

"I use the donkey," says Francis, "to peddle the things around town or sell them along the road, making about a dollar and a half a day." He distinguishes between work he himself can ably do and work that can be better done for him by those more experienced—capital idea in organizing the handling of his work.

Francis goes on, "I have been very lucky and never had any wrecks or been gypped but I left a boy to watch the melons one day and some one beat him out of a five-cent cantaloupe." Francis himself, gets the money before he lets his products, or his buyers, go, apparently. He has his eye on the public for his own welfare—real supervising and caring for business.

This is what he told about another interest. "I asked my father if I might farm an eight-acre field. He told me I could. I hired a colored man to break the ground and plant six acres in corn and two acres in soy beans. The corn is almost ready to cut and father says it will make 65 bushels to the acre. I have cut and put away about half of the soy beans. I hired two boys of my age to help me put the soy beans up." So, early in the afternoon is fourteen)—here is a busy country lad dedicated to highest ideals—doing a worthwhile thing well and with the cleverest dispatch and the least outlay possible.

No, Francis doesn't work always. He finishes by saying, "My brothers and I have a world of fun with Jesse—the burro." Gertrude Shockey.



Francis, Eager for Jesse's Face to Show When the Picture Is Taken, Leaves His Younger Brother in Charge of a Cantaloupe Deal

• • •

I Have a Start

"CREEP before you walk" is very good advice to follow in money making schemes I believe; especially so if one has but little to invest. We live on a state highway twenty miles from a city and have numerous small summer homes about us. We keep about two hundred White Leghorn hens and are getting a start with bees.

My husband painted a sign—large black letters on a white ground—which can easily be read from each way. Our driveway and walk lead to the dining-room door. Just inside the door where the light is especially good, I placed a neat cupboard, the inside of which I painted pure white. Here I arranged rows of perfect combs and extracted honey in glass jars holding a quart, a pint and a half pint respectively. We have tasteful cartons in which to place the comb honey. All were neatly labeled and bore our name and address. The honey was very attractive against this white background. When a customer came asking for honey I immediately opened this cupboard and the neat display appealed to more than one but enough so the women "They liked to have their order filled from the stock right before them.

Many of the summer people used our honey during their vacations and when going home bought more. We kept shipping cases in which two dozen individual cartons of comb honey could be carried in perfect condition. We also put up the extracted honey in five-pound pails. Many persons remarked about the attractiveness of the honey and the neat way in which we wrapped it.

I procured some cartons holding one dozen eggs. Upon a small table beside the honey-cupboard I kept a basket of fresh clean white eggs. "If a nice hen's look" was the usual comment. And many who came for honey also took eggs.

The first of July I began culling my hens and each Saturday dressed a few of them. By mentioning the fact that I had them dressed I usually sold them on honey and egg customers. What I did not sell on Saturday we ate on Sunday or canned on Monday. For eggs I charged two cents above the local prices. The fowls were picked and drawn and "jumped" at one dollar each for the smaller ones and one dollar and a quarter for the large. On all honey retailed we made fifty per cent more over the wholesale price.

These are some points which I find make for success:

1 An honest pack. You have to deliver the goods to keep your customers.

2 An attractive package with orders filled right before their eyes.

3 A label giving name and address of the retailer. (Best of all I gave a preference to the purchaser and often leads to other orders.

4 A neat package. Cartons wherever possible. Neat paper bags. Fresh twine. Personal labels. These cost little and add to the appearance of the product.

5 Good service. Everything needed right at hand—including plenty of small change. G. S.

• • •

Cold Milk

OUR house is blessed with a large front porch which we have had screened. We have placed there some comfortable furniture and it is alluring. Guests may choose the swing, or couch, or some comfortable chair. The floor is attractive in its cheery grass mat. Small tables hold the milk, fruit and sandwiches we serve.

We are fortunate in living on a much traveled highway and are but two miles from a very wealthy summer home colony. This brings autoists and horse-back riders to our door, hot and thirsty.

Never do we serve anything elaborate, just fruit in season, and if sandwiches do not fit in with the day's tasks, a plate of raisin bread with fresh butter and jelly always brings calls for more. With very little work, a neat sum is netted yearly, and I find the few moments of contact with these folks very restful indeed. H. B. H.



Summer Tourists Enjoy the Cold Country Milk. They Relish a Good Home-Made Sandwich and a Bit of Fresh Fruit

The Bread and Butter Problem

By HEPSY NEFF

SPEAKING of problems is merely putting a new face on old facts. When Eden's gate was shut and Adam was on the outside he had shouldered the problem of making a living. Even the Pygmies of the Amazon jungles under a tropical sky know something of the problem of getting something to eat though little of getting something to wear. But a sight of their dwarfed bodies and shrunken minds would cure any of us of all desire to shirk hard problems.

Because farm problems are both in the air and on the air just now is a favorable time to get information. Neither the bank, the factory nor the farm can afford to close doors and windows to the outside world. The question of making and keeping a sizable income that will come in with any degree of steadiness goes far beyond the farm. Always it is the margin that can be saved that marks growth, and that means holding down the outgo. Just why this question of the outgo of the family income depends so much on women may forever be a mystery but the fact is generally accepted.

But for all of us who must stay at home there is hope. Magazines on homemaking and the care and training of children multiply and many of them are very helpful. A few home magazines carry suggestions and advice which can be met only by a five or ten thousand dollar income. Just here our farm training in meeting actual conditions becomes valuable. We learn what is most important; what comes first and what can wait. The farmer never knows the despair of the wage earner because on the farm there is always something which can be done. Here are more facts which even the farmer must ponder.

"During the last five years, while every index of production and prosperity has risen employment totals have been gradually dropping.... The factories of the United States employed 880,000 fewer workers in 1928 than they did in 1923 and a continued decrease is predicted for 1929. While production increases the total number of workers decreases. That is the story of the last five years and is likely to continue for some years to come."

With the combine harvester in use farm folks need not be told that the old rule of "more machines, fewer men" still holds. Is the remedy fewer machines for mere mechanical drudgery or more drudgery for more men and women? Has mankind climbed to higher levels by the help of machines and more time to read and think or have we made our gains on the basis of long and longer days of toil?

If the facts recited above are dependable or even probable they must be reckoned with. It is said of all primitive peoples that saving money for the needs of tomorrow or next week or next year is one of the last things they learn. We know that our children need patient training in the wise use of money and to save it for definite ends. Plainly, there are men and women who were not taught these lessons in childhood. The school of experience is a hard school but it is never too late if a real determination to learn exists.

TIGHT BINDING TEXT CUT OFF

CHERRY HILL CHICKS

S. C. W. Leghorns—Wyckoff Strain . $9.00
S. C. Everlay Brown Leghorns . 9.00
Barred Rocks and R. I. Reds . 10.00
Heavy Mixed . 9.00
Light Mixed . 7.00

Le less per chick in 500 lots, 1c less in 1000 lots. For less than 100 chicks add 2c per chick. 100% live arrival guaranteed. Parcel post prepaid. Bank reference. Order direct from this ads or write for free circular.

CHERRY HILL POULTRY FARM
Wm. Naco, Prop., Box P, McAlisterville, Pa.

GREEN FOREST HUSKY CHICKS

English and Tancred Strain

Ship C O D. 25 50 100
S. C. White Leghorns . $2.50 $4.25 $8.00
S. C. Barred Plymouth Rocks . 2.75 3.25 6.00
Mixed Chicks . 2.25 3.75 7.00

We guarantee 100% strong chicks on arrival.
GREEN FOREST POULTRY FARM,
J. W. Amig & Son, Star Route, Richfield, Pa.

BABY CHICKS

50 100 500 1,000
White Leghorns . $4.50 $8.00 $37.50 $70.00
B. Rocks . 5.50 10.00 47.50 90.00
S. C. R. I. Reds . 5.50 10.00 47.50 90.00
Buff Orpingtons . 6.50 12.00 57.50 110.00
White Rocks . 6.50 12.00 57.50 110.00
Heavy Mix . 4.50 8.00 37.50 70.00

100% live delivery guaranteed. Send 20% with order, balance C. O. D.
MONROE HATCHERY, Box 10, Richfield, Pa.

Baby Chicks

From Free Range Selected Flocks

June and July. 25 50 100 500 1,000
White Leghorns . $2.50 $4.50 $8.00 $37.50 $75
B. Rocks & Reds . 2.75 5.00 10.00 47.50 90
Light Mixed . 2.25 4.00 7.00 34.00 65
Heavy Mixed . 2.50 4.50 8.00 38.00 75

100% Prepaid Safe Delivery Guaranteed
Fair View Poultry Farm, B. S. Millerstown, Pa.

ULSH'S Superior CHICKS

50 100 500
White Wyand.... $6.50 $12.00 $57.50
Wh. & Brd. Rocks 5.50 10.00 47.50
Heavy Mixed . 5.00 9.00 42.50

100% live delivery guaranteed. Postage paid
JAS. E. ULSH, Beaver Springs, Pa.

STOP! LOOK! and take notice to the special low prices on Cockamus husky chicks for June Delivery.

25 50 100
Tancred strain White Leghorns.... $2.50 $4.50 $8.00
Everlay Strain Brown Leghorns.... 2.50 4.50 8.00
Barred Rocks and S. C. Reds.... 2.50 4.50 10.00
Light mixed . 2.25 3.50 6.00
Heavy mixed . 2.50 4.50 8.00

100% live delivery guaranteed, parcel post prepaid. Special prices on 500 and 1000 lots. Free circular.
COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

PENN'A CHICKS FOR JUNE

Have vim and vigor—hatched by men with 18 years experience. Prepaid and 100 per cent live delivery guaranteed. S. C. White and Brown Leghorns, 9c each; Rocks, 10c; Reds and Minorcas, 12c. Heavy mixed, 9c; Light breeds, 8c; $70.00 per 1,000. Circular free.
THE PENN'A HATCHERY, Liverpool, Pa.

Quality Chicks at Low Prices

PRICES FOR JUNE AND LATER

Variety 100 500 1,000
United Strain Leghorns.... $7.50 $35.00 $70.00
Barron or Wyckoff Leghorns.... 8.00 37.50 75.00
Special Leghorn Wyckoff only.... 9.00 42.50 85.00
Barred Rocks . 9.00 42.50 85.00
Mixed Chicks . 7.00 34.00 65.00

L. E. STRAWSER, McAlisterville, Pa.

CHICKS

Pure bred, Blood tested free range breeders. Leghorns, Anconas, 8c; Rocks, Reds, 10c; Wyandottes, Orpingtons, Minorcas, 11c; Black Giants, 16c. 100% live delivery. Valuable Chick Manual Free.
SEIDELTON FARMS, Washingtonville, Pa.

CHIX

PEDIGREE STRAIN WHITE LEGHORN CHICKS

Our breeders are large birds; long, deep, rectangular bodies. Selected for size, type and egg production.
$8.00, per 100; $37.50, 500; $70, 1,000
JUNIATA POULTRY FARM, Box P, Richfield, Pa.

Chicks 7c Up

Long's Large Type Barron Strain

S. C. W. Leghorns, 2 yr. old breeders, $10.00 per 100
S. C. W. Leghorns, 1 yr. old breeders, 8.00 per 100
Barred Rocks . 10.00 per 100
Assorted . $7.00 and 9.00 per 100

Prepaid live arrival and satisfaction guar'd. Catalog
TURKEY RIDGE HATCHERY, Millerstown, Pa.

Klines' Barred Rocks

Healthy stock. Penna. State Col. mates. Strong chicks guar. Prompt del. C.O.D. $10.00,-100; $90.00,-1,000. Write or wire.
S. W. KLINE, Box 20, Middlecreek, Pa.

WYCKOFF STRAIN WHITE LEGHORNS CHIX

$8.00 per 100 $37.50, 500 $70.00, 1,000
100% prepaid safe delivery guaranteed.
J. W. Mace Poultry Farm, Box A, Richfield, Pa.

Chicks, Barron Eng. Wh. Leghorns 8c

White Leghorns 7½c; Barred Rocks 10c; heavy mixed 8c; light 7c. Reduced on large orders. 100% guaranteed. Send for Circular Free. July and August delivery.
TWIN HATCHERY, McAlisterville, Pa.

BARRON and WYCKOFF STRAIN

S. C. White Leghorn chicks for June, 9 cents each; $80.00 per 1000. Prepaid and safe delivery guaranteed for 19th year. Circular free. $1 books order.
THE PENN'A HATCHERY, Liverpool, Pa.

Baby Chicks

from free range flocks. S. C. White Leghorns, 8c; Barred Rocks, 10c; Heavy Mixed, 9c; Light Mixed, 8c. 100% live arrival guaranteed. Circular free.
PENN'S CREEK HATCHERY, R. 1, Selinsgrove, Pa.

Two Nice New Dish Towels

Clip this printed slip, fill it out as you think, and send it to us before June 12. If you have something else on your mind that might help make the Home Department more useful, write that on a separate sheet of paper, and send it along. Don't be afraid of hurting any one's feelings. Truth often hurts—but it helps in the end.

1. How much of the Farm Home Pages do you read each week?

2. What part of this Home section do you like best? And why?

3. Do you find the advertisements helpful? In what way?

4. If you were managing this section of the paper, what would you have more of?

.....

5. What would you omit altogether?

6. Is there any special thing you would like to see in print in July?

.....

Name .....

Address .....

For the most helpful ideas submitted we will send a set of two very attractive hemmed dish towels marked with artistic designs for embroidery. Mail your ideas today before you forget it to Home Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Everlasting Flowers

ALL wives who are the proud possessors of a small portion of a garden desire a few everlasting flowers for interior embellishment. Such flowers if stored in a dust-proof box will offer a source of supply for an entire winter.

A few annual everlasting flowers are Helichrysum (common straw flower), Acrolinium (rose everlasting), Statice (Limonium suworowi) and (L. sinuatum), Gomphrena (globe amaranth), Ammobium (winged everlasting) and Xeranthemum (Immortelle).

Biennials and perennials worth while are Sea Lavender (hardy statice), Babies Breath (Gypsophila), Honesty (Lunaria) and Chinese Lantern (Physalis).

The process of preparation is simple. The flowers should be cut before they are fully open. This reduces the blackening of the petals in the process of drying. In all cases the flowers are hung upside down, excepting Chinese Lantern, to dry in a shed. Honesty requires special treatment. As the plant begins to die the outside covering of the disk-like pods is removed leaving a silvery disk. The entire plant is pulled and hung upside down. Chinese Lantern sprays as soon as the husks are brilliantly colored, are cut and hung upright by the top so that the "lanterns" will hang in a normal position.

Choose varieties of gladiolus bulbs (corms) so that a succession of bloom may be enjoyed. The various varieties of gladiolus have a definite number of days of growth before flowering. The number of days vary from about 68 to over 120 days. Prince of Wales requires about 74 days and Peace 120 days. It can readily be seen that the rule "Plant every two weeks until July 15" would hold only with material that requires about 74 days in which to bloom in localities where frost is expected September 1.

For exhibition spikes, plant gladiolus bulbs in a single row six inches deep and six inches apart. Tall growing varieties must be staked individually.

For ordinary cut flower purposes the bulbs may be planted in three rows in a trench dug the width of a spade. The bulbs are not more than an inch or two apart. Plants this close have a tendency to support each other.

Do not use fresh manure in the trench for growing gladiolus. Use a good potato fertilizer. This may be scattered in the trench at the same rate or quantity as used on potatoes. The gladiolus enjoys a large quantity of superphosphate. Do not plant the bulbs directly on the fertilizer. Mix the fertilizer with the soil at the bottom of the trench before planting.

E. I. Wilde

When Children Visit Us

WE find it a good plan to keep certain sort, inexpensive toys in a convenient cupboard ready for little guests. These include games from our childhood, dolls and a few toys that can be drawn about the house.

For quiet or entertainment we have balls (both home-made and rubber) and a well-worn croquet set. It means very little trouble on our part and we are more than repaid by the pleasure so apparently derived. Maybe that is why youngsters beg to stay here when their folks say it is time to go.

This would seem to me a superfluous suggestion if I had not found homes where not a plaything could be unearthed.

Vida M. Bates.

Attractive Style



No. 2817. Smart Flared Side. Designed for sizes 16, 18 years, 35, 38, 40 and 42 inches bust measure. Size 36 requires 2⅝ yards of 39-inch material with ⅝ yard of 27-inch contrasting.

No. 535. French Undies. Designed for sizes 16, 18, 20 years, 36, 38, 40 and 42 inches bust measure. Size 36 requires 1⅞ yards of 35-inch material.

No. 552.—Popular Cotton Print. Designed for sizes 16, 18, 20 years, 36, 38, 40 and 42 inches bust measure. Size 36 requires 3½ yards of 36 or 40-inch material with ⅝ yard of 36-inch contrasting.

How to Order

Write your name and address clearly. State number and size of each pattern. Price 15c each, two for 25c. Our Fashion Magazine will help in preparing your wardrobe. Copy alone 15c; with a pattern only 10c. Address Pattern Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

St. Louis Man Invents New Washing Machine

A simple new kind of washing machine has just been invented. It has no motor or moving parts, yet it is just as efficient as machines costing $100. This new machine simply sets in any ordinary boiler or tub, automatically cleans and sterilizes as any fine washing in about 20 minutes. No rubbing or strong soap or lye is required. It has been tested and approved by leading engineers. This new machine costs no more than a pair of shoes. THE PERFECTION MANUFACTURING COMPANY, DEPT. 37, ST. LOUIS, MO., are offering to send one of these new washing machines on free trial to one person in each locality. They also want agents and spare time workers. Write them at once for free booklet and complete details.

BABY CHICKS

100% arrival 25 50 100 500
White Leghorns 12.75 $3.25 $ 6.00 $27.50
Barred Rocks . 3.25 6.25 12.00 57.50
R. I. Reds . 3.25 6.25 12.00 57.50
Heavy mixed . 2.75 5.25 10.00 47.50
Light mixed . 2.50 4.75 9.00 42.50
Pekin Ducklings . 4.50 8.50 16.00 75.00
Mixed Ducklings . 4.50 8.50 16.00 75.00

JOHN SHADEL HATCHERY,
R. 2, Box 9, McAlisterville, Pa.

Baby Chicks

From heavy laying strains of B. Rocks and Reds, $8.00. W. and B. Leghorns, $7.50. Mixed, $7.50 prepaid.
Member I. B. C. A.
Sunnyside Hatchery, Liverpool, Pa.

HERBSTER'S QUALITY CHICKS

Summer Prices
Can ship C. O. D.
B. Rocks & Reds, $10 per 100
Heavy Mixed, 8.00 per 100
Herbster's Poultry Farm, Bx.171, McClure, Pa.

Bigger Chicks

Hatched from two-ounce eggs or better.

50 100 500
White Leghorns $3.50 $10.00 $47.50
Wh. & Bd. Rocks . 6.50 12.00 57.50
S. C. Reds . 6.50 12.00 57.50
Jersey Black Giants 9.50 18.00
Mixed . 5.50 10.00 47.50

COVALLEN POULTRY FARM,
F. W. Metzebargh, Dunmore, Pa.

BARRON

From Large Type Barron Strain Tancred Strain Wh. Leghorns. Heavy mixed 8c; Light mixed 7c. Rocks, Reds, Minorcas, Anconas, 9c. Extra quality chicks from free range breeders. Circular free. 100% live arrival guaranteed. Catalog free.
ROBERT L. CLAUSER, Box R, Kutztown, Pa.

TAKE NOTICE

25 50 100 500
S. C. White Leghorns . $2.50 $4.50 $8.00 $37.50
Barred Rocks . 3.00 5.50 10.00 47.50
Rhode Island Reds . 3.00 5.50 10.00 47.50
Assorted Yard Weaklings . 3.50 6.50 12.00
Light Mixed . 4.00 7.00 12.00
Heavy Mixed . 4.50 8.00 14.00

From carefully selected free range flocks. Special Prepaid. Write for illustrated circular.
THE RICHFIELD HATCHERY, Box 2, Richfield, Pa.

Penn'a State CHICKS

Flocks inspected by officials of Penn'a Dept. of Agri. S. C. White Leghorns, Brown Leghorns, Rocks, Reds and S. C. Black Minorcas. 9c up. Circular free. Members I. B. C. A.
THE KEYSTONE HATCHERY,
(The Old Reliable Plant) Box 82, Selinsgrove, Pa.

STRICKLER'S SUPER-QUALITY CHICKS

High Egg Production Bred, Healthy, Large size Tancred Harron English S. C. White Leghorns 274-314 egg line matings. No lights used; chicks are extra hardy and vigorous. These quality plus chicks shipped parcel post prepaid 100% live delivery guaranteed any week in June at $8 per 100; $38 per 500; $75 per 1000. White Rocks, Barred Rocks, $10 per 100. Ship C. O. D. Catalog free.
LEONARD F. STRICKLER, Box F, Shrewsbury, Pa.

Valley View Chicks

Tancred Strain Wh. Leghorns, $7.50 per 100
S. C. W. Leghorns . 7.00
B. Rocks & R. I. Reds . 8.00
Heavy Mixed, $5.00; Light Mixed . 4.00
500 lots 5c less; 1,000 lots 1c less. Prepaid. 100% live delivery guaranteed. Circular free.
VALLEY VIEW POULTRY FARM,
R. J. Ehrenseller, R. 2, Myerstown, Pa.

ZELLER'S EXTRA QUALITY CHICKS

from Large Type S. C. White Leghorns. Tancred, crossbreds. Rocks, Reds. 100; 500; 1000 lots. Heavy Mixed, Light Mixed. Hy Rocks and Reds.
EDGAR A. ZELLER, Newton Manor, Pa.
2010 Manada St.

WHITE LEGHORNS . $7.00 per 100
Brown Leghorns . 7.00 "
Tancred . 10.00 "
Rocks . 10.00 "
Mixed Chicks, $6.00 & $8.00 per 100. Prepaid. Circular free.
ECLIPSE HATCHERY, Port Trevorton, Pa.

The Easy Way to Kill Lice on Poultry



Paint the Roosts

No matter how big the flock or how lousy, only a small paint brush, a can of "Black Leaf 40" and a few minutes time for "painting" it on top of the roosts are required to rid an entire flock of body-lice. Do away with old laborious and disagreeable methods of dusting, dipping and greasing!

Just Paint the Roosts with "Black Leaf 40"

About a half hour before fowls perch, "paint" "Black Leaf 40" on top of roosts. When fowls perch upon roosts that have been so "painted", fumes are slowly released that permeate the feathers, killing the lice. The treatment is so easy, effective and cheap that poultry owners need never be bothered by lice on their flocks. Think of the time, labor and expense that this method saves! There is no individual handling of fowls. "Black Leaf 40" is sold by poultry supply stores. $1.25 size treats 100 lest of roost. Ask your dealer or write us.

Tobacco By-Products & Chemical Corp. Incorporated, Louisville, Ky.

"Black Leaf 40"
WORKS WHILE CHICKENS ROOST

CHIX from large breeders

SUMMER PRICES 50 100 1,000
Tancred Strain W. Leg.... $4.50 $8.00 $70
Everlay Brown Leg.... 4.50 8.00 70
Hansen's Barred Rocks 5.50 10.00 90
Penn'a R. I. Reds 5.50 10.00 90
Heavy Mixed 4.50 8.00 70
Light Mixed 4.00 7.00 60

Prices are subject to change without notice. Order from this ad or write for free circular.
JUNIATA POULTRY FARM
CHIX Box P, Richfield, Pa.

Hatchery Chicks

FOR GREATER PROFITS

12,000 CHICKS WEEKLY FOR JUNE

Barred Rocks and R. I. Reds . $5.50 $10
White Wyandottes . 6.00 11
Anconas and Minorcas . 6.50 12

100% live arrival guaranteed. All breeders culled for health and egg production. Circular free. ORDER NOW.
L. B. WALCK HATCHERIES,
Dept. 6 Greensburg, Pa.

BABY CHICKS C.O.D.

Send no money. Just mail your order. We ship C. O. D. and guarantee live delivery of chicks. From pure-bred, inspected and culled flocks.

Prices on 25 50 100
S. C. Wh. and Br. Leghorns $1.90 $3.50 $ 6.50
Bf. Rocks and R. I. Reds 3.50 6.50 12.00
Wh. Rocks and Wh. Wyandottes 4.00 7.50 14.00
Broiler Chicks . 2.50 4.50 8.00

Bellefonte Poultry Farm, Box 906, Bellefonte, Pa.

BABY CHICKS

25 50 100 500
Wh., Bf., Br. and Dk. Leghorns..$2.25 $4.50 $10 $40
Rocks, Reds and Wyandottes.... 3.50 7.00 13 64
Heavy Breeders . 3.25 6.50 12 59
Light Breeders . 2.25 4.50 8 38

Pekin Ducklings 4 weeks old, 50c each. Prepaid. 10 years in business. Hogan tested flocks. Postage paid. 100% delivery.
JOHNSON'S HATCHERY, ICKESBURG, PENN'A

Baby Chicks

from High Egg Laying Flocks

11 years reliability. Satisfied Customers our specialty. Prices Reasonable. Write for catalog and price list.
BUCYRUS HATCHERY CO., Box 413, Bucyrus, Ohio

BABY CHICKS

FROM HEAVY LAYING FREE RANGE FLOCKS

25 50 100 500 1,000
S.C.W. & Br. Leg. $2.50 $4.50 $8.00 $37.50 $70
S.C. Rocks & Reds 3.00 5.50 10.00 47.50 90
S.C. Buff Orpingtons 3.00 5.50 10.00 47.50 90
Wh. Wyandottes 3.00 5.50 10.00 47.50 90
Assorted Chicks 2.25 4.00 7.00 32.50 60

100% prepaid safe delivery guaranteed. Order from this ad or write for circular.
J. H. MACE POULTRY FARM Richfield, Pa. Box 3.

BABY CHICKS

Tancred Str. Wh. Leghorns, $8 per 100
Barred Rocks . 10 per 100
S. C. Reds . 10 per 100
Heavy Mixed . 9 per 100
Light Mixed . 8 per 100

500 lots ½c less—1,000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for free circular.
C. F. LEISTER, McAlisterville, Pa.

BEST QUALITY CHICKS

Prices on C. O. D. 25 50 100
Tancred Strain White Leghorns..$2.50 $4.50 $ 8.00
S. C. Brown Leghorns . 2.50 4.50 8.00
S. C. Barred Rocks . 3.00 5.50 10.00
Light Mix $7.00. Heavy Mix $8.00 per 100.

100% arrival. Postpaid. Special prices on large lots.
Chester Valley Hatchery, R. 2, McAlisterville, Pa.

Neighbor Poultrymen

By H. C. KNANDEL

THE magnificent Niagara Falls was the next stop. Here the night was spent. Early the next morning we left the good old United States for Canada. At St. Catharines Professor W. R. Graham, head of the Poultry Department at the Ontario Agricultural College, and Professor Frances of the same institution met us. They escorted us about for two days.



The first stop was made at George Robertson's farm. Last year six tons of asparagus and 40 tons of cherries were sold from this farm. Chickens, mostly Barred Plymouth Rocks, are an important source of income. Throughout Canada we were soon to learn that size of eggs and many of them are of topmost consideration. Only males from hens which laid 28-ounce eggs to the dozen were used in the breeding pens. The reason for the stress laid on size of egg can be better understood when one realizes that last year in Canada extras—eggs weighing 24 ounces or more per dozen—brought a good price, while grades under this were broken and sold as frozen eggs.

Ten Men in Research

Several hatcheries were visited during the remaining part of the day and then we went to Guelph, the home of the Ontario Agricultural College. That night the entire force of the Poultry Department, numbering a dozen, explained in detail the experimental work under way. With a corps of trained men, all specialists in their respective fields, much good work is being done by this institution. In the Poultry Department is to be found an embryologist, a bio-chemist, a veterinarian, a bacteriologist, a geneticist and under these are graduate students. Ten men are employed in the research work in poultry at this institution, probably this is one of the strongest research departments in poultry on the North American continent.

The following day a trip was made to the turkey farm owned by the Dominion government and operated by the Poultry Department. On this farm the four principal varieties of turkeys may be found; namely, White Holland, Bronze, Narragansett and Bourbon Red.

Hon. John S. Martin's farm at Port Dover, Canada, was next visited. This gentleman has made his way to the position of Minister of Agriculture for the Province of Ontario through the White Wyandotte fowl.

On a Fox Farm

Another stop was made at a different kind of stock farm—a fox ranch. Ninety-three pairs of silver foxes were raised on wire, since intestinal parasites are the chief scourge in the fox-raising business. Each man buys a pair of foxes. These cost $750. He then pays $100 to have them cared for throughout the year. In the fall, if he is fortunate, he has a pair to sell to some other breeder from whom he receives $750, and so the endless chain goes on. The only rub is to whom will the last fellow sell his pair?

The last stop was made at a small place and yet one of the most interesting. This man could find only one hen that was good enough to mate with one rooster. This hen—a Barred Plymouth Rock—laid 28-ounce eggs and many of them. She came from a hen which was a good hatcher and her chicks lived. From this one hen this farmer last year set 55 eggs. He hatched 55 chicks and he raised 55 birds to maturity. A dozen of these pullets were entered in an egg-laying contest and to date are in first place.

20TH CENTURY "MARVEL" CHICKS

from Special Mating Imported Barron White Leghorns

This Superb Mating consists of 250 Yearling hens imported from TOM BARRON of England. The hens weigh not less than 4½ pounds and up to 6 pounds, and produce better than 250 eggs per year per hen.

Big Healthy Chicks from the World's Best Strains

11 matings. Matings sired by pedigreed Males from the World's finest Trapnested Egg Strains. Dams of these producers, 250 to 300 eggs. Tests Barronette, Richel, Shepherd, Dustin, Page and others of similar known breeding. 1 Guarantee Satisfaction and save you personal service. 100% Live Delivery Guaranteed. Ref.: Commercial Bank, Bus or Bradstreet.

Prices Effective June 17 Through July and August.

50 100 500 1000
S. C. White, Brown, Buff and Black Leghorns, Ancona . $4.50 $ 8.50 $40 00 $ 78.00
S. C. White Rocks, S. and R. C. Reds, Black Minorcas . 5.50 10.50 50.00 98.00
White Wyandottes, Buff Orpingtons, Buff Minorcas . 6.50 12.50 60.00 115.00
Imported Barron Leghorns, White Minorcas, Park's Rocks . 7.00 13.00 62.50 118.00

Heavy Mixed, $9 per 100; Light Mixed, $7 per 100. W. P. Ducklings, 22c each.

Ship C. O. D. if desired—pay postage on delivery. FREE, Illustrated Catalog, tells all about our big size Winter Laying Chicks and profits you can make with them. Send for your copy.

20th CENTURY HATCHERY Box Y NEW WASHINGTON, OHIO

NABOB JUST-RITE Baby Chicks

GREAT WINTER LAYERS

OFFICIAL TRAPNEST PEDIGREED U. S. O. P. Male Exhibition Quality Matings in the world's finest Tancred or Barron strains. Great Winter Layers, from High Record blood lines. R. O. P. matings in S. C. White Leghorns, also Barron and Tancred strains; Pompton, Owen, Schaub and R. I. Reds; B. P. Thompson and Hitchman's Barred Rocks; Martin and Fishel White Wyandottes; Fishel White Rocks; Sheppard's Anconas. 40 Other popular and rare breeds including Ducklings; Guineas, Baby Turkeys. Member International C. C. A. and American B. C. C. A. Postage paid. 100% Live Delivery Guaranteed.

25 50 100 500 1000
S. C. White, Buff, Brown, Black and R. C. Brown Leghorns . $3.00 $ 5.50 $10 $47.50 $ 95
Barred and White Rocks, R. I. Reds, S. C. Anconas . 3.75 6.50 12 56.50 110
S. C. Buff Minorcas, Wh. and Sil. Wyandottes, Buff Orpingtons, R. I. Whites . 4.00 7.00 13 63.50 126
S. C. Blue Andalusians and Buff Minorcas, White Silk Langshans . 5.00 9.00 15 72.50 145
Silver Spangled Hamburgs, Partridge Rocks, Blue Andalusians, Buff Rocks . 5.00 8.50 15 69.00 135
Light Brahmas, Buff Black Giants, White Faced Black Spanish . 5.25 9.50 18 85.00 170
Mixed Assorted $8.00 per 100. Heavy Assorted $9.00 per 100. All other breeds reasonably priced.

FREE Beautifully elaborate Color-plate Catalog. 56 pages, 70 illustrations. Stamps appreciated. Don't fail to get this big book and direct your money this season in the famous Nabob 18K strains, the most profitable investment you can make in the poultry field this year. References: PEOPLES BANK, Leesburg, Ohio, and BLAIRSTOWN.

NABOB POULTRY FARMS, Dept. 52, GAMBIER, OHIO



NATIONAL "SUPERBRED" CHICKS

100,000 Chicks for Delivery in June

50 100 500 1,000
S. C. White, Brown, Buff Leghorns . $0.75 $11.00 $52.50 $100.00
Barred & White Rocks, Reds . 0.75 13.00 62.50 120.00
Light Mixed, 40.00 per 100. Heavy Mixed, $10.00 per 100. Also White Wyandottes, Black and White Minorcas, Ancona and Blue Andalusians. Send for our Catalog and price list. We guarantee 100% live delivery. Member International Baby Chick Association.

NATIONAL CHICK FARMS, Box 404, MIFFLINTOWN, PENNA.



CLIMB ABOARD OUR CHICK SPECIAL!

BATTLEFACTORY CHICKS

25 50 100 500 1000
S. C. Wh., Br., Bf. and Bl. Leghorns, Shepperd's Anconas $4.00 $7.50 $13 $60 $115
Barr., Wh. and Bf. Rocks, Bf. Orp. Reds, Bl. Minorcas..... 4.50 8.00 14 70 135
Barred, Wh. Wyandottes, Wh. Minorcas, Park's Rocks . 4.75 8.50 16 75 145
Ex. Qual. Wh. Wyd., Reds, Buf. Wyckoff Wh. Leg., Wh. Min. 5.00 9.50 18 85 160
Heavy Mixed 50, $4.50; 100, $8; 500, $37.50; 1,000, $65. Light Mixed 50, $4; 100, $7; 500, $32.50; 1,000, $60. Black Giants 100, $20. Wh. Pekin Ducklings 25c each. 100% Live Delivery Guaranteed. Bank Reference. Ship C. O. D.

The NEW WASHINGTON HATCHERY CO. Postpaid to Canada. Member I. B. C. A.
BOX D. NEW WASHINGTON, OHIO

FREE BEAUTIFUL 4 COLOR CATALOG

WOLF SELECTED CHICKS

CHICKS C.O.D. Send only $1.00 and pay Postman the balance.

Special pen mated and extra high bred chicks at slightly higher prices. Shipped made any time you wish.

50 100 500 1000
S. C. Wh. Br., Bf. Leghorns, Anconas $2.75 $5.00 $ 9.00 $26.00 $42.50 $ 82
Bf. & Wh. Rocks, S.C. & R.C. R. I. Reds . 3.50 6.50 11.50 33.00 55.00 105
Bf. Minorcas . 3.50 6.50 11.50 33.00 55.00 105
White Wyandottes, Buff Orpingtons . 4.00 7.50 14.00 40.00 70.00 135
Barred Black Giants . 4.50 8.50 15.00 43.50 72.00 140
Assorted Heavy Mixed Chicks . 3.25 5.00 8.50 28.00 46.00 90
Assorted Light Breeds Mixed Chicks . 2.50 4.00 6.00 23.00 38.00 75

WOLF HATCHING & BREEDING COMPANY, Box 43, Gibsonburg, Ohio

IMMEDIATE DELIVERY

FOR LARGER GAINS BUY EARLE CHICKS

Get our facts and prices on the best quality stock offered at lowest prices. For better laying, better paying, buy our guaranteed stock, trap-nested Hollywoods, and eight different breeds of the most popular strains. Write to-day. Every inquiry answered personally. Start to-day with chicks that pay.

Richland Poultry Farm & Hatchery, Earl F. Layser, Prop., P.O. Box I, Richland, Pa.

Pride o' Niagara CHICKS

1200 Breeders Trapnested on our own Breeding Farm. Foundation stock mated to R. O. P. Pedigree Males. 1,000 satisfied customers. Every Chick a credit to its name. Leghorns, Reds, Rocks, Wyandottes, Orpingtons, Anconas, Minorcas, Black Giants, Pekin Ducklings. WE GIVE FULL SATISFACTION ON EVERY ORDER. Get our catalog.

NIAGARA POULTRY FARM
Box 25 Ransomville, N. Y.

HILL SIDE CHICKS

Will Ship C. O. D.

Special Wyckoff Strain . $ 9.00 per 100
Special Tancred Strain . 8.00 per 100
S. C. W. Leghorns . 7.50 per 100
Barred Rocks . 9.00 per 100
Owens Strain Reds . 9.00 per 100
Light Mix . 7.00 per 100
Heavy Mix . 8.00 per 100

100% live delivery. Special prices on large lots. Less than a hundred, add one cent a chick.

T. J. EHRENZELLER, Prop.
United Phone Box 14, McAlisterville, Pa.

Reduced Chick Prices

In effect June to October. 25 50 100 500 1,000
Large Type Wh. Leghorns, 8c . $2.50 $5.00 $10 $47.50 $90
Bd. & Wh. Rocks, Reds . 3.00 6.00 12 57.50 110
Wyandottes, Orpingtons . 3.25 6.50 13 62.50 120

Light Assorted, 9c. Heavy Assorted 10c.
Live Delivery Guaranteed. Catalog Free.
Lantz Hatchery, Tiffin, Ohio

BARRED ROCK CHICKS

A Big modern Breeding Farm and Hatchery devoted exclusively to the production of BARRED PLYMOUTH ROCKS

MARVEL POULTRY FARM, GEORGETOWN, DEL.

BABY CHICKS

From Free Range Selected Flocks

25 50 100
S. C. White Leghorns....$2.50 $4.50 $ 8.00
Barred Plymouth Rocks.... 3.00 5.50 10.00
Send no money; just mail your order. We ship C.O.D. and guarantee live delivery of chicks.

RINGOVILLE POULTRY FARM, Box 306, Ringoville, Pa.

BABY CHICKS

JUST GOOD CHICKS

Barred and White Rocks, R. I. Reds, $11.00 per 100
Leghorn and heavy mixed . 9.00 per 100
$1.00 per 100 deposit, balance C. O. D. Member IBCA.

SUSQUEHANNA HATCHERY
R. Ray Miller, Prop. Millersburg, Pa.

WHITE WYANDOTTES

Chicks, Eggs, 2-4-6 weeks old and older. Special price cockerels and pullets. Hit Type, Heavy Layers. A. P. A. Certified. Large Catalogue.

Shirman Bowden, Box 195B, Mansfield, O.

PUREBRED BARRED ROCK CHICKS

$10.00 per 100, $90 per 1,000. Heavy mixed, $8.00 per 100. Prompt service. 100% live delivery guaranteed.

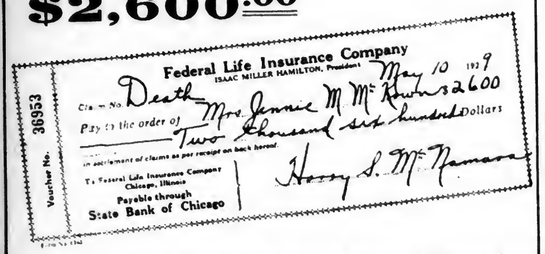
CHAS. F. EWING, R. 1, McClure, Pa.

Chicks from Blood-Tested Stock

Pennsylvania Supervised Flocks.
Shipped C. O. D. Free Circular.
Sunnybrook Poultry Farm, New Berlin, Pa.

TIGHT BINDING TEXT CUT OFF

Another Insurance Claim Paid
$2,600.00



Automobile Accident Fatal

The above is a reproduction of a check for $2,600.00 that was paid to the widow of Wylie McKown, Leechburg, Pa., who was instantly killed when a small truck in which he and three other men were returning from work, overturned as the driver attempted to pass another car. The accident occurred near Casa Grande, Arizona, where he and his wife were spending the winter.

Over $20,000.00 Paid
To Pennsylvania Farmer Readers

In the three years Pennsylvania Farmer has been offering its subscribers this insurance protection over $20,000 has been paid to policy holders. Any and all members of a reader's family between the ages of 10 and 70 years may secure on of these policies upon the payment of $2.00 per each policy.

Here Is What It Is Worth

$10,000.00 For loss of life by wrecking of railroad passenger car or steamship. $25.00 per week for 13 weeks for total disability.

$3,000.00 For loss of life by wrecking of St. Car, Omnibus, Taxicab, Automobile Stage or Passenger Elevator. $15.00 per week for 13 weeks for total disability.

$500.00 For loss of life while riding as a fare-paying passenger in an Airplane, Aquaplane, or Dirigible Airship. $5.00 per week for 13 weeks for total disability.

$2,000.00 For loss of life by wrecking or being accidently thrown from any horse-drawn or motor-driven car or motorcycle or while using or operating Farm Wagons and other farm machinery which are motor-driven or horse-drawn. $10.00 per week for 13 weeks for total disability.

$1000.00 for loss of life by being struck or knocked down while on public highway or by being struck by lightning, cyclone, tornado; collapse of outer walls of a building, or by the burning of any church, theatre, school, or municipal building. $7.00 per week for 13 weeks for total disability.

There Is Need For This Protection

One out of every 11 deaths is caused by accidents—over 30,000 people are killed or injured every day—over 7,000 passengers are killed every year in railroad accidents; 57 automobile accidents occur every hour. Over 25,000 persons were killed and over 700,000 injured in highway and street accidents throughout the nation in 1927. No one is immune. Fill out the application blank below and mail today with $2.00. Tomorrow may be too late.

Notice Not more than one policy can be issued to any one person, but any or all members of a reader's family may each secure one.

Application

Print each name and address clearly and carefully. Illegible names will delay the delivery of your policy.

for $10,000.00 Farmers' Special Accident Insurance Policy issued to readers of PENNSYLVANIA FARMER

PENNSYLVANIA FARMER
Insurance Department, Pittsburgh, Pa.

I am a reader of PENNSYLVANIA FARMER, more than 10 years of age and less than 70 years, not deaf or blind or crippled to the extent that I cannot travel safely in public places, and hereby apply for a $10,000.00 Farmers' Special Automobile, Travel and Pedestrian Accident Policy in the Federal Life Insurance Company issued through PENNSYLVANIA FARMER. Enclosed is $2.00 (two dollars).

Full name ..... Age.....
Print plainly and carefully
Postoffice ..... State.....
R. F. D. .....Occupation .....
Postoffice .....State..... Relationship of Beneficiary .....
Full name of beneficiary .....

Orchard Windfalls

By. S. W. FLETCHER

THIS is the open season for pessimism. At this time of the year the fruit grower needs to draw on his reserve stock of optimism. Is there to be a crop, or is there not? That's the question. There can be no assurance on this point until after the June drop. In the meantime he watches



the unfertilized blossoms turn yellow and fall, perhaps in distressing numbers. The high pressure spray blows them off the trees like chaff. The number of tat, lusty fruits remaining seems all too few, and they must still run the gauntlet of the June drop. Most growers habitually underestimate crop prospects at this time of the year—the fruits do not show up well among the foliage.

That there has been a very heavy drop in some places, however, cannot be doubted. The Cumberland-Shenandoah region, in general, and the Martinsburg, W. Va., district in particular, report a very disappointing set of Stayman and Delicious. In the College orchard, what looked like a ninety per cent crop ten days ago now is cut to around fifty per cent; ice formed on five nights during the blooming season. Complaints about the poor set of Stayman and Delicious come from many quarters.

Strange as it may seem, in some cases unsprayed trees suffered less injury from frost than sprayed trees. Probably this is because the frost made the epidermis of the young fruits, especially the stems, more susceptible to injury by spray material. However, no one would omit spraying for this reason; scab-control, especially during a wet, protracted blooming season like this, is a far more important factor. There is much scab in some orchards, especially those in which Spray Service directions were not closely followed, so that there is bound to be a considerable loss later from that source. Altogether it does not look like a "bumper crop"—but it may yet prove to be a profitable crop.

Ben Davis

I am being chaffed for my kind words about Ben Davis in a recent issue of Pennsylvania Farmer. I have no apologies to offer. Ben has been a money maker for me—why should I turn my back on an old friend? Not that I recommend anybody else to plant Ben Davis—that is far too much responsibility for any man to assume. Nor that I will plant any more Bens myself; if we are to keep Pennsylvania markets for Pennsylvania apples we must grow varieties of high quality. Nevertheless, I am glad that there was a fair proportion of Ben Davis, in bearing, in both of my orchards, when I bought them. Being a Professor of Horticulture, I never would dare to fly in the face of an outraged public sentiment and plant Ben Davis; but being in dire need of money, I am mighty glad I have some already planted. There is consistency for you!

Bees for Orchards

Those fruit growers who have grave doubts about their ability to establish cordial relations with bees, and who would prefer to rent them from beemen for use during the blossoming season, should secure Extension Bulletin 56, of the Michigan State College, East Lansing, Michigan, "Renting or Keeping Bees for Use in the Orchard."

De-shooting Peaches

The experimental work of Professor Fagan, and the experience of many growers throughout the state, have clearly shown the value of debudding yearling apples when planted. The Maryland Experiment Station, applying the same principles to peaches, now issues a bulletin reporting successful results with "de-shooting."

The difference in practice is due to the fact that in the peach the new shoots on newly-planted yearling trees may come from most anywhere, while in the apple they come only from the definitely localized buds. It is necessary, therefore, to let the peach tree feather out, and then remove all the shoots except the three to five that are left for scaffold limbs. These need not be spaced as far apart as in the apple, and should be selected to build an open center tree.

The advantage is not only a stronger tree-shaped tree but also a gain in size, it will not be necessary to cut off large limbs next winter, hence growth will not be checked. De-shooting should be done before June 1. Some prefer to punch back the shoots that are not wanted, instead of removing them, but this involves more work throughout the summer.

Summer Trip

The summer meeting and trip of the State Horticultural Association will occur July 16, 17, 18 and 19. On Monday afternoon, July 15, those who come from the southeastern counties will have an opportunity to inspect the experimental work with fruits at State College, but the first appointment of the trip will be at North East, Erie county, at 6 p. m., the following day probably with a beach party.

Wednesday the group will inspect the orchards and vineyards of Erie county, meeting at North Girard in the afternoon for a discussion program. The night will be spent at Ashtabula, Ohio (bathing beach four miles away).

On Thursday the party will visit several prominent Ohio orchards, and possibly inspect the extensive orchard experiments of the Ohio Experiment Station, Wooster.

On Friday several orchards in eastern Ohio and in the Pittsburgh district will be visited. The trip will close about three o'clock so as to allow most of the party to get home that night. The Erie County Horticultural Society and the Ohio State Horticultural Society are cooperating.

• • •

WANTED.—151 more members of the State Horticultural Association. The paid-up membership on May 23 was 735 annual members and 114 life members, a total of 849. The goal set for this year is 1,000. In the vote of the Association, any member (except secretaries of county societies) who sends in five or more new members will be remitted the annual dues for 1930. After June 1 new members are credited with dues for 1930, as well as for the remainder of 1929, and receive the proceedings for both years.

Whitewashed Trees

Please let me know if whitewashing trees is all right when they are in full bloom. Mahlon Wolf

IF you mean whitewashing only the trunk and scaffold limbs, this may be done at any time. It has some value in promoting a healthy growth, but not nearly as much as is commonly supposed. It has comparatively little value for the control of insect pests and diseases. Trees that are sprayed regularly need no whitewashing.

If you mean spraying the entire tree with whitewash, this could be done when the tree is in full bloom without much danger of injuring the blossoms, but it is much better to wait until the pollination season has passed. Such a spray has value for the control of certain fungous diseases, but is not as effective as the standard lime-sulphur spray. S. W. F.



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quick new energy



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Remember—if you're to get the Wake-Up Food you need—ask your grocer for Post Toasties. You'll know it by its red and yellow wax-wrapped package.

POST TOASTIES

The wake-up food

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Post Food Products

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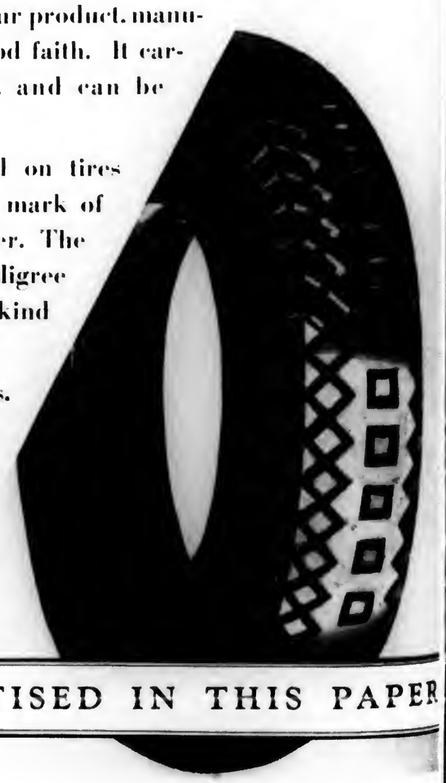
ANCESTRY
MEANS A LOT TO LIVESTOCK —AND TIRES

SAVE time, money and temper by driving on good tires. Remember, the tire is the foundation of your car or truck. Everything depends on it.

What is the ancestry of the tires you buy? A tire is made of rubber and cotton—but what kind of rubber, and what kind of cotton? How are they processed and put together? What manufacturer places his trade mark there, saying: "This is our product, manufactured in good faith. It carries our name, and can be depended on."

You can depend on tires that carry the trade mark of a reliable manufacturer. The trade mark is the pedigree that stands for the right kind of ancestry.

No need to take chances. Tires that are advertised in these columns must be good or you would not find them offered here.



Why worry along with poor tires? It's more economical to buy advertised tires. That's the way to pack up tire troubles and forget them.

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Woman's work..

Woman's work is never done—certainly not if she lives on a farm! From early till late she cooks, cleans, and mends. In her "spare time" she is expected to take care of the chickens and the garden. Rarely has she even a few precious moments of leisure. ¶ And if she sweeps and washes by main strength she is wearing herself out for three cents an hour! ¶ For that slight cost, electricity will run a vacuum cleaner, a washing machine, or a refrigerator or fan. For a little more it will operate electric cooking and heating devices. ¶ Save her time and strength with electric servants which bear the G-E monogram, your assurance of economy and good service. ¶ If you are located on or near an electric power line, ask your power company for complete information concerning the possible uses of electricity on your farm.

Tune in on the General Electric Special Weekly Farm Program on WJZ Schenectady, KOA Denver, KGO Oakland. In addition, every Saturday evening at 9 P.M. Eastern Daylight-saving Time the "General Electric Hour" is broadcast over a nation-wide chain.



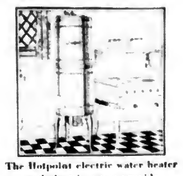
The G-E refrigerator is entirely automatic and makes it safe to be hungry



You set the throttle and this Super-Automatic Hotpoint Iron maintains any desired temperature



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GENERAL ELECTRIC

98-611

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C. G. ROHRER, *Sibley, Illinois,* *Manager of Burr Oaks Farms, writes:* "I have used Goodyear tires for fifteen years. They are the best for heavy duty, driving through rough pasture, stubble fields, and in all kinds of weather. For last five years I have insisted on Goodyears as original equipment and for all replacements. I purchased Double Eagle Goodyears for the business car used practically every day of the year in superintending 13,000 acres of Illinois farm land."

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—combining OUTSTANDING quality and LOW price, and backed by the greatest name in rubber!

Pathfinder tires are now well and favorably known to a great army of American motorists.

Millions of Pathfinders have been built by Goodyear, and they have served satisfactorily and well.

Now Goodyear offers a *new* Pathfinder tire—a *vastly improved* Pathfinder—embodying all the experience gained in making the earlier Pathfinders.

It is literally a great step ahead in tire-making, because it successfully combines *outstanding* quality at surprisingly *low* cost.

You will notice first what a big husky tire this new Pathfinder is—big and handsome and rugged.

Its wide and heavy tread is designed for slow and even wear, and it delivers exceptional traction.

Beneath that stout tread is a tough and sinewy carcass made of genuine Supertwist cord, with its matchless vitality and resistance to fatigue.

Big, strong, good-looking, dependable—*high* in value and *low* in price—this new Pathfinder is a genuine Goodyear product through and through.

CORD **PATHFINDER** CORD

The MARKET PLACE

By W. R. WHITACRE

THE farmer who ships a load of produce to a commission man and then hears that another dealer has received more money for his neighbor's product generally believes that the dealer is at fault. If this happens a number of times he is likely to look around for another man to sell his stuff.

There are times when it pays to change commission men, but it is difficult to make sure that the change is for the best. It is human nature for a man to believe that his produce is the best on the market, but it is more probable that it is not. When a grower fails to get top quotations it is just as likely that his goods are not of highest quality as it is that the merchant has failed to make a good sale. A change of dealers in this case will bring no lasting benefit.

Some commission men go through the country soliciting shipments with promises of high prices. They claim to make but a very low charge for handling and state that their excellent trade enables them to obtain prices above the regular market. Some say that they can do much more for you than the man that has been regularly handling your crops. Some of these men may represent good firms, but promises of high prices and low handling charges are to be regarded with suspicion and the firm should be well investigated before a shipment is risked.

Advantages

There is an advantage for the grower who finds a reliable merchant and sticks to him over a period of years. The buyers get to know his produce and know where to look for it and if it is good the dealer will build up a trade for it. The returns will average higher than if dealers were changed a number of times during the season. The dealer who has his shippers' confidence will keep them informed of market conditions and ways in which they can better their pack.

I believe there are times when it pays to change dealers, but as a rule it is because a wise choice was not made in the beginning. Commission men due to their location in the city and to their class of trade generally have specialities. Some can do well on small lots but fall down when they have a large quantity of produce to move and vice versa. Some do well on fruits but not so well with vegetables.

At times the sales force or management of a firm changes and things do not move so well, again the dealer may move his store to a new location and lose part of his customers. Sometimes financial difficulties arise but whenever possible it is best when considering a change to go to the dealer and talk things over and determine where the trouble lies. It may be on the farm or it may be something that can be adjusted. If after this it appears that it is wise to make a change every precaution should be taken in order that it may be a change for the best.

Change Corporate Name

THE J. I. Case Threshing Machine Company, Inc., of Racine, Wisconsin, has just announced a change in its corporate name. Henceforth, the organization will be officially known as the J. I. Case Co., Inc. There will be no change made in the personnel or established policies of the institution.

Recently the company acquired all outstanding rights to the use of the names "Case" and "J. I. Case" on plows, harrows and certain other farm tools, and now has the exclusive right to the use of the names "J. I. Case" and "Case" on all farm machinery and implements. Now there is only one Case organization, that is the J. I. Case Co., Inc., of Racine, Wisconsin—formerly called the J. I. Case Threshing Machine Company.

McCORMICK-DEERING Cultivators



have many features that save time, money and energy

THE McCormick-Deering Two-Row Cultivator has a foot-operated gang control that makes for close, accurate cultivation. You can dodge plants in crooked rows with remarkable speed and with minimum effort. Eighteen acres is an average day's work with this perfected cultivator.

The New 4 Pivot Axle Cultivator is an Ideal single-row implement for all row crops. Its ease of handling, adaptability, and the clean work it does have made it one of the most popular cultivators ever built. It has a vertical pivot axle and a gang-shifting system that makes it unusually easy to guide. To appreciate its ease of operation you must try it

The McCormick-Deering Leverless Balance Rider, the Victor Combined Riding and Walking Cultivators, the new, improved Model TF Disk Cultivator, and the Hammock Seat Cultivator—all offer you features that save time, money and energy. The line also includes Walking Cultivators, Lister Cultivators, and cultivators for work in beets. A big selection of shovels and gang equipment, fertilizer attachments for the New 4 and the Model TF, and other accessories.

Ask the McCormick-Deering dealer to show you the cultivator for your farm. Write for cultivator literature.

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Because, in a Frick Thresher mucrecled separation is obtained by a spiral beater which distributes the straw, in a thin film, evenly the full width of the separator, and prevents backbinding and wrapping of cylinder when operating at speeds recommended by us.

Frick Threshers are equipped with Gravity Cleaner, simple in construction, adjustable while machine is running, and gives less trouble than sieves.

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FREE Write for our Free Spraying Calendar and other detailed information.

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NEW CROP
Black Wilson Soy Beans *for Seeding*
Recleaned and bagged $2.50 per Bushel
LESTER MILLER, Westover, Md.

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THE HYDRAULIC PRESS MFG. CO.
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Walsh Garden Tractor and Power Mower
Plows, Seeds, Cultivates, Mows Lawns & Hay
For Gardeners, Florists, Fruitmen—Walk or Ride
SPECIAL FACTORY PRICE
Single & Twin Engine-Belt Jobs. Catalog Free
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CORONA WEEDKILLER kills Thistles, Morning Glories, all noxious weeds, by spraying the leaves. One quart prepaid, 60c. or C. O. D. Money-back guarantee.
BUCKEYE CHEMICAL CO., Holgate, Ohio

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THE YOUNG PEOPLE

Bellhanna Calf Club Results

TWO years ago W. L. Treager, county agent, Westmoreland county, Pennsylvania, assisted five boys and one girl in organizing a pure-bred Holstein calf club. They called themselves the Bellhanna 4-H Holstein Calf Club.

The club has had two round-ups and these young folks have now brought their heifers into production. While the heifers have not finished their first lactation period, they have gone far enough so that we are able to get some idea as to their productivity. Out of the six original heifers two freshened too young and as a result the owners have lost interest in carrying out the record-keeping phase of calf club work. The other four are making a very respectable showing in the milk pail. Two produced heifer calves, which



The First Group at Oak Ford Park, Two Years Ago.

were kept by their owners. The other two had bull calves which were sold at $50 and $40 respectively, at about four weeks of age.

The brothers, Leslie and James Hamilton, have their heifers entered in the local cow-testing association and their total production is as follows:

No.	Date Freshened	Lbs. Fat	Lbs. Milk	Return Above Feed Cost
1	Nov. 11, 1928	229.9	5,405	$114.12
2	Nov. 26, 1928	153.3	4,072	76.54

No. 1 is owned by Leslie Hamilton and No. 2 by James Hamilton.

Charles Lyons is another member of the club. He got his start in the cow business by raising a very small calf to a fairly good cow. She made him want to own a pure-bred, and when he found out that this calf club was being organized he sold his grade cow to buy a pure-bred calf. There was some difference in the price, but Charles quickly earned the balance by acting as driver when the township put on the T. B. test. He is satisfied with his trade, for in three months his heifer has produced 3,350 pounds of milk and 115.9 pounds of butterfat.

Last year Charles was a strong contender for the dairy cattle judging team which represented Pennsylvania dairy club members at the National Dairy Show. He was one of the high ten contestants in the State Judging Contest.

Arthur McKee's heifer produced very abundantly during the fact she was severely wounded early after she freshened. However, this shows that she has the best qualification of a good producer, in that she is a good feeder. The first month after she recovered she produced 900 pounds of milk and 36.4 pounds of butterfat.



The Bellhanna Club All Set to Go.



Bellhanna Calf Club Round-Up, Just After the Calves Had Been Placed.

The Youthful Cook

Ginger Ale Fruit Salad

[illegible]
2½ cups ginger ale

Dissolve gelatin in boiling ginger ale and cool. When it begins to set add one apple cut in slices, one pear cut in quarters and one-fourth cup blanched almonds, whole or shredded. Serve on lettuce with this dressing:

½ cup lemon juice ½ cup sugar
¼ cup orange juice ½ cup cream
¼ cup pineapple juice whipped.
2 eggs beaten

Heat fruit juices in double boiler. Beat sugar into egg, add hot liquid and return to double boiler to cook until mixture thickens. When ready to serve cold fold in whipped cream.

Butterfly Salad

Cut pineapple slices in half. Place back to back to form wings. One date makes the body, three portions. One teaspoon of mayonnaise spread between wings forms balance of body. Stuffed olives cut in four pieces to make spots on wings (4 spots). Two pieces of red beet or two strips of red peppers to make the feelers. Place on lettuce leaf.

Large can of pineapple contains 8 slices. Very economical salad as well as attractive.

A Sad Tale

ONE evening father came in from the field with his pocket looking fat and bulgy. "Put in your hand," he said, "and you can have what's there."

Something squirmed in the pocket and I pulled out a darling, soft, little rabbit! It had great, big frightened eyes and long floppy ears. It trembled all over; it was so scared.

"Oh, poor little thing," said my mother.

We put him in a box and gave him a saucer of warm milk and named him Bunnikins. But he would not drink, he just huddled himself into a corner of the box and trembled. I was afraid he would die.

"Leave him alone," father said, "he'll eat when you go away."

The next morning all the milk was gone and Bunnikins seemed happier. From then on he grew tamer and tamer. We became good friends, and played together lots. I kept his box in the back yard. There was a fence around the yard, so Bunnikins could get out of the cage to play. And I shut him inside the cage at nights.

But one morning when I went to [illegible] the cage [illegible] I began to cry. A great big rabbit had come in the night and carried off Bunnikins whole. But the snake forgot that if Bunnikins couldn't get out of the cage, neither could he after he had swallowed the poor little rabbit. So he had to stay in the cage and look cold as cross and dangerous.

Father killed him. The next day he put his bed, the cage, and the snake where we buried all our pets. I don't like to bury the snake there but we had to, because Bunnikins was inside. And I don't think I'd ever want a pet rabbit again. It would make me sad.

McKean Co., Pa. Alice Brooks.

ANSWERS TO LAST WEEK'S BEHEADINGS

Solid, cold, cad.
Chest, hest, he.
Coast, oast, ast.
Branch, ranch, anch.
Sledge, ledge, edge.
Plate, late, ate.
Quill, uill, ill.
Drill, rill, ill.
Place, lace, ace.
Chest, hest, est.

WE WANT YOUR PRIZE PICTURE

NOW that school is over and vacation here, you will want to have your camera some bright day and snap some pictures. Perhaps you already have one you think would win a prize and if so enter it in our **Camera Contest.** You may choose your own subject—people, scenery, animals, mountains—any thing that will be an unusual picture.

Book prizes will be given to the ten best pictures received. Your name and address should be written on the back. We will not return pictures unless stamp is enclosed. The contest is open until June 30th and all of our Young People readers may enter the contest and submit one or more pictures.

Address Camera Contest, Young People's Editor, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa. Next week's paper will announce the prize winners in our recent contest. I know you will be anxious to see who wins.

Young People's Editor.

Little Folks Corner

A Legend of the Goldenrod

ONCE there were a great many weeds in a field. They were very ugly-looking weeds, and they didn't seem to be the least bit of use in the world. The cows would not eat them, the children would not pick them, and even the bugs did not seem to like them very well.

"I don't see what we're here for," said one of the weeds. "We are not any good."

"No good at all," growled a dozen little weeds, "only to catch dust."

"Well, if that's what we're here for," cried a very tall weed, "then I say let's catch dust! I suppose somebody's got to do it. We can't all be blueberries or blossom into hollyhocks."

"But it isn't pleasant work at all," whined a tiny bit of a weed.

"No whining allowed in this field," laughed a funny little fat weed, with a lump in his stalk. "We're all going to catch dust; so let's see which one can catch the most. What do you say to a race?"

The little fat weed spoke in such a jolly voice that the weeds all cheered up at once, and before long they were as busy as bees and as happy as [illegible]. They worked so well stretching their stalks and spreading out their fingers that before the summer was half over they were able to take every bit of dust that flew up from the road. In the field beyond, where the clover grew and the cows fed, there was not any to be seen.

One morning, toward the end of summer, the weeds were surprised to see a number of people standing by the fence looking at them. Pretty soon some children came and gazed at them. Then the weeds noticed that people driving by called each other's attention to them. They were much amused at this, but they were still more surprised when one day some children climbed the fence and commenced to pick them.

"See," cried a little girl, "how all the dust has been changed to gold!"

The weeds looked at each other, and sure enough, they were all covered with gold-dust.

"A fairy has done it," they whispered one to the other.

But the fairies were there on the spot and declared they had nothing to do with it.

"You did it yourselves," cried the queen of the fairies. "You were busy in your work, and a cheerful spirit always changes dust into gold. Did you know it?"

"You're not weeds any more, you're flowers," sang the fairies.

"Goldenrod, goldenrod!" shouted the children. Frances J. Delmo

WHO CAN HE BE?

He uses a pen
Every day of his life.
And yet he can't write.
And no more can his wife.
Too, like the lily, he never
Will labor or toil.
And oft, like the lily,
He roots in the soil.

AD CONTEST WINNERS

Luella Hollenbaugh, Pauline Sherry, Marion Hornberger, of Pennsylvania; Martin, Ohio; Cecil Morris and Ada Schell, West Virginia.

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1—Harry Lane, [illegible] of the Ivy Hall Club, Chicago, has a very peculiar hobby and is thusly named as "The Pigeon King"—for the past few years as part of his daily routine he has never failed to feed the birds at least a pound of grain. Our photo shows Mr. Lane with some of his friendly pets.

2—London.—Photo shows an unusual stunt of a British soldier in a baby tank jumping a gap—one of the obstacles for the Tank Steeplechase event in the forthcoming Royal Tournament at Olympia, where rehearsals are taking place. Almost looks as if this chap from the 3rd Battalion Royal Tank Corps can [illegible].

3—A graphic illustration showing the Navy's smallest and what will be the largest dirigible. Left to right, the Pony Blimp; the RS-1, the Los Angeles, and the great ZRS-4, which with the sister ship ZRS-5 is now under construction and will be completed in a year. Note how much larger the new ship will be—even in comparison with the great Los Angeles.

4—Washington, D. C.—Photo shows an unusual view of the National Capitol here, made by reflective photographer.

5—Peking, China. Photo shows Anchita Galli-[illegible], world famous soprano, photographed at one of the curious statues within the Forbidden City here.

6—America's First "Windmill" Plane. The Cierva Autogiro, powered by a nine-cylinder Wright Whirlwind motor, in which Harold F. Pitcairn broke the world's solo "windmill" plane flight record, by flying from Pitcairn Field, Bryn Athyn, to Washington, D. C. The plane shown above, the original invention of the Spaniard, Juan de la Cierva, is the first one built in the United States.

TIGHT BINDING TEXT CUT OFF

The Timber Treasure

By FRANK LILLIE POLLOCK

(Copyright, 1913, by Perry Mason Co. Originally published in the Youth's Companion.)

THE fresh northeast wind was covering the lake with whitecaps, but Fred drove through them, and passed the narrow channel that connected the two lakes. Waves slapped over the bow, and the canoe had six inches of water in her when he ran into the mouth of the river that he fished the day before.

The smoke was beginning to drift heavily along the shore. The fire was still a considerable distance inland, but Fred could hear the crash of falling trees.

He forced the canoe up the stream, till he was compelled to make a hundred yards' carry round a dangerous bit of rapid. Beyond that he advanced for perhaps half a mile, till the intense heat forced him to stop.

The vast clouds of smoke, sweeping overhead, filled all the woods in front of him, so that he saw scarcely a tongue of flame, although ashes and live sparks fell in showers. Burning masses of bark and branches blown high over the trees were spreading the fire with terrible rapidity. The dry top of a dead cedar suddenly burst into flame almost over his head.

With some desperate hope of saving at least a part of the pulp-wood tract, Fred leaped ashore, and began to cut at timber in order to clear space enough to serve as a fire-guard. The smoke choked him, and his eyes ran streams; but he cleared a considerable strip through the small spruces, and then was horrified to find that the fire was already burning briskly on the other side of it.

As Fred realized in despair, it would need fifty men to check it, for the strong wind carried burning masses so far and so high overhead that only a wide strip of clearing could stop them.

But he could not give up yet. He jumped into his canoe, and paddled down the river for a hundred yards or more to a marshy belt where he again tried to clear a space.

Fire rained all about him as he worked; twice he had to dash water on his smoldering clothes. A flaring tree crashed down just beyond him; the fire had passed him again.

A forest fire does not usually travel very fast, but the strong wind that day carried sparks so far over the treetops that an immense area flamed up almost simultaneously, and the fire spread every moment. Fred saw that the fight was hopeless. To save himself by getting back to the lake was what he had to think of now.

Down the river he paddled again, till he neared the rapid where he had portaged as he came up. The thickets were blazing on each side of the dangerous point. It was impossible to turn back; so he headed the canoe boldly into the broken water.

A SPLASH of spray rippled over the bow into his face. He caught a glimpse of a sharp, wet rock, and sheered away. Down a swift chute he shot with a velocity that put the canoe beyond control, and then the Peterboro crashed bows on into a jagged boulder.

The delicate wood crashed. Fred saved himself from capsizing by some miracle of instinctive balancing, and dug in the paddle desperately. How he got through he never could tell. He went at breathless speed through a fog of flying spray and smoke, roaring water and fire; and then he found himself flying down the tail of the rapid with the canoe half-full of water, and a great hole in her polished bow.

Crowding back into the stern as far as he could, in order to lift the leak out of the water, he guided the floundering craft down to the lake. The fire had spread enormously even since he had come up; he could see patches of burning timber almost everywhere he looked, and he realized with a sick heart that the forest was doomed.

On the shore of the lake the smoke had become blinding. He landed, hastily emptied the water from the leaky canoe, and was about to push off again, when a man plunged blindly out of the smoky thickets. It was the fish expert, scorched, blackened and bewildered.

"Thank goodness!" he exclaimed. "I thought I was cut off. Saw your partner going up the lake in his canoe, but couldn't make him hear."

"Where's your own boat?" Fred asked.

"She got loose as I was putting in my kit. She's blown half-way across the lake by this time. Let's get out of this. There are trees burning on the shore now."

"I don't know whether this canoe will carry us both. But get aboard."

The weight of the two men brought the leak well under water. Only by placing themselves close together at the stern were they able to elevate the bow sufficiently; that brought the rear end dangerously close to the water-level.

They found it almost impossible to paddle, for the least disturbance of their equilibrium brought a whitecap slopping inboard. Fred could do little more than keep the head of the canoe straight. However, the wind was behind them and they drifted before it in a direction that would bring them to the other side of the lake.

The surface of Big Coboconk was shrouded in whirling vapor, and when they were fifty yards out, neither shore was visible. The waves ran rough, and sparks, hot ashes and flaming pieces of bark fell upon them. From the veiled land came the roar of wind and fire, broken by the crash of falling trees.

At this point, the lake was less than three miles wide, and although the wind drove them diagonally, they soon came ashore. The air here was much clearer, and the naturalist went in search of his boat, which he presently discovered stranded and in a water-logged condition. The glass bottom was broken, and the provisions and supplies were saturated.

Here the two men were safe enough from the fire, which was burning down toward the lower lake, and which was not likely to come up on that side unless the wind changed greatly. Both camps were sure to be burned out, but Harrison had seen Bert with his canoe laden with the camp outfit paddling fast up the lake. No doubt Bert was searching for his companion; but the smoke lay so thick on the water that he might pass them several times without their seeing him.

Nevertheless, they looked out anxiously for him, for he had the only sound boat and the only undamaged supplies. During all the rest of that forenoon they sat at the end of a long rocky headland, and peered through the smoke clouds without, however, sighting any canoe.

Those were the most melancholy hours that Fred had ever spent in his life. The pulp-wood was gone, and no doubt the last remnant of his father's fortunes had gone up in smoke with it. He tried to believe that it might not have been his shoulders, after all, that had fighted the fire; but an overwhelming conviction possessed him that it was.

Physical discomfort was added to mental for he was wet to the skin and had had no breakfast. After some time, however, the two built a fire, dried themselves, and extemporized a meal from Harrison's wet provisions. Nothing did they see of Bert nor did he appear during the afternoon. So far as they could judge, the fire was then burning well down the shore of Little Cobocook, over a very wide area. It continued to make furious progress all the afternoon, but about four o'clock Fred was startled from his painful meditations by a prolonged, sullen reverberation that seemed to come from overhead.

"Was that thunder?" cried the ichthyologist.

"Can it be going to rain? It's too good to be true."

The sky above the smoke was invisible, but in fifteen minutes the rain came down in torrents, and the terrific thunderclaps fairly drowned the noise of the fire. The storm lasted for three-quarters of an hour, and then seemed to move westward, although the rain continued to fall in a steady drizzle.

Harrison and Fred put up a shelter of hemlock boughs, so laid as to shed water more or less, though the steady downfall found a dozen leaky spots. The rain had seemed to have very little effect on the forest fire, and the sky to the east was still in a fiery glow, but the glow grew fainter as the night passed. The fire was being beaten down, but as far as the pulp-wood was concerned, the rain had come too late.

Harrison slept soundly but Fred, tormented by his reflections, hardly closed his eyes till nearly dawn.

A few hours later he awoke, to find the rain over and the world a gray cloud of steam that reeked of wet, burnt wood. But presently something broke through the clouds, pale, trembling, but certainly a sunbeam. There was fine weather overhead.

Still Bert had not appeared. Fred decided to go down to their old camp to see whether his companion had not perhaps left some message or clue. As Harrison was anxious to visit his own camp, where he had abandoned most of his outfit, they set out together to walk round the lower lake.

The smoke and steam clouds now lifted a little, and revealed the appalling desolation on the other side of the lake. As far as they could see, there was nothing except ashes, tangles of half-burned, fallen timber, and rampick of standing skeleton trees. Yet the feet of Little Cobocook there was still fire alive, but in the dampened condition of the woods, it was not likely to go farther.

It was a long walk round to the camp; when they arrived they found the place white with ashes, and destitute of any human trace. Continuing up the eastern shore, they found the naturalist's camp also totally fire-swept. The hope of recovering more supplies was gone. It was more imperative than ever to find Bert.

They turned back. When they arrived at the narrows that connected the two lakes, the naturalist volunteered to cross and bring over the canoe. Leaky as it was, it would save them a long walk. The channel was not fifty yards wide, and Harrison took off his clothes, put them on his head, and waded over; he was obliged to swim only a few yards at the center.

At one time the two lakes had been one body, and the land about the narrows was low and sandy. It had formed part of the lake bottom not many years before. It had been covered with small evergreens, but the fire had swept it clean, and left nothing except sand, ashes and ancient logs half buried in the earth.

Fred sat down on one of the logs to wait. He was mortally weary in body and in mind, and utterly dejected. While he sat there, he considered the scattered logs and observed indifferently that the ends of all of them were sawed square across, as if they had been cut by lumbermen. On the end of one of them he noticed that the letters "D. W." had been roughly cut with an ax.

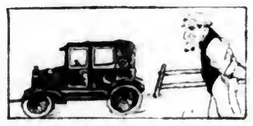
What did "D W" stand for? The name of Daniel Webster darted into his mind.

For a moment the name conveyed nothing to him—and then he remembered. It was the David Wilson Lumber Company that had cut and lost the black walnut raft.

He jumped up with a sudden thrill of excitement. There were many logs in sight, perhaps a hundred of them; some half-projected above the sand and were charred by the fire, some barely showed "D W" was cut on the ends of all of them.

(To be continued)

The Cheerful Plowman



THE POOR OLD WRECK

SEE that old wreck they're hauling in? It looks like seven kinds of sin, all rusted in its iron and tin. My, how it protests, wobbles, reels, will not admit how weak it feels in carburetor, gears and wheels.

If it could talk I'm sure 'twould say, "Why do you junk me thus, I pray? I'm getting better every day! I'm stronger than I ever was, I have more pep and fewer flaws, I keep the road and never pause. The brand new cars are not so quick, they cannot hope to do the trick; I am not old, I am not sick.

"Experience it is that counts, and that I've had in large amounts; you're foolish to give me the bounce. See, watch me spin, and whirl, and jump. If I am taken to the dump you'll be the loser. You're a chump. You'll go and give your honest cash for something without style and dash, a car that soon will go to smash. I long have served you well and fair, and you are giving me the air. How do you figure? Do you date?" If it could talk that's what 'twould say; it can't believe it's giving way nor see that it has run its day.

How like indeed are cars and men, as like, indeed, as ten and ten; that old wreck teaches that again. It's hard for us old chaps to see that we are wobbly in the knee, to hear the time and tide decree. We feel that we're the salt of earth, we feel we have a greater worth than any man of later birth. We feel we have the larger niche, the hillside of the steeper pitch, in life and effort tried and rich.

"How dare they put us on the shelf?" each one of us will ask himself. "They're risking progress, risking pelf." We protest long, and strong, and far; we tell how quick and fresh we are, yet we get junked. Good-bye, old car! J. E. T.

Like the Brindle Cat
W. McW. Returns

WELL Editor, the thrill you'll get finding this glowing letter on top of your mail pile this a.m. will equal if not more so the confusion of Lias Puls one early forenoon on the horse-and-buggy tree trade route.

You'll recall I'd that Lias had on his farm among other chattels a brindle female by birth, that, grown up and following the lines of least resistance, was found at frequent intervals in an old basket with never less than six young fur-bearing mongrels. Many's the time Lias had she dragging rats, mice, rabbits, toads and snakes onto the back porch for her brindle lord, then rushing to fit me the hash again.

Lias began to fill a deep hole in the stream with gunny sacks and rocks containing and holding down surplus brindle stock. Lias decided that Lillian the prolific cat must go so he—thinking and carrying out an original plan, he betook her to town and secretly spilt her amongst the old tin cans, warped stove lids and discarded pottery that in civic pride the population had dumped at the edge of town roadside.

Lillian's Long Journey

On his way to milk that evening Lias looking back beheld Lillian as usual following him. This called for an enlargement of plans to lose Lillian. Consequently and the following eve she was taken along to the county seat 18 miles distant and deftly dropped one block from the court house. Next morning at the rattle of the milk pails Lillian pounced from under the steps. A second cousin of the household (Lias' not the cats) came in from the sorry to visit and returned home with Lillian in a neat box. The next after a m. of confusion returned to the beginning of this letter happened on Sunday morning one month after the departure of Lillian and the cousin. Lias just in time to and unbuckled, opened the back door and believed his eyes, for there with tail skyward and full of lures was Lillian.

Editor whatever application is made of this story or whether the joke on is on you or me or still on Lias doesn't alter the fact that it could easily have been left out by saying "Well, I'd here I am back again."

Ready and Waiting

What I started to remark, Ed tor-in-Chief, is that your stand on farm relief propagander reminds me of nothing else so much as the behavior of the old boy in the bed-time story "counting star-gazing minister with a crooked noodle who set Thursday the 21st at 3 p. m. as the time the world would end. He preached and whooped about it until his flock got frothed up, quit making a living and devoted all time to preparing to be frisked out of earth's troubles into heavenly rest. But the old hog in question, after years of kept on cultivating corn like the even believe in the signs of the times.

Thursday the 21st the congregation was robed and waiting, excepting of course the old boy who in his stupid and bull-headed way still cultivated corn. Old man Hogg of the believers shed his red flannels and wriggled his rheumatic into a robe and stood on high ground with the wind blowing on the robe of his special ordering for Gabriel to blast a welcome sweet that would blow the world me.

But Gabriel never toot could it Fogg got peeved some others went hogging having no respect for the years long away and the old man stood cultivating corn long enough to raise a coarse, healthy crop of jungle.

Editor, there is nothing much in this stale story to interest that in about two years you will be nonplussed in horse laughter at the expense of the odious and mistaken brothers who have lasted and prided over the folly of your red heavies and shoved a knife fully into a robe to join the latter-day Letters.

Worthampton W. McWheelock



You'll welcome this amazingly

Slow-consuming OIL
for today's fast-stepping motors

IN THIS day of marvelously improved driving control, automobiles travel safely with far greater speed than formerly. No ordinary motor oil can begin to withstand the demands of modern high-speed motors and fast-driven cars.

If you value that fine piece of mechanism under the hood of your car, *don't gamble on the oil* you put into it. From behind sixty years of lubrication experience, The Atlantic Refining Company sees the importance of that warning more clearly, perhaps, than you do.

By intensive research laboratory work on internal combustion engines of all types and makes... by innumerable road tests of the most racking sort... Atlantic lubrication specialists have developed in ATLANTIC *Paraffine Base* MOTOR OIL the precise qualities automobile operation requires today.

ATLANTIC
MOTOR OIL

The smallest evaporation loss
The longest-lasting efficiency
The slowest consumption

TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

A FURTHER sharp drop in the lamb market took place this week. Lamb prices closed 75c to $1.25 below a week ago, yearlings were off as much, while the decline on spring lambs and on sheep amounted to 75c to $1. There was not much change in the feeder lamb market, but supply is light.

The marketing of lambs at leading points was under last week, but well ahead of the same week last year and two years ago. Average price of lambs here this week at $13.30 compared with $13.65 last week and $16.20 the same week last year.

Both Colorado fed lambs and California springers are falling off. Receipts of the former here this week were 11,000 against 23,000 last week, and of the latter 20,000 against 32,000 last week. But the southern lambs are beginning to show, the run being 4,500 this week against only 300 head last week. The supply of these lambs will increase from now on.

Top prices of aged wool lambs dropped here from $16.25 early in May to $14 at the end of the month, which compares with a top of $18.10 about the middle of April. Top shorn lambs declined from $15 to $12.75 during the month, comparing with a peak of $17.25 in May last year. A few springers sold up to $25 during the Greek holiday trade, but prices have dropped sharply and at the end of May best sold at $16. Farmers have been buying sparingly of lambs for feeding, and a range of $12.50 to $13.25 is taking good California feeders at this time. The lamb market has been hurt not only by liberal supplies, but also by weakness in wool.

Hogs Lower

In spite of some reduction in the supply, the hog market continues weak with the price trend lower. Eleven markets had 485,000 hogs this week, comparing with 538,000 last week, 584,000 the same week last year and 626,000 the same week two years ago, yet the market was off 30 to 40 cents for the week.

Average price of hogs for the week was $10.65, 15 cents lower than last week and lowest since the last of February. Prices, however, are still a dollar higher than a year ago.

For the year to date eleven markets have received 12,506,000 hogs, against 14,820,000 last year and 12,245,000 two years ago. Unless the first of the month reports on provision stocks show substantial decreases, there is no prospect of an improvement in prices. In fact, with the usual June run at hand it would not be surprising to see further price reductions.

During the month of May Chicago received 537,000 hogs, third smallest run for the month since 1914. Average weight of hogs for the month, at 240 lbs., was among the heaviest of all time for the month. It was nine pounds heavier than for the same month last year. Average price for the month, $10.95, was 70 cents above the February average and $1.80 above the January average, though below the March and April averages. In general, hogs paid a fair price for feed, as indicated by the fact that marketing ran to heavy weights.

Gain in Cattle

The cattle market started out in a rather slow fashion this week, but picked up later, and at the close was 25 cents higher on the bulk and 40 cents higher on the tops than a week ago. Receipts at 40,000 were about normal for the time of year, and beef trade was a little better on the whole. Best steers this week brought $13.10, that price being paid for 1,350-lb. cattle, while lighter cattle topped at $15, these prices comparing with $14.85 last week. Average price of steers this week at $13.75 was 15 cents up from last week and 40 cents higher than the same week last year.

The range country continues to be very optimistic in regard to cattle as indicated by asking prices for fall delivery. Calves are offered at around $50, yearlings $75 and two's $100 a head, with buyers reluctant to pay such prices. Farmers can hardly look for cheap feeding cattle this year unless there should be a radical change in the market.

Steer prices averaged $13.65 for May, highest for the month since 1919. Stockers and feeders averaged $12.15 for the month, highest since September last year, and aside from last year, highest for any previous month since May, 1919. The extreme scarcity of well-bred thin stock continues, and the country is forced to compete with killers for such stock as is taken out to feed.

Wheat Prospects Improve

The wheat market showed a net loss of five cents for the week, corn nearly as much, and oats about half as much. Reports of the week continued on the bear side. Both Canada and the spring wheat states had excellent rains during the week, and the wheat will now step right out and grow.

At local points in Montana Durum wheat is now bringing only about 60 cents, and with a good crop in prospect and a big carry over they are worrying about turning out wheat.

Even the financial interests of the country have begun to worry about wheat, the low prices of which have already had some effect in the stock market. The marketing of new wheat is less than a month away in southern territory, and from then on a liberal supply may be looked for. On the other hand, some are arguing that wheat seldom stays long below cost of production, and so hope that something may happen to cause action in the market.

Corn is in the ground and up nicely in north, central and western Illinois, and southern Iowa, but southeastern Iowa, southern and eastern Illinois and points east are late, with no little plowing and fitting still to be done.

Oats looks fine and an average hay crop is in prospect. Pastures good but understocked.

Telephone in School

A telephone has been installed in an Illinois rural school. It was installed for the benefit of the teacher and parents, and has been in use the entire school year. The teacher says it has proved a great help to the parents and their children. The parents could be in touch with the children at all times. The teacher and people of the district feel that they could not do without the telephone now.

Wool Sales

Iowa wool sales are reported at 32 to 35 cents, and Indiana sales at 27 to 38c cents. There is some disposition to hold for higher prices both in the Corn Belt and in range states where less wool than usual has moved.

WATSON.

Chicago, June 1, 1929.

WEEKLY WOOL MARKET REVIEW

Boston, May 31.—The volume of wool moved during the past week has increased quite materially over the volume of the previous week, says the U. S. Department of Agriculture. The bulk of the sales were on the finer grades above 56s, though on this quantity a fair demand was received and on the 48s, 50s a scattered demand. Prices were fully sustained on most grades. Some of the medium descriptions were slightly easier while in some instances of the market quotations on 56s, 58s, 60s were slightly firmer.

There would have been some fair business had Ohio delaine fleeces been offered, but there has been about no sales on price at 50@51c on the grease with a few scouring at 60@62c. A movement of these wools is looked for in June. A clean up of the 1928 wools is expected by the end of the month. Some 1929 wools have been sold in the Ohio valley at 47@50c per lb., scoured basis, and 1/2 blood at 47@50 per clean, scoured basis. Fine delaines are down to 45@47c.

Domestic Wool Quotations
Grease Basis, Ohio and Similar

64s, 70s, 80s, (fine) stretch combing	40@41c
64s, 70s, 80s, (fine) French combing	36@37c
64, 70s, 80s, (fine) clothing	35@36c
58s, 60s, (½ blood) strictly combing	44@45c
58s, 60s, (½-blood) French combing	42c
58s, 60s (½ blood) clothing	40@41c
56s (¾-blood) strictly combing	44@45c
56s (¾-blood) clothing	42@43c
48s, 50s, (¾-blood) strictly combing	43@44c
48s, 50s, (¾-blood) clothing	42@43c
46s, (low ¾-blood) strictly combing	41@42c
36s, 40s, 44s, (common and braid)	40c

LIVESTOCK

PITTSBURGH

Cattle

ABOUT 33 carloads were offered on Monday. The demand was right good and trade fairly active at steady to a little better prices. The quality of some of the cattle was better than last week, one load of choice 1,180-pound steers selling at $14.75. Good weighty steers sold around $14.25 and plainer ones or too heavy at $13.75@14. Good handy-weight steers brought $14.50, but only a few had sufficient finish to sell above $14.25. The majority of the fleshy but not fat handy butcher steers brought $13.50@13.80, with plainer kind $13@13.25. The light steers which went at $13@13.25 were not suitable for feeders, lacking quality and stretch. Best light steers here brought $14, but were not very good. A few interior steers went at $12@12.50. Bulls were a bit stronger than last week, best handy kind going at $10.50@10.75 and ordinary bologna kind $9.25@9.50. Fat cows were steady to strong. Canners ranged from $5.75@6.50 and were wanted. Heifers were firm, one carload of nice light Herefords brought $13.75 and a few individuals $13.50. There is little change in the market for fresh cows but few good ones are coming.

Choice grain-fed steers, 1,200 lbs. or over: $14.40@14.75
Good to choice: 14.00@14.35
Fair to good, do.: 13.50@14.00
Plain heavy steers: 13.25@13.75
Choice handyweight steers: 14.25@14.50
Good butcher steers, 1,000 to 1,150 lbs.: 14.00@14.25
Fair to good, do.: 13.50@14.00
Ordinary to fair, do.: 13.00@13.50
Common, do.: 12.25@12.75
Good light butcher steers: 13.75@14.00
Fair to good light steers: 13.25@13.75
Common to medium, do.: 12.50@13.00
Interior light steers: 10.00@12.00
Feeders: Nominal
Stockers: Nominal
Choice heavy bulls: 10.25@10.50
Choice handy butcher bulls: 10.00@10.75
Good handy bulls: 10.00@10.50
Fair to good bulls: 9.50@10.00
Common to fair bulls: 9.00@9.50
Inferior bulls: 8.00@8.50
Choice fat heifers: 13.25@13.75
Good to choice heifers: 12.50@13.25
Fair to good heifers: 10.50@12.00
Common to fair heifers: 9.00@10.00
Choice fat cows: 10.50@11.00
Good to choice fat cows: 10.00@10.50
Fair to good cows: 9.00@10.00
Common to fair cows: 7.00@ 8.50
Canners and cutters: 5.50@ 7.00
Fresh cows, calf at side: 50.00@150.00

Monday's Representative Sales
Steers

22	1182	14.75	22	1051	14.50	20	1286	14.25
22	1221	14.25	7	1108	14.25	17	1301	14.15
18	1029	14.15	16	1151	14.00	20	1235	14.00
7	1125	14.00	23	1062	14.00	8	1066	14.00
17	994	14.00	25	851	14.00	9	1438	13.90
6	1125	13.80	12	1018	13.80	3	1213	13.75
26	1020	13.75	4	655	13.75	19	1155	13.65
17	1114	13.65	7	1040	13.50	10	1029	13.50
4	1025	13.50	4	882	13.50	10	1016	13.50
9	1020	13.25	12	1000	13.25	20	980	13.25
4	982	13.25	6	906	13.25	6	690	13.10
7	825	13.00	4	945	13.00	3	860	13.00
20	912	13.00	4	912	13.00	5	870	12.90
6	856	12.90	1	840	12.75	5	836	12.50

Hogs

The hogs coming to this market average higher in weight than they did earlier in the year. Few pigs are among them and an increasing proportion of the 225-250-pound kind. Some of the light hogs are showing grass. Monday's supply was clean 9 double-deck carloads. Heavy hogs brought $11@11.25 mainly, the inside figure for extreme weights. Heavy mixed hogs brought $11.50@11.60, but they have fluctuated more of late than any other kind. Handy weights brought $11.60 mainly, with good light Yorkers and weighty pigs only a little behind at $11.50. Saws were a little easier but the best went at $10 per cwt., as they did last week.

Heavy wts. 250 lbs. or over: $11.00@11.25
Meavy mixed: 11.50@11.60
Medium wts., 180-200 lbs.: 11.55@11.60
Heavy Yorkers, 165-180 lbs.: 11.55@11.60
Light Yorkers, 125-150 lbs.: 11.25@11.50
Pigs, 90-100 lbs.: 11.00@11.50
Roughs: 9.50@10.00
Stags: 6.00@ 8.00

Sheep and Lambs

Only six carloads were offered on Monday. Sheep were in a little better demand than at the low time last week. A few choice dry-fed wethers were sold at $8 per cwt., but most of the sheep came off grass and pretty good ones brought only $7.25@7.30. Clipped lambs were nominally steady, but none of the right quality appeared to test the market. Probably good handy-weight lambs could realize around $14, but they will soon be known as yearlings and spring lambs will succeed them. The supply of spring lambs is rather light here, but eastern points are getting quite a number. They sold largely at $16@17.50 per cwt. and weighed from 70 lbs. down. Demand for them was good and not wholly satisfied.

Good to best wethers: $ 7.25@ 7.75
Fair to good wethers: 6.75@ 7.25
Good to best: 6.75@ 7.00
Fair to good do.: 6.00@ 6.75
Common to fair: 4.00@ 6.00
Inferior sheep: 3.00@ 4.00
Good to best lambs: 13.00@14.00
Medium lambs: 10.00@13.00
Culls and common: 7.00@10.00
Spring lambs: 13.00@17.50

Calves

The supply of milk is showing in the quality of the calves coming forward. [illegible] is to be lower than usual [illegible] fleshy. Receipts [illegible] about 1,300 head. Best [illegible] $15@15.50 per cwt., second [illegible] and heavy calves down to $10.

LANCASTER

Cattle

Lancaster, June 1. Receipts totaled 2,[illegible] head. Market steady to strong.

Good steers: $13.25@14.00
Medium to good: 12.25@13.25
Common to medium: 9.00@12.25
Good to choice heifers: 10.50@12.00
Medium and common: 7.75@10.00
Good to choice cows: 8.50@10.25
Common and medium: 6.75@ 8.50
Low cutter and cutter: 4.00@ 6.25
Good to choice beef bulls: 10.50@12.00
Cutter common and medium: 7.25@10.00
Feeder and stocker cattle: 8.25@12.00
Good to choice calves: 14.00@14.50
Medium: 12.00@14.00
Culls and common: 7.50@12.00

Hogs

The supply amounted to 1,[illegible] head. Market nominal.

Heavy weights, 250-350 lbs.: $11.00@11.50
Medium weights, 200-250 lbs.: 12.00@12.50
Light weights, 160-200 lbs.: 12.00@12.50
Packing sows (rough and smooth): 8.25@11.00

CHICAGO

Cattle

Chicago, June 3.—Today's supply consisted of 17,000 head. The market was strong with best steers selling at $13.

Common to fair yearlings: $11.25@12.25
Fair to good yearlings: 12.25@13.25
Good to choice yearlings: 13.25@14.25
Choice to prime yearlings: 14.00@15.00
Common to fair steers: 11.25@12.50
Fair to good steers: 12.50@13.50
Good to choice steers: 13.50@14.50
Choice to prime steers: 14.25@15.00
Common to good cows: 8.00@10.00
Good to prime cows: 10.00@12.00
Heifers, common to good: 9.00@12.00
Heifers, good to prime: 12.00@14.50
Canners and cutters: 6.00@ 7.50
Inferior light bulls: 8.50@10.00
Bologna bulls: 9.25@10.50
Fair to choice butcher bulls: 10.00@11.50
Stockers, common to fair: 10.00@11.25
Stockers fair to good: 11.25@12.00
Stockers good to choice: 12.00@13.00
Fancy yearling stockers: 12.75@13.50
Stocker and feeder heifers, common to choice: 9.75@11.75
Stocker and feeder cows: 7.75@10.25
Feeders common to fair: 10.25@11.25
Feeders fair to good: 11.25@12.00
Feeders good to choice: 12.00@13.00
Fancy selected feeders: 13.00@13.75
Millkers and springers, common to best veales: 60.00@110.00

Hogs

About 45,000 hogs were on sale. Mostly 25@30c higher.

Heavy butchers, 270 lbs. up: $10.30@10.60
Medium, 225 to 265 lbs.: 10.60@10.90
Lights, 190 to 225 lbs.: 10.70@10.90
Selected, 160 to 190 lbs.: 10.90@11.00
Mixed packing, 270 to 350 lbs.: 9.40@10.00
Heavy packing, 350 to 500 lbs.: 9.15@ 9.75
Roughs, 300 to 500 lbs.: 9.00@ 9.25
Stags, subject 7% lbs. dockage: 9.00@ 9.50
Pigs, best grades: 10.00@10.60

Sheep

Offerings amounted to 15,000 head. Market steady to a quarter higher.

Wethers, all ages: $6.00@ 7.25
Yearlings: 7.25@ 8.25
Western ewes: 4.00@ 6.00
Native ewes: 4.00@ 6.00
Feel western lambs: 11.25@12.00
Native lambs: 9.50@11.50
Feeding lambs: 12.25@13.00
Native spring lambs: 12.75@14.50
Weeded stock $1 to $2 above [illegible] quotations.

Stock Movement

	Cattle	Hogs
Receipts this week	39,071	144,000
Last week	41,878	119,000
Year ago	37,978	164,000
Shipments this week	12,708	21,000
Last week	13,203	20,000
Year ago	11,739	28,000

Produce Market Review

WARMER weather during the past week brought many new products to the markets. Receipts of New Jersey peas were fairly liberal and considerable also was received from the Eastern shore sections. Raspberries, huckleberries and blueberries from the southern states made their appearance and Virginia began to ship sour cherries.

Irish potatoes were dull for the most part, and sold slowly. Prices of Pennsylvania potatoes were somewhat lower in Philadelphia but this was due largely to the quality of the offerings. Most sales ranged from $1.70 to $1.75 per 120-pound sack. Maine Green Mountains sold at $1.90@2 per two-bushel sack.

Sweet potatoes were irregular and the market varied in the cities according to the supply and local conditions. Late in the week Philadelphia and New York received somewhat higher prices but the quality in Pittsburgh and Washington was inferior. South Carolina Cobblers brought $4.65 per barrel in Philadelphia, $4.75@5 in New York, $5.25@5.50 in Pittsburgh and $4@4.25 in Baltimore.

Shipments of new potatoes from the Eastern Shore sections have begun in a small way. A moderate movement is expected this week with the heaviest shipments beginning around June 17. It is believed that the peak movement of South Carolina potatoes was past last week and shipments during this week and next will be lighter. Shipments from North Carolina are increasing and the heaviest shipping season will probably come around June 12.

Receipts of asparagus were only moderate during the week but the demand was usually slow. Some dealers attributed this to the hot weather and stated that prices were very cautious since the grass season ended quickly. On the other hand the warmer weather improved the quality of the receipts and more entirely green stock was offered. At the close of the week the market showed a slight improvement. Generally prices were considerably below those of last week. The large sizes sold at $3@3.50 per dozen bunches with smaller sizes as low as $1. The asparagus market in New York was weak with most stock showing the effects of the hot weather. The demand was slow and $3.50 was the top price at the close of the week.

Strawberries.—Truck receipts of strawberries from Maryland and Delaware were somewhat lighter but the movement from New Jersey increased rapidly. At the close of the week this state has supplied Philadelphia with more berries than both Maryland and Delaware. The quality of the stock offered showed a wide range which naturally resulted in wide differences in prices. Most stock sold at $26@3.50 per 32-quart crate but there were occasional lots of fancy large berries that brought as high as $4.50. The first Pennsylvania berries of the season arrived this past week and those noted were of fine quality and brought top quotations. Reports from many sections in Pennsylvania indicate that there will be more berries shipped this year than normal. This is particularly true in sections which ordinarily market their berries in the coal towns and is due to poor industrial conditions.

Apple prices held firm in Philadelphia but the movement was not quite as active as it was probably due to the warmer weather and the increased competition with the small fruits, such as strawberries, cherries, etc. Retail prices of oranges are low with fair quality stock selling as low as 25c a dozen. Truck receipts of Early Romes and Winesaps continued to sell at $2.25@2.75 per bushel.

Peaches from Georgia began to arrive in the local markets. It appears that the commercial crop in Georgia will be very light this year. Early estimates are for less than 10,000 cars this season compared with nearly 16,000 last year. The shipments of Illey and Elberta may be only 25 per cent of last year's output of these varieties. This condition is undoubtedly favorable for growers in New Jersey, Maryland and Delaware.

Sweet potatoes continued steady in Philadelphia and New York. The best New Jersey sweets sold at $2.25@2.75 per bushel in Philadelphia and at $2@3.25 in New York.

New Jersey peas met a fair demand with the small Early June variety bringing $3@3.25 per ⅝ basket and the larger varieties $1@1.50. Eastern Shore peas sold around $1@1.50 with better stock as high as $2. Many of these Eastern Shore peas showed heat damage.

Most of the green vegetables such as spinach, kale and escarole were very dull and hard to sell. This was on account of the competition of such crops as peas, asparagus and other vegetables. The first nearby beets of the season were offered and sold around 10c a bunch.

Butter prices were steady throughout the week. Dealers and buyers showed more confidence in the situation and unless goods could be handled at a profit they were generally placed in storage in anticipation of profit later in the season. Buyers bought more freely for current needs and for storage purposes. Receipts were heavy at all markets and exceeded those of a year ago. The quality of the butter improved as cool weather throughout the producing territory improved the quality of the raw material.

The Philadelphia egg market showed a weaker tendency. Nearby eggs were generally of irregular and poor quality. Buyers generally discriminated against the nearby eggs for this reason. There were some lots of fancy nearby eggs that sold readily at a premium. Offerings of Western and Southwestern eggs were more liberal. Desirable lots of nearby mixed colors were quoted at 30@31½c per dozen with some whites bringing 32½@33½c.

Live broilers were in moderate supply on the New York market during the week. The Decoration Day holiday brought a good demand but prices were somewhat lower than the week previous. Warm weather affected the market for fowl and prices declined. Rock broilers were quoted at 33@48c per pound. Reds at 30@40c and Leghorns at 28@37c. Leghorn and colored fowl brought 30@32c per pound.

Dressed poultry was in light supply and the market steady with a slow demand. Fowls brought 30@40c and broilers 47@55c.

W. R. W.

Miscellaneous Produce

Philadelphia

Eggs. Firsts, 32c; seconds, 30@31c.

Butter. Creamery, tubs, 92 score, 44c; 90 score, 42@42½c.

Poultry. Fowls, 33@36c; broilers, 34@46c, old roosters, 18@21c; pigeons, per pr., 33@50c.

Apples. U. S. No. 1, per bu., nearby, Romes, Winesaps, 82@2.50.

Strawberries. Various varieties, 32-qt. crate, 82@3.50.

Asparagus. Pa. Dela. and Md., doz. bunch crates, green, large, $2.75@3.

Beans. Lima, Fla., ⅝ bu. hmps., $1.50@3, S. C. bu. hmps., green round, $2.

Cabbage. E. S. Va., ½ bbl., hpr., 50@60.

Cucumbers. Bu. hmps., choice to fancy, $1@2.25.

Onions.—Texas crates, yellow U. S. No. 1, $1.40@1.50; yellow boilers, $1.75.

Potatoes. Pa. round whites, per 100 lbs. $1.50@1.60, new stock, per bbl., Spaulding Rose, U. S. No. 1, $5@5.25.

Sweet potatoes. N. J., bus., yellow, $2.25@2.75; Tenn., bu. hmps., Nancy Halls, $2@2.25.

Tomatoes. Fla., choice to fancy, $2@3.50.

Radishes. Nearby, bu. 25c@$1.

Rhubarb. Nearby bunches, 2@3½c.

Cauliflower. Calif. crates, $1.75@1.85.

Escarole. Nearby bus., 25@40c.

Kale. Nearby bus., 15@25c.

Peas. Calif., bu. hmps., $1.50; Va., bu. hmps., 75c@$1.50.

New York

Butter. Creamery, higher than extras, 43½@44c; extras, 43c; firsts, 40½@42½c.

Eggs. White eggs, current receipts, average extras, 33½@36c; extra firsts, 34½@35c; mediums, 33@34c.

Poultry. Live, by freight, fowls, 33@35c; broilers, 30@40c; ducks, 20c; turkeys, 20@30c.

Baltimore

Butter.—Creamery, fancy, 45@45½c; rolls and dairy prints, 34@35c; packing stock, 30c; butterfat, lb., 43@43½c.

Eggs. Md. Pa. nearby firsts (loss off), 30@31c; western firsts, 30½c; southern, 29½c.

Live poultry.—Hens, old, 4½ lbs. and over, 33c; small to medium, 33@34c; Leghorns, 28@30c; guineas, young, 1¾ lbs. or over, each 75@1.10; roosters, 18@20c; ducks, 25@30c; pigeons, pair, 35@40c; squabs, 30@50c.

Potatoes. Old, 150-lb. sack, $2.50@2.75; new, No. 1, bbl., $4.50@4.75.

Apples.—Fancy pack, bu., $2.75@3.25.

Asparagus. Per crate, choice to fancy, $2@3.25.

Onions.—50-lb. bag, $1.75.

Huckleberries.—N. C., 32-qt. crate, 12½@15c qt.

Strawberries.—32-qt. crate, E. S. Md. & Va., best, 75@9c qt.

Celery.—Doz. bunches, $2.50@3.75.

Cucumbers.—S. C., bu. hmps., choice to fancy, $1.50@3.25.

Lettuce. Calif. crates, $3@4.75.

Sweet potatoes. E. S. Md., bu. hmps., yellows, U. S. No. 1, best, $2@2.25.

Spinach. Nearby bu. bskt., 40@65c.

Tomatoes.—Fancy, $2@3.75.

Pittsburgh

Butter.—Creamery prints, 92 score, 50½@51c; tubs, 49½@50c; local tubs, 47@48c.

Eggs. Fresh, select, white, 33@34c; brown, 31@33c; current receipts, 28@30c.

Poultry.—Heavy hens, 31@33c; Leghorns, 30@33c; broilers, 40@45c; roosters, 18@20c; ducks, 30@32c; geese, 20@22c; pigeons, 40@50c per pair.

Apples.—Bu bskt., U. S. No. 1, 2½-in. Baldwin, $2.40@2.50; Russets, $2.25@2.35.

Cucumbers.—Ohio bothouse, 2 doz., $2.35@2.50.

Potatoes.—Per 150-lb. sack, U. S. No. 1 Mich. Rurals, $1.75@1.85; Maine Green Mts., $2.25@2.35.

Spinach.—Virginia, bu., 75@85c.

Strawberries.—Del. & Md., 32-qt. crate, $4@5.

Lancaster

Butter.—Country butter, 52@55c; creamery, 50@55c.

Poultry.—Chickens, dressed, $1.25@2.50 each; springers, 60c@$1.25 each; ducks, $1.50@2.50 each; squabs, 25@50c each.

Eggs.—Fresh eggs, 32@34c.

Vegetables.—Asparagus 10@15c per bunch; beets, 10@15c per bunch, egg plants, 15@30c each; string beans, 20@25c; per ¼ pk.; beans, Lima, 35c per pt.; box; cabbage, 10@20c per head; carrots, 8@15c per bunch; cauliflower, 20@35c per hd.; celery, 15@25c per bunch; cucumbers, 8@15c each; spinach, 12@15c per ¼ pk.; rhubarb, 5@10c per bunch; peppers, 3@8c each; endive, 10@15c per head; lettuce, 10@20c per head; radishes, 5@10c per bunch; mushrooms, 25@30c per pt. box; peas, 35@40c per ¼ pk.; green onions, 8@10c per bunch.

Potatoes. Old, per bu., 65@75c; new, 20@25c per ¾ pk.

Sweet potatoes.—20@25c per ¾ pk.

Strawberries.—15@25c qt. box.

Cantaloupes.—15@25c each.

Watermelons.—60@75c each.

York

Butter.—Country, 50@55c; separator, 55@60c.

Eggs.—Fresh, per doz., 32@33c.

Poultry. Heavy fowls, per lb., 28@29c; Leghorns, dressed, $1.25@1.35 each; heavy $1.50@2; springers, 75c@$1 each.

Vegetables. Potatoes, 75@90c per bu.; cabbage, 5@15c per head; lettuce, 10@20c hd.; spinach, 15c ¾ pk.; celery, 8@15c stalk, onions, green, 5c bunch; asparagus, 8@10c per bunch; rhubarb, 5c bunch; radishes, 5c bunch; carrots, 8c bunch; turnips, 13@15c ¾ pk.

Apples.—Per bu., $2.50@3.

Strawberries.—County, 13@18c qt.

HEAVES

I have a fine young mare which has the heaves. Has a rattling in her head and throat. In hot weather she is worse.

E. P. D.

Heaves may be relieved by careful feeding and management. The bulk of the hay should be fed at night with grain making up the major portion of the morning and noon feed. Avoid dusty hay and over feeding. Keep the bowels open by use of laxative feeds such as bran, oil meal or a few hours pasture. Exercise should be at a moderate gait.

Farm Conditions

Somerset Co., Southern Pa.

May 28: Farmers sowing and planting after being delayed with the wet weather. Wheat and grass look good. Not as much fruit frozen as thought at first. Sheep being sheared. A good bit of buckwheat will be sown. Mrs. H. W. Brant.

Mifflin Co., Central Pa.

May 16: Weather still unfavorable for farming on account of so much rain. Most of the oats sowed and growing nicely. Some corn planted, most to plant yet. On account of the late frost most kinds of fruit will be only half a crop. Wheat and grass are looking promising. Farm help scarce.

J. H. Byler.

Butler Co., S. W. Pa.

May 21: Weather during April wet compared with normal, with killing frosts; the same has been true of May. Frosts have damaged grapes and much of the other fruit. Very little corn planted and much oats ground not even plowed except on higher land. Potato ground unplowed. Large acreage to be planted if weather permits. Winter wheat good. Baby chicks doing fair.

Howard F. Fox.

Lawrence Co., Western Pa.

May 21: Few dry days during the past three weeks. No corn planted; but few fields of oats in. Fence building and repairing is about all that can be done. Several freezes, fruit damaged. Stock out on pasture. Fresh cows milking well. Country butter 50c. Eggs plentiful, 30c. Veal calves 8@9.15 per cwt.

M. L. V.

Wood Co., Western W. Va.

May 20: Farmers behind with corn planting due to so much rainy weather. Potatoes look fair. Cherries turning in some sections. A leading orchardist reports that an early frost killed practically his entire apple crop. Good prospect for hay. Cattle high. Hens laying well.

Allyn Deem.

Pendleton Co., N. E. W. Va.

May 27: Some days warm, and some cool accompanied by frost at night. Most of the corn planted has germinated and is growing nicely. We had a big rain and hail storm last Saturday but no serious damage was done. Several large bears have been killed in this and adjoining counties. They were playing havoc among the sheep and lamb growers for quite awhile. Cattle high, especially milk cows. Hogs plentiful and not much demand for them. Lumber camps are running full time. Some tan-bark peeled this spring. A friend of mine has contracted to peel a hundred cords. For awhile this product was considered invaluable, but not so now.

John Dahmer.

Erie Co., N. W. Pa.

May 15: April was the coldest in years. Has rained all spring. Two killing frosts early, fruit is hurt, apple trees in bloom now. Too wet to plow on most land. A few gardens in. Grapes being tied. Bad time for baby chicks. Not so many potatoes being planted this year, a few early ones in. Fishing good.

M. M.

Wirt Co., N. W. W. Va.

May 13: Warm with few light showers. Everything making rapid growth. Oats looking fine, potatoes being worked the first time. Lots of corn being planted. Butter 50c, cream 48c, eggs 26c, pigs $10 a pair. Schools all out. Dirt roads in bad shape for time of year. Cows scarce and high.

E. N. B.

Tioga Co., Northern Pa.

May 14: Rain again today. The past month has been very wet. A few farmers have some planting done, many haven't any. Meadows and pastures looking good. Young chickens doing better than last year in spite of rain; hatches were better too. Quite a demand for good cows. Increasing interest in sheep. Eggs 27c.

Mrs. P. W. Lawton.

Franklin Co., Southern Pa.

May 15: Ideal May weather. Wet and cool, becoming dry and cool. Hay and wheat fields in general are quite promising. Rye not so promising. Prospects for a fruit crop are good. Some corn being planted. Some plowing being done. Some potatoes being planted and the most remains to be done yet. Oats up and making a good showing. Berries are blooming and the woods has become green. Pastures are good and stock prospering. A cannery is going to operate in Greencastle this coming season by the H. F. Hemingway & Co. of Baltimore; some heifers being raised this spring. Horses and cattle selling well.

John B. Shank.

Lucas Co., N. W. Ohio

June 1: First real growing weather this week. Three-fourths of corn planted. Some plowing to be done yet. Wheat looks good, oats and barley fair. Hay will be a heavy crop. Early potatoes up and looking good.

F. H. South.

Ontario Co., Western N. Y.

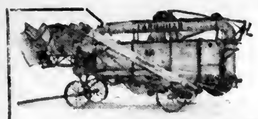
May 30: The past month has been a record breaker for rain. Has been very bad on tall plowing. Some fields look like meadows. Farmers are behind with their work and help is scarce. Oats just being sown. A large amount of fitting to do for barley and corn. We had a bull bloom of apples and pears but I notice nine have fallen off.

E. T. Brizzee.

CHICAGO CASH GRAIN

Chicago, June 3.—The following cash prices ruled here today: No. 2 yellow corn, 85@86c; No. 2 mixed corn, 84@85c; No. 2 white oats, 44@44½c.

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Farm and Dairy

By L. W. LIGHTY

He has luck to say but in doing things he is quite efficient. He was just drawing his surplus corn to market when it was quoted $1.03 a bushel, while wheat was $1. He had fed a large stock during the year and still had a few hundred bushels of corn to sell while his neighbors were large buyers. I tried to have him tell me why this was the case, but he being a man of few words I had to ask many questions. The answers came something like this:

"I plow a good sod. I use manure and fertilizer. I work the land completely before planting. I plant in good time and use only the best seed. I cultivate my corn often until it is too large to get through."

"Which is the most important operation in growing this big crop?" I asked.

"All are absolutely necessary," he said.

"Where do most of these corn-buying farmers fail?" I next asked.

"They do not work their corn half. They let the weeds get a start. Soon the weeds choke the corn and when it gets dry they take the moisture the corn needs and also the fertilizer and the result is only part of a crop."

These are the words of a man who makes money annually on the farm. He buys implements, machines, automobiles and luxuries and pays cash for them. He has no other income but from the farm. The words of such a man I prize highly when it comes to advice about doing things on the farm.

This same man sells hay every year while others with more land and hardly as many animals are short of hay usually. I asked him how he does it. Plenty of grass seed, manure and fertilizer will do it. No, he would not say anything against his neighbors, but some folks sow only half enough grass seed and apply fertilizer by the spoonful instead of by the bucketful. Then they have little hay, a poor sod and little corn and no money. That with the results the man gets all the time sounded to me like a college education for a farmer.

One Testimonial

Testimonials were formerly monopolized by the patent medicine men, but now the cigarette and other folks also use them liberally, hence if it sells their wares it may sell mine too. Here is one I received recently:

"Last summer you advised me to sow rye for early spring cow feed and I sowed an acre, fertilizing heavy and sowing two bushels on the acre as you said I should," writes a farmer. "The last week of April I started cutting and fed liberally to May 14th when the last was cut. My cows filled the cans and I had to have an extra can to hold the milk. My pasture is short and dust and since the rye is gone the milk check has fallen off a fourth and the extra cash is useless. How could I keep up that milk flow now?"

I promptly wrote this man to cut wheat daily for his cows. It will replace the rye that is gone and cut to season. I assured him he will get much more work feeding the wheat to the cows out of the mild the end of May and the beginning of June than he can make out of it any other way. Ever since Congress has been in session wheat has dropped in price almost daily and if this special relief session continues the chances are wheat will sell at 50c a bushel but regardless of that the milk the green wheat produces will bring more profit than the wheat grain if allowed to ripen.

Penn State Annual Dairy Exposition

THE Atlantic City bathing beauties apparently had nothing on the bovine beauties at the annual Penn State Dairy Exposition this spring. Manicured hoofs and hoofs, fluffed tails, glistening coats of hair, and the best of bovine manners among the livestock gave Agricultural Hall the appearance of a real "Cow" College.

The boys and some girls had been busy during all their spare time since the Easter vacation in fitting up their entries for the occasion.

The clean milk production contest was won by A. C. Hug Germania, Potter county, Pennsylvania.

The best fitted Ayrshire was shown by Fred Houser, State College, Centre county, Pennsylvania; the best Holstein by K. E. Storch, Troy, Bradford county, Pa.; the best fitted Jersey by S. L. Hames, Bristol, Bucks county, Pa.; the best fitted Brown Swiss by F. A. Higgins, Chester, Delaware county, Pa.; the best fitted Guernsey by Paul W. Waite, Port Matilda, Centre county, Pa.

The dairy cattle judging contest in which there were sixty-six participants was won by F. A. Higgin of Chester, Pa., in the amateur group and Russell M. Smith of Pottsgrove, Pa., in the professional group.

The dairy products judging contest in which fifty-eight students took part was won among the amateurs by James Bohn, Boalsburg, Pa., and among the professionals by C. E. Patterson of Willow Grove, Pa.

The best showman in the whole contest was G. W. Munson of Beaver, Pa., while Miss Pauline Myers of Connellsville, Pa., won the Co-ed milking contest by getting six quarts of milk from a cow in three minutes.

The Exposition as a whole was the most successful of any of the seven similar events that have been held annually.

A. A. Borland.



G. W. Muncon Won First Place in Showmanship at the Recent State College Dairy Exposition



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Women students at the Pennsylvania State College who won in the milking contest. They are, left to right: Miss Tamson England, 2nd place; Miss Priscella Wanson, 3rd; Miss Elizabeth Fields, 6th; Miss Pauline Myers (seated), 1st; Miss Sarah Burt, 4th; Miss Kathleen McLeran, 5th; and Miss Sarah Hutchinson, 7th.

City Milk Delivery

(Continued from page 8.)

grandmother's influence. This is a striking evidence of the result of health teaching in the public schools. Jewish families use the most milk of all types, especially for drinking purposes. Their religious traditions forbid their use of milk and meat at the same meal and many seem to prefer milk.

According to a report issued by the U. S. Department of Agriculture on "Consumer Demand for Milk in Philadelphia," people apparently drink milk because they "like it" and not because it is good for them. "Taste is the primary factor influencing people against the use of milk." The milk distributor and all the departments including the driver know this so well that every effort is made to prevent any kind of contamination and keep the milk always perfect. The milk driver's wagon-lamp is candle or an electric flash—never kerosene.

So when a complaint comes in from the consumer "The milk does not taste right—my children will not drink it", all attention is given at once to find whether the case is real or imaginary. Once a person has taken a dislike to milk it is very difficult to re-create an enjoyment of it.

Due to the rigid inspection of the milk at the plant the company officials usually know when anything is wrong with the supply. The problem is to satisfy the customer. The driver gets the first story from the customer—he reports to the foreman, who investigates and tells the branch manager. Sometimes he too makes a visit to the home and the company laboratory is called in for detail work. It may not be possible ever to get to the bottom of the complaint. Perhaps the bottle was once used for gasoline or kerosene or oil—the flavor and smell would remain even after sterilization.

Causes of Poor Milk

In wealthy homes sometimes the help do not give the milk proper care; perhaps some crafty mother or father had conceived the idea of claiming that the baby was sickened with the milk in hopes the firm will pay money to prevent any publicity to the case; or, what is less frequent than formerly, perhaps some rival driver tampers with the bottle to get a customer.

There are times, however, when the producer is to blame for bad milk and the consumer has a just complaint. For instance ropy milk is something no city housewife can understand and she will not continue with the same milk dealer if she has it two days. Always ropy milk originates on some farm—possibly starting in a stagnant pool of water where the cows have waded or been drinking. It is carried into the barn on the flanks of the cows until sometimes even the dust becomes untasted.

Ropy milk is caused by the bacterial action of a tiny vegetable organism that is spread easily and is difficult to destroy except by the thorough application of heat. It is not so dangerous as disagreeable. Milk producers can readily eradicate it first by thoroughly cleaning up at home. This means absolute boiling all dairy utensils, everything the milk touches, then exposing them to sunshine.

But in the meantime the first farm with ropy milk has infected the dealer's weigh tank washing machine, pasteurizing apparatus, bottling machines, until possibly a large part of his supply has been contaminated, also the germ is carried back to other farms by means of the cans. Not that the dealer has been careless but this ropy milk organism survives all ordinary sterilizing methods, as the first farmer has learned to his sorrow. Within the past year there have been two serious outbreaks in the Philadelphia district, making a lot of unnecessary work and trouble for many people.

An Exceptional Case

One fall a few years back an unusual number of city customers started complaining about the taste of milk. While first it was considered a notion on the part of some fussy consumers it was finally realized that something serious was wrong and a frantic effort was made to locate the trouble. I was home ill at the time and thought for a while my taste was affected, as even my appetite for milk disappeared. The flavor was bad enough, but the odor seemed even worse.

After a long and thorough investigation on the part of producers' organizations, health authorities and dealers' field men, the trouble was traced to a silage condition peculiar to that year causing an exceptionally strong smell and taste. This was transmitted to the milk on many farms. Apparently the larger and better farms shipping "A" and "AA" milk had larger silos or used more silage—at least these grades of milk were worst tasting. Receiving men were given orders to refuse any milk with the slightest trace of bad flavor, for one can could spoil a whole tankful. It was remedied at last by feeding after milking and keeping all milk away from the barn the trouble could be overcome. The milk of every city dealer was affected, nevertheless customers relieved their minds by changing milkmen and many other good milk consumers were lost then who never again will enjoy drinking milk. They will say, I don't like the taste of it."



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In the past, producers of Certified and Grade A milk have been unable to spray their cows, because of tainting. They need not hesitate to use Klip, the new cattle spray developed by the makers of Flit. It cannot taint milk even if the teats are soaked with it. Be sure to get Klip, because this cow spray is the one which is guaranteed to keep cows free of flies while milking, and for long periods in the pasture. The cow's business is to turn grass into milk. Don't let her waste your money swinging her head.

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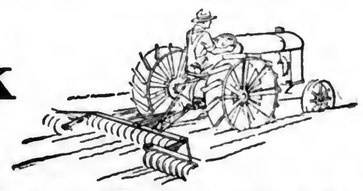
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Make this chart your guide

It shows the correct grades of Gargoyle Mobiloil for certain prominent cars. If your car is not listed here, see at your dealer's the complete Mobiloil Chart, which recommends the correct grades for all cars, trucks, tractors, etc.

NAMES OF PASSENGER CARS	1929 Engine		1928 Engine		1927 Engine		1926 Engine	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Auburn, 6-cyl.	BB	Arc	BB	Arc	BB	Arc	A	A
" 8-cyl.	A	Arc	A	Arc	A	Arc	A	Arc.
" other models	BB	Arc	BB	Arc	BB	Arc	A	A
Buick	BB	Arc	BB	Arc	BB	Arc	BB	Arc.
Cadillac	BB	Arc	BB	Arc	BB	Arc	BB	Arc.
Chandler Special Six	...	...	A	Arc	A	A	...	...
" other models	A	Arc	A	Arc	A	Arc	A	Arc.
Chevrolet	A	Arc	A	Arc	A	Arc	A	Arc
Chrysler, 4-cyl.	...	...	A	Arc	A	Arc	A	Arc.
" Imperial	BB	Arc	BB	Arc	A	A	A	A
" other models	A	Arc	A	Arc	A	A	A	A
De Soto	A	Arc	...	...	...	...	...	...
Dodge Brothers	A	Arc	A	Arc	A	Arc	A	Arc.
Durant	A	Arc	A	Arc	...	...	A	Arc.
Erskine	A	Arc	A	Arc	A	Arc	...	...
Essex	A	Arc.	A	Arc	A	Arc	A	Arc.
Ford, Model A	A	Arc	A	Arc	...	...	...	...
" Model T	...	...	...	...	E	E	E	E
Franklin	BB	Arc	BB	Arc	BB	BB	BB	BB
Gardner, 8-cyl.	BB	Arc	BB	Arc	BB	Arc	A	Arc.
" other models	...	...	...	...	...	...	A	A
Graham-Paige	BB	Arc	BB	Arc	...	...	...	...
Hudson	A	Arc	A	Arc	A	Arc	A	Arc.
Hupmobile	BB	Arc	BB	Arc	A	Arc	A	Arc.
La Salle	BB	Arc	BB	Arc	BB	Arc	...	...
Marmon, 8-cyl.	A	Arc	A	Arc	A	Arc	...	...
" other models	...	...	BB	A	A	A	A	A
Ms	A	Arc.	A	Arc	A	Arc	A	Arc
Nash, Adv. & Sp. 6	BB	Arc.	BB	Arc	BB	Arc	A	Arc
" other models	A	Arc	A	Arc	A	Arc	A	Arc
Oakland	A	Arc	A	Arc	A	Arc	A	Arc
Packard	A	Arc.	A	Arc	A	Arc	A	Arc
Peerless, 72, 90, 91	BB	A	BB	A	BB	A	BB	A
" other models	A	Arc	A	Arc	A	Arc	A	Arc.
Plymouth	A	Arc	...	...	...	...	...	...
Pontiac	A	Arc	A	Arc	A	Arc	A	Arc.
Reo	A	Arc	A	Arc	A	Arc	A	Arc.
Stearns Knight, 6-80	BB	Arc	BB	Arc	...	...	...	...
" other models	BB	A	BB	A	BB	A	BB	A
Studebaker	A	Arc	A	Arc	A	Arc	A	Arc.
Velie, 8-cyl.	BB	Arc	BB	Arc	...	...	...	...
" 6-cyl.	A	Arc	A	Arc	A	Arc	A	Arc.

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Farm Facts and Fancies

By ALVA AGEE

A TARIFF is a tax in its essential nature. Peoples empower their governments to levy taxes on them because only through taxation can the expenses of government be met. These taxes may be direct or indirect, but the original idea was to secure means of defraying expenses. There arose the curious idea that peoples outside one's own country might be caused to contribute to its expenses through the collection of duties on goods shipped into the country. Along with it came the tariff levied not primarily for revenue but that goods so that there would be less competition to be met in home markets by home products.

As this was naturally an agricultural country, a tariff high enough to bar manufactured goods encouraged manufacturing. A protective tariff works when there is a home market for home industries. The creation of these industries provided a broader home market for all kinds of products. Most of our industries have thrived under a protective tariff.

Naturally agriculture has wished for equivalent benefits. Certainly it has a right, in such a scheme, to its home markets for whatever it is able and willing to supply at reasonable prices. Some products now have the advantage of a protected market, and others can be added, but there is complaint that the great mass of farmers cannot have the prices of such staples as wheat, corn, meat and cotton raised by a high protective tariff because they now produce too much for the home market, and it is not a question of barring outside production, except on a limited scale and within certain classes. And it is so. And the failure is due to conditions directly opposite to those that have been prevailing in manufacturing. And again we come back to the fundamental trouble that we are farming too much land.

Slow to Learn

A little later we shall have a report from a committee on conditions prevailing on present reclamation projects of the national government. We wish there had been an announcement of any care used to select a committee without bias. The Reclamation Bureau finds that our farm organization leaders and some thoughtful men outside of agriculture have lined up pretty firmly against further increase in our farming area, and the bureau's work is in danger of being sadly curtailed if it cannot be shown that these projects are not so much at public expense as is generally believed.

The fact is that official statements, made when money was wanted to render projects more attractive to prospective colonists, attracted the attention of many who had not been thinking much about the matter. Those in charge of reclamation are slow to realize that the public is no longer interested in having farms created for people who think they would like deeds to them, either for productive or speculative purposes, but it is interested that farmers be not given unfair competition.

It is time for an abrupt change in national policy regarding the public domain. Its development is to await the time of public need, and that lies a long way in the future. One index of the efficiency of farm organization leadership will be outstanding evidence that the national policy in this respect has undergone radical change.

Mediterranean Fruit Fly

Fruit is a leading source of wealth to California. In the case of citrus fruits it is not only the value of groves and their crops but it is the industry's attractiveness to investors and tourists, and that is an asset almost beyond estimate. The Coast would be far behind its present state of development if citrus fruits had not advertised it.

The presence of the Mediterranean fly in this country is alarming, and the Coast is redoubling its quarantine activity against Florida. But the pest has been found in Texas in a shipment of fruit from Florida, and there is the reasonable assumption that no pest of this sort can be exterminated, and that quarantines are only a check to the spread into sections favorable to it. The only thing to do is to use money and skill freely to hold the fly in check until the best means of combating it are learned.

We may be told that extermination is on the way, or that a quarantine will hold this fly in its present area, but most pests finally come under control only through a balance set up by nature between an insect and its enemies and by the assistance rendered by man. Time is a factor on man's side in such a fight, and control may come, but in this instance extermination cannot reasonably expected.

Partially Helpless Legumes

I was taught that one could test the ability of clover to add nitrogen to the soil by examining the roots for the nodules that all of us have learned to know. I have dug a poor plant of clover out of a wet and sour soil and found a fair supply of nodules, and the inference was that the ground was growing richer even if it was not producing a strong plant.

The presence of so good a development of nodules was puzzling. Now we have learned that some strains of these bacteria have no particular value and do not stimulate plant growth by fixing air nitrogen. It is with the bacteria and the nodules housing them as it is with all else in this world—their works we shall know them. Not an early day some producers of cultures for soil inoculation made such broad claims for the benefits arising from their use that one's inclination was to pay no attention to them and provided his soil had in the past been growing the legume wanted.

It was just as well, it may be, because in that early day there was little certainty that the purchased bacteria were good for much. The situation remains unless one patronizes the right people, but we have learned that some strains are peculiarly efficient, and we now know that when we have been growing a legume in an acid soil the chances are that the bacteria lack the full ability they should have to fix nitrogen. The gain that could be made by fresh inoculation of much land that now is growing legumes only indifferently well is a big matter.

Cut Grass Early

Most orchard grass in West Virginia is now ready to cut and some of it has passed its best stage for cutting. At the West Virginia Experiment Station orchard grass was cut May 7 and it was found to contain 26.42 per cent protein; on June 7th it contained 17.49 per cent protein; July 7th it contained 15.28 per cent; August 7th it contained 10.77 per cent and September 7th, 8.05 per cent.

Granted that the grass would be heavier in September than in May, it can readily be seen that it would have to have more than three times as much weight to contain as much protein as that would be less digestible. The cutting made the seventh of September contained the first and second growth. If the first growth had been untouched September 7th, it would have been found that it did not contain eight per cent protein by quite a little.

Again the growth of orchard grass that was made in 1927 stood on the field until 1928 and was analyzed and was found to contain but 3.96 per cent protein. This ought to convince the most skeptical farmer that he cannot afford to let his grass stand until it is ripe if he wants it for hay.



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The Jones Family

By W. D. ZINN

MR. AND MRS. JONES were married fifty years ago and they are now 71 years old. They are living in the same house into which they moved during their honeymoon. The house has been remodeled quite a little during these years but it still has its large, unhandy kitchen and the steps leading upstairs are still out on the front porch. Their outbuildings are just where they were when the owner moved onto the farm.

I harbor no ill will against the Joneses. They are good, honest and as industrious people as you will find in these "diggins." The object of this article is not to cast any reflections on their fair name, but I am using them to show how much unnecessary work many farmers' wives do just because somebody does not think a little more. Do not misunderstand me. I do not mean that all the work which I shall enumerate is unnecessary or avoidable. I am writing this hoping that a few of my husband readers may be able to see wherein they can take a little work off the shoulders of their good wives.

The Water Supply

For fifty years all the water consumed in this home has been carried by hand from a spring below the house twenty rods and I would have you know that the word "below" here means a descent of 100 feet. Hardly less than six pails of water per day would be sufficient to supply the demands of this home. That means that some one would have to make six trips to the well every day and in a year would make 2,160 trips or travel 270 miles. Supposing the good wife carried all the water, in fifty years she walked 13,500 miles. In order to have cool fresh water running through the milk cellar it was built just below the spring and the good wife carried the milk twice a day from the house to the cellar and made one other trip at noon for the milk and butter, traveling during the year 6,750 miles.

The Barn

In order that conditions should be sanitary around the home the barn was located 20 rods on the opposite side of the house from the cellar. The good wife has always done the milking in this home, the propriety of which I seriously doubt. She has made two trips a day to the barn to milk and she has traveled each day 80 rods or 90 miles in a year, or in fifty years she has traveled 4,500 miles, and her husband has made more trips to the barn and has traveled much farther.

The Poultry House

For the sake of avoiding the nuisance of having the chickens around the barn the poultry house was built across the road from the house and 25 rods from the same. The wife makes at least two trips to the hen house each day. She travels 100 rods each day in looking after her poultry and during the last fifty years she has thus traveled 5,600 miles.

In all we find she has traveled 30,300 miles and when we add to this the steps she has taken in that big kitchen we find she has encircled the earth one and one-half times.

Nature's Best Display

THE gentle hum of the bumble bee, the fine tunes of the mocking bird, the pleasant voice of the bob-white, and the songs of other birds fill the air in daytime.

At night there is the merry whip-poor-will, the plaintive tree toads and the "who-ing" of the owls in a free-for-all concert. Various sweet smells of grasses fill the air and the clover shows forth her flowers in June.

The beautiful fields of grain, the cornfields like pieces of barred goods all are a beautiful sight in June. Who could want to see more than June presents out in the open country where the living for all who eat grows?

J. B. S.

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TIGHT BINDING TEXT CUT OFF

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NESHAMINY GARDENS

By R. P. KESTER

FOR those who raised their eyebrows or actually expressed incredulity when I told here that we had succeeded in raising 97 per cent of our baby chicks two years in succession, I quote the following letter. It is from a man up in my old home county, Clearfield, and I can vouch for the honesty and truthfulness of the writer. I have known him all his life:

"Dear Sir —I see in the Pennsylvania Farmer that you are interested in poultry and truck raising. I put 1,700 chicks in a brooder house on April 1 and about 1,000 more the last of April. Out of the 1,700 I lost three, and out of the 1,000 I lost ten. Now come up and see them! I have used the same brooder for about 15 years.

"Some of them formed the habit of picking their tails, so I concluded they did not get enough nitrogen. I began cutting green clover for them and they stopped this habit almost immediately.

"Do you remember when I attended your writing school at Hepburnia?"

G. M. McD.

Now let somebody come along with a story that will beat that. The percentage of loss is so small I will not take the trouble to figure it.

This letter recalls something in my life which I had nearly forgotten, at least I am not reminded of it when I look at my handwriting today. As a boy I was always practicing writing and drawing. When I taught my first term of school I saved enough of my thirty dollars a month to go to Lock Haven to a business college and take a course in ornamental penmanship and pen drawing. So great was the impression my ability made on those who saw me give demonstrations that I was in demand as a teacher of penmanship. For a time I taught it to teachers in a Normal School, and at home they got up an evening class, having provided a long wooden table, a blackboard and plenty of fool's cap writing paper. Those were the good old days. Men and boys for miles around came, and my boyish vanity had full sway. But good writing, to say nothing of fancy writing, has gone out of style now.

But to get back to something worthwhile. I have another letter, this one from a woman in Virginia. She writes:

"We have been taking the Pennsylvania Stockman and Farmer for several years, and as we have got a lot of information and entertainment out of your articles lately I will try to help you out in a little matter you ask about.

"We have been raising a few chickens for some time. Last year I sold everything off but a few pullets, and I had to depend on them this spring for breeders. I, also, had heard that pullet eggs were not good to raise chicks from. But frankly I did not see why. So I set my pure-bred Rhode Island Red hen on pullet eggs, eighteen of them. Three weeks later I lifted her off the nest and found sixteen of the fluffiest baby chicks you ever saw. Not a puny one among the lot. None has been sick and now at five weeks they are nice big healthy chicks.

"Five days ago another hen having pullet eggs hatched fifteen fine chickens. I would not fool with anything but first-class stock. I hope others will come to the defense of the pullet. We are Pennsylvanians, having moved to Virginia fifteen years ago."

Mrs. H. G. G.

• • •

It may be the idea that pullet eggs should not be used for hatching is only folk lore. I have no records of careful tests on this subject.

• • •

"Let a man who thinketh he standeth take heed lest he fall," is a bit of good advice. I have often found that Fate will play a trick on any one who assumes to be especially good or successful in a given line. I have raised raspberries a good many years, and thought I knew just what to do and when to do it. But I find I don't. Last year our red raspberries were fine in every way. The yield was good, and the new canes healthy and vigorous. They were pruned and thinned out this spring, and worked up in good shape. But they did not come out in leaf, except near the ground. In fact the tops are as dead as the proverbial door nail. What's the answer? We are so anxious to know that we agree to send a canceled postage stamp to the first one telling what is the matter. Answers saying that it is winter-killing are barred, as we had no cold weather last winter.

A letter is received from a man living in New York City, asking why I have not said more about the little girl in the family. He has been interested in the two boys, but also likes girl babies and wants to know all about her. Well, in the first place my space here is limited. I notice that not over two columns is ever available and I like to finish a subject when I start on one. Unless our grouchy, old bachelor friend who objects to my speaking about family matters here objects I shall publish a picture of all three some day, then our New York friend can judge for himself.

• • •

Our strawberry patch is a sight for sore eyes this spring. Never in all the years we have grown strawberries have we had such a set of blossoms and fruit as there is now. The Premiers are beginning to ripen (May 29) and in a few days will be in full swing. The Big Joes are just a little later, but they, too, are white with bloom. I do not know how the price will be. We have been eating strawberries for a month that cost less than we are hoping to get for ours. Life in every respect has changed so much during the past ten years that one would hardly recognize the earth as being the same place if he had been off it during this period.

Wisdom and Folly

THE savants inform us that man is naturally lazy. But it seems when the average farmer is cooped up for a day or two by rainy weather that the accumulative ambition renders him hard to hold. It goes against the grain to sit at a window and listen to the steady drum of rain on the tin roof and gaze over the acres wherein the corn planter should be cheerfully chugging.

Then it is that the itch of ambition is hard to withstand. When we are a week ahead of the season's work we're willing to take things calmly. But when we get a week or two behind we're prone to agitation.

When the field force has been idle for a week or two the first few days had best be taken cautiously. Soil that has been beaten by incessant rains dries quickly on top but remains soggy underneath. Horses' feet or tractor wheels press this wet soil and render it impervious to the penetration of delicate plant roots.

Remember that there can be a tremendous amount of haste without much speed. Crops in a well-prepared seedbed have the best chance of making up for lost time. Folly may have forty acres of corn planted tonight; but the twenty that Wisdom plants tomorrow will occupy the most space in the end.

S. H. Green.

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What Our Readers Say

I READ "Subscriber's" letter and am getting fed up on farm kicking, that seems to be all you see in the farm papers any more. In the West there may be reason for it, but I doubt it, as I know central Pennsylvania personally and know the farmer is just as well off as his city cousin.

I am a farmer, have been for six years. Lived in a large city for four years preceding that and of course would cheerfully double my yearly income. Who wouldn't? We must be a little careful with our expenses, sure, but we have a better living than we had in town, and get to the movies as often as we care to go.

We have three kiddies, 4, 6 and 8 years, and would not think of taking them to the city to live.

I never made less than $150 per month in the city, yet left it broke except for plenty of furniture. Today I can show a net profit of close to $3,000 for six years' work. Sure we work, and play too.

I can show you hundreds of farmers with a mighty nice net profit and also hundreds of farmers who are just about ready to starve. Go to the city and you find the same thing, but a hundred children go hungry in the city to one on the farm.

What makes a successful farmer?

First: He must like his calling.

Second: Experience in farming.

Third: Ability to learn and make use of what he learns.

Fourth: Being willing to work when necessary to work, and get recreation when possible.

Fifth: Capital.

Sixth. Patience, patience and more patience.

I know men in city and town who can't keep a job three months. Some of them are just plain lazy, some are willing to work but lack ability, and their type on the farm is causing most of the kicking.

I know feeds, etc., are too high. Take bread. The farmer gets two to three cents per pound for wheat, pays two to four cents for bran and middlings and three to five cents for flour. No kick in that, but 15 to 25 cents per pound for bread is an outrage. Home-made bread is the best anyway.

As to county superintendents, we have, some real men who are willing to give their service for the good they can do. Some are just too lazy to exert themselves. Others have the education, but not the ability to do anything with more pay. H. S. H.

Dauphin county, Pa.

* * *

ON the Editorial Page of your May 25th issue I read with interest your articles, "Why" and "Who Should Speculate?". I agree with the editor, why should the American farmer need to ask for a subsidy on his products to bring them on par with other commodities which he must buy in exchange for his products? Why should those who manufacture and handle those commodities be protected by a tariff wall so high that it takes three or four dollars' worth of the farmers' products in exchange for one dollar's worth of their products? I am not a free trader, but unless the farmer gets some protection to equalize such inequality an entirely free trade basis would solve the farm problem and place everybody on the same footing.

The American farmer is amply efficient to produce farm products in competition with any farmers on the face of the earth, if the manufacturers of the commodities which the farmers must buy would be compelled to do likewise, so that he could buy on the open market, as well as sell. This would bring the farmer on an equal basis with other industries and that is all that farmers demand.

A better plan, however, would be to retain our standard of living, and overcome this inequality between agriculture and our other industries by having the prices of farm products fixed by an unbiased board of experts on an equal basis with other commodities, instead of having them fixed by speculators and gamblers. All the uncertainties are made by the gamblers. There need be no such uncertainties. The crop reports show fairly accurately the supply. The demand varies little year by year. There is no more cause to gamble in farm products than there is in farm machinery, fertilizers, shoes and clothing. The manufacturer figures his cost of production, adds his profit and fixes the price and there is no speculation or gambling about it.

If he has a surplus, that surplus is exported and sold in the world market in competition with the cheaper products of other nations and does not in the least affect the price of the same product in our home market. Why should not the farmer have the same privilege? Is he not a citizen of this great country which was founded on the principle of equal rights and entitled to the same protection on the part of the government? John Shoener.

Schuylkill county, Pa.

Before & After

This home is located on my father's (Benj. B. Leaman) farm in Lancaster county, Pa. We moved here on April 1st, 1928, and found the surroundings like the first photo, which was taken the latter part of April. We remodeled the house inside and out, filled up the lawn and sowed grass seed, planted flowers and shrubs and made all efforts possible to improve the living conditions and make it more home-like. I snapped the other photo in September showing the improvements.

Martha W. Leaman.





AFTER reading your, "Do you know a Master Farmer?" I am obliged to say, I do not. Indeed I was tempted to say: "There ain't no sich animile." However, your conditions do bar all but the very few. Even at that, I would add one other, this same to supersede all the rest. That the farm was purchased and paid for solely and entirely by the proceeds of farming by that particular farmer. This would automatically exclude all artists, artisans, business or professional men, statesmen or other office holders and all who acquired their farms by inheritance. Otherwise your contest cannot possibly be other than unfair.

Maintaining the high fertility of a good farm which has been built up by fifty or seventy-five years of steer feeding and regular liming is an altogether different matter from feeding up a farm so lean that the backbone sticks up, due to dozens of greedy tenants and stingy owners who only robbed it; just the same as there is a difference between keeping down the weeds where they were never permitted to gain a stronghold and killing them off the place that is choked and bound with morning glory, wild artichoke, jimson weed, chickory, wild onions, Canada thistles and poison ivy, or what have you? If the farmstead was originally conveniently arranged and substantially built the present owner need exert less energy and thought and have less expense to bring the place up to date and keep it in good repair.

And then,—Why, Oh why! do you trip up the knockers when you know that often they are the sanest men in the community, while the boosters usually merely wish to fur their own pockets? The old-fogy, narrow-minded people of other days worked hard and made extreme sacrifices in order that we may have an excellent start toward being master farmers on good farms, while we, in our pursuance of up-to-date enterprises, endow our children, yea, even our grandchildren, with grievous debts to pay.

Mrs. R. E. Brightbill, Jr.

Lebanon county, Pa.

Marginal Relief

I THINK we would be more certain as to the class of farm relief we need, if we knew the percentage of the marginal farmers which comprise the whole. Conditions soon alter circumstances. Marginal farm relief means ultra-prosperity for many now prospering farmers. How to help equally is a problem hard to solve.

On the same, and on the adjoining page of the issue wherein the marginal farmer was editorially discussed, are some of the facts that are real factors of the present divergence in agricultural prosperity.

A man wants to start farming and says he will need several thousand dollars for equipment. Mr. Horst says there are producing lands in Pennsylvania that can be bought for $25 per acre, and less. These are, no doubt, marginal lands; yet, many alert, capable men with capital can remove these lands from their marginal position.

I know of a great many farmers in need of better equipment. Equipment and capital in agriculture are often synonymous. There seems to be a real need of attracting men with capital, or its equivalent, ability, to sections where opportunity awaits; or rather where this type of men create opportunities. The East offers opportunities in farming which are frequently overlooked because they are so near home.

S. H. Green.

TIGHT BINDING TEXT CUT OFF

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THEY WANT TO WORK

A STUDENT of dairy husbandry in a great agricultural college asks us to find him a summer job on a high-class dairy farm. Another college boy wants a place on a first-class general farm. The names of these young men who want a chance to work and learn something at the same time will be given on application to this office.

WHEN ENTRIES CLOSE

THE closing date for Master Farmer nominations passes each year before all who plan to suggest candidates have done so. Names of those to be considered in the selection of the Master Farmers for 1929 must be mailed to this office not later than June 17th.

This will be our last comment on this subject for several months. During these months hundreds of letters will be written and thousands of miles of traveling will be done in connection with the Master Farmer work. We want the men finally elected Master Farmers to be truly representative of the best in eastern agriculture. If you know some farmer you think should be considered by the judges who make this selection, we remind you again of the closing date.

A HOME MARKET

HERETOFORE a coal company operating in Schuylkill county, Pennsylvania, has imported practically all of the hay consumed by its 1,600 mine mules—4,600 tons last year. Now the company plans to buy all of its hay in Schuylkill county, if possible. That should be good news to the farmers who have been looking in vain for hay buyers.

This is just another example of the almost unlimited markets existing in the East. Most of these markets will be opened to local producers eventually. But first more of us must learn that the way to break into the best markets is to offer what the buyer wants, not what we think he should buy or what we happen to have. Now that the Schuylkill county hay growers have their market we hope they hold it.

ILLEGAL

WE have a letter from a New Jersey subscriber in which he reports that two men in plain clothes, accompanied by two state troopers, came to his home and demanded to know the location of his mash tanks and still. Being a law-abiding citizen he was irritated at their manner, assured them that they were lying and asked them to show their search-warrant. This they refused to do, but they forcibly entered the barn, where they found nothing illegal. Our subscriber wants to know what right they had to invade his premises without a warrant. None at all. Their conduct was a clear violation of his constitutional rights, and the two state troopers, who are supposed to know the rights of all parties, should have protected him. The two federal agents should be discharged before their methods result in tragedy. We all believe in law enforcement but if that enforcement is to be respected it must itself be lawful.

SCATTERED INDUSTRY

"DIVERSIFIED farming is one of the ways to make safe farming. The difficulty is people often don't like diversified farming. They don't want to be busy the year around; they'd rather have one crop and more leisure." So says B. H. Crocheron, director of agricultural extension in California. Then we hear from Dr Julius Klein, Assistant Secretary of Commerce. After mentioning that the use of power has grown nearly four times faster than our population, and that in America we use as much electricity as all the rest of the world combined, he says: "This has made it unnecessary for factories to cluster in certain districts; there's a decided trend of industry to move to smaller-sized centers and to the country."

This trend of industry has been quite noticeable in Pennsylvania and even more so in some other sections. Does all this forecast a time when the one-crop and other unsuccessful farmers will eke out a living by working part time in nearby factories? If so, does this represent a healthy kind of agriculture? We think not, various authorities to the contrary notwithstanding.

HIDE FUTURES

THE first organized future trading in hides was established last week when the New York Hide Exchange began business. The first day's trading amounted to 2,000,000 pounds, largely in December and January deliveries at 17.10c per pound, though the range of prices was from 16.82c for August up to 17.12c for next May delivery. The president of the Exchange, after mentioning the violent fluctuations in hide prices in the past, said: "Trading in futures will not only permit hedging operations by producer, dealer and consumer but, through the concentration of opposing forces of opinion, will cushion price changes and stabilize our whole industry. This will establish a basis for easier financing, safer trading and the spreading of price risk incumbent on the business." If future trading is such an evil as our legislators fear why have two great industries established it, for the first time in history, within a few months?

AGRICULTURAL MARKETING ACT

THIS is the new title of the McNary bill, the so-called farm relief bill, known in the House of Representatives as the Federal Farm Board Act and in the Senate as the Agricultural Surplus Control Act. The conferees have given it a better name than it has had, and they have made several changes in it. The debenture plan is eliminated. The Federal Farm Board is composed of eight members and the Secretary of Agriculture, all appointed by the President without any territorial or other restriction. They are all to receive the same salary, $12,000 a year. A revolving fund of $500,000,000 is provided to be used largely at the Board's discretion. The provision for loans to cooperatives for the purchase of supplies was eliminated. Clearing houses are authorized for all commodities instead of perishables only. Unless the Senate holds it up the bill will get through both houses of Congress this week. Next will be the appointment of the Board, which is likely to disappoint several eloquent farm relievers.

FOR RESEARCH

THE twenty-six agricultural and other organizations which unite in a campaign for larger federal appropriations for research in agriculture have done some good and we hope can do more. For agriculture, a business of small units scattered over a vast area, cannot carry on its own research as other industries do. And other industries so highly esteem the benefits of research that they are spending about $180,000,000 a year on it, according to Dr. A. F. Woods of the Department of Agriculture. Before somebody holds up and says that agriculture is getting enough federal money and favors now let us say that research in agriculture is not merely for the advantage of agriculture. Its benefits are shared by all the people. It is a question whether the discovery of the Babcock test, for instance, has not benefited consumers much more than producers. The same is true of Louis Pasteur's great discovery, an incidental result of research in agriculture.

IS IT A DREAM?

WE have a few letters containing criticisms of the two great cooperative milk-marketing agencies in Pennsylvania. Can these critics remember when there were no such organizations? If they can they will see that much progress has been made even if perfection is still far away. The marketing of milk is a difficult problem always because of the nature of the commodity. It is particularly difficult under the shifting conditions of the present time, involving various developments in production, transportation, distribution and consumption. We should try to understand such difficulties before hastening to criticise those who are trying to overcome them. Some day, we hope, milk may find an open market for standard grades. That day is still far away, but recent improvements in refrigeration and transportation make it look a bit nearer than it did a few years ago. It is only another iridescent dream?

THE NATURAL WAY

THE knowledge that legislation in the interest of agriculture was on the program at Washington failed to prevent the decline in wheat. The special reduction in freight rates failed to check it. The proposed reduction of ocean rates has had little effect. And now the investigation proposed by a resolution before Congress promises nothing. Why spend time investigating a clear case?

The future price of wheat will be fixed by all the influences which naturally determine prices in open markets. If wheat goes below parity with other grains some of it will be fed to livestock. Whenever anything is cheap more of it is used in various ways and usually more is exported. At the same time production will be checked or reduced so far as lesser acreage will do it. All these influences will bring about readjustment better and quicker than any artificial plan, which may raise false hopes, confuse all interests and so delay the essential movement into consumption and disappearance of the trouble-some surplus.

More than once in the past agriculture has experienced and survived such conditions. Nor is agriculture alone in that experience. Similar conditions exist in coal, in oil, in wool and cotton manufacturing for example, in all of which productive capacity has gone ahead of the consumptive capacity of the country. There is no comfort in all this, but nothing is to be gained by hoping or expecting great benefit by some legislation or some official body. These may both be useful sometimes but they cannot overcome the effects of heavy production.

New Jersey Farm Comment

By G. W. HARRIS

AT the largest convention in the history of the Holstein-Friesian Association of America, held at the Benjamin Franklin Hotel, Philadelphia, June 4-5, Frank O. Lowden of Illinois was reelected for the ninth term as president of the association. Dr. L. M. Thompson of Montrose, Pa., was reelected vice-president for his sixth year. Houghton Seaverns, Battleboro, Vt., was reappointed secretary and Jas. Reynolds, Cleveland, Ohio, was reappointed treasurer. H. W. Norton, Jr., Delavan, Wis., will again head the advanced registry work. Directors elected for a four year term are: W. D. Roberts, Poland, N. Y.; Fred Pabst, Oconomowoc, Wis.; F. F. Elder, Mt. Hermon, Mass., and L. L. Wunger, Brush, Col.

Many Holstein breeders from Pennsylvania, New Jersey and nearby states attended this forty-fourth Annual Convention. Two of the largest delegations of New Jersey farmers came to Philadelphia by bus, 150 farmers from Somerset county and 75 from Hunterdon county.

On Tuesday afternoon nearly 1,500 people visited Winterthur Farms, Winterthur, Delaware. The trip was made by boat from Philadelphia to Wilmington where buses met the crowd to take them to the farm. Through the courtesy of Winterthur Farms the visitors were served dinner and later in the evening were taken to Longwood Gardens. Here the most enjoyable hour of the entire convention was spent in the conservatory and gardens. A gorgeous colored fountain display was staged especially for the guests.

A banquet attended by 500 made a grand farewell to the convention Wednesday night. The entertainment was made possible through the courtesy of the National Dairy Council, and under the direction of the Philadelphia Inter-State Dairy Council. The dance after the banquet helped the delegates and visitors to become better acquainted and many look forward to meeting again when the convention meets in Denver Col., next year.

Among the resolutions passed by the delegates was one endorsing a proposed tariff on imported registered dairy cattle. The amount recommended was 2½ cents per pound on cattle weighing over 800 pounds and three cents per pound on cattle weighing under 800 pounds. Registered cattle are now duty free, which is not true of grade cattle. Because of this many inferior registered cattle are being shipped to the states from Canada.

Another resolution adopted would add New Zealand, British Friesian and South African herd-books to those that are now accepted by the Association for registration.

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HOLSTEIN breeders from the Mid-West and South as well as the East attended the Sixth Brentwood National Sale of Holstein-Friesian cattle held at the Commercial Museum, Philadelphia, the two days following the convention. The sales totaled $94,707 and the 147 head averages $644.

Several leading Pennsylvania and New Jersey breeders consigned cattle to this sale. Those in Pennsylvania were: M. L. Baselhoar, Littlestown; John A. Bell, Jr., Pittsburgh; L. N. Boston, Philadelphia; Jesse Kurtz, Carlisle; Retreat Farms, Retreat; H. E. Robertson, York; H. A. Snyder, Montoursville, and W. A. Woods & Son, Carlisle. New Jersey breeders were: Bloomingdale Farms, Somerville; J. Irving Stryker, Millstone; M. J. Sheridan, Lebanon, and Mrs. H. C. Scudder, Trenton.

New York state consignors were: W. G. Monghton, Lowville; H. A. Knapp, Mechanicsville; Middleton Farms, Black River; P. B. Misner, Baldwinsville; Henry Morgenthau, Jr., Hopewell Jct., and Shawangunk Valley Farms, Wallkill.

Other breeders represented were: Winterthur Farms, Winterthur, Del.; J. Natwick, Baltimore, Md.; Springfield State Hospital, Sykesville, Md.; John M. Dennis & Son, Lutherville, Md.; Arbu Farms, Oxford, Mich.; E. M. Bayne, Romeo, Mich.; E. A. Baker, Rockingham, N. H.; F. H. Boyle, Peebles, Wis.; J. H. Brewer, Grand Rapids, Mich.; Carnation Farms, Seattle, Wash.; Dutch Creamery Farms; Firestone Farms, Akron, Ohio; Fredmar Farms, Jefferson Barracks, Mo.; Hargrove & Arnold, Norwalk, Iowa; Houck Brothers, Chippewa, Ont.; J. B. Jones, Romeo, Mich.; F. P. Knowles, Auburn, Mass.; Pabst Farms, Oconomowoc, Wis.; Hon. F. M. Peasley, Cheshire, Conn.; Raymondale Farms, Vaudreuil, Que.; Serradella Farms, Oscoda, Mich.; H. S. Seward, Perterburg, Va.; Wisconsin State Institutions, Madison, Wis.; Dudley E. Waters, Grand Rapids, Mich.; and John Zoberlin, Plymouth, Wis.

Bayneswood Calamity Ormsby, a bull calf consigned by E. L. Bayne, Mich., brought the top price of the sale when sold to Winterthur Farms for $10,100.

Pennsylvania buyers were: C. A. Spahr, Job Speltzius, Elverson, Indiana County Home; John A. Bell, Jr., Pittsburgh; Bell Farms, Coraopolis; M. G. Baschoar, Littlestown; Chester County Home; Neal M. Savage, Penn Run; Naaman Stoltzfus, Morgantown; H. O. Kimmel, Shoberg; Chas. E. Longacre, Royersford; David K. Bomberger, Annville; Ashley Farms, Newton Sq.; Webster Stayer, Spring City; George G. Sanders, East Earl; J. H. Phillipps, Greencastle; D. S. Engle, Lancaster; Elmer Stoltzfus, Elverson; R. Bruce Steward, Carlisle; J. H. Gray, Carlisle; Mast Stoltzfus, Morgantown; J. O. Vaughn, Retreat; Jas. L. Woods & Sons, Red Hill; Frank W. Fernsler, Lebanon; Cream Rose Dairy Products, Turtlecreek; E. O. Ludt, Carlisle; Ira M. Eby, Gordonville; Wm. S. Ker, Carlisle; C. D. Gerhard, Blairsville; H. A. Snyder, Montoursville; W. A. Wood & Son, Carlisle; Ira H. Stoltzfus, Elverson and Indian Rock Farm, Newtown.



About 300 people attended the Northern Section Spring Show held by the Eastern Shore Jersey Cattle Club near Newark, Delaware, on Saturday, May 25th, at the Chamber's Rocks' Farms, through which runs Mason and Dixon's line dividing Pennsylvania and Delaware. Fifty-one animals were entered by 22 members of this cattle club and junior club members. Seven young bulls were entered in the 18 months or under class for bulls. The first prize ribbon and cup was won by Catillon Gem, owned by Miss Margaret England of Earleville, Md. This animal is on the extreme right in the picture. In the class for cows, four and under five years, five animals were entered. The picture shows the first four placings with the winner, Aix Alma, an entry from the Coweview Farms, Glasgow, Delaware, on the left. The Parish Show of this Jersey Club is to be held at the University of Delaware Experiment Farm on Wednesday, August 28, 1929.
Ed. William, Jr., County Agent.

Other nearby buyers were: Winterthur Farms, Del.; I. Natwick, Baltimore, Md.; J. Harold Tenbrick, N. J.; McDonogh School, Md.; H. C. Baker, Laurel, Md.; Albert Winter, Malwah, N. J.; P. E. Kraminer, N. J.; McKendrick Walker, Md.; Nelson Sheenan, N. J.; Caill Coleman, Elmer, N. J.; Peter I. Van Nuse, Belle Mead, N. J.; and Wm. H. Wagner, Flemington, N. J.

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FIVE Mullica Hill dairymen have organized a bull association in order that they may most profitably improve their herds. They will purchase five pure-bred bulls and exchange them among the association members. This will enable them to keep good sires and prove them when their daughters come into production.

The members of the association are Charles H. Kirby, J. Willard Gardiner, Henry Edwards, Russell Skinner and Robert Duffield.

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THE New Jersey Experiment Station has worked out a control for the raspberry crown borer which seems to give very good results. A pyrethrum soap compound gave practically 100 per cent control when used at a strong concentration. A spray of a highly refined white oil emulsion gave nearly equal results when used at about one per cent concentration. At strong concentrations the oil resulted in injury to the canes.

The crown borer attacks both raspberries and blackberries. The annual value of these crops in New Jersey is nearly $1,000,000. In some sections, especially the Hammonton district, infestation is very heavy and has threatened to make the growing of cane fruits unprofitable.

ALL of the work in the certification of New Jersey poultry flocks will be under the direction of the State Department of Agriculture this coming year. Last year the department representatives inspected the birds for certification, took the blood tests, and sent the samples to the poultry laboratory at the New Jersey Agricultural Experiment Station for the agglutination tests.

To obtain closer coordination between the different phases of the inspection work, the department inspectors will carry or send the samples from nearby points directly to Bureau of Animal Industry laboratory at Trenton. Where this is not possible samples are to be sent via parcel post with special delivery and special handling stamps on them to insure rapid transit to the laboratory. This year experienced bleeders will accompany each inspector to take the blood samples.

Last year the department inspected 128,695 birds for certification and had 104,000 under supervision.

Maryland Notes

THE state of Maryland will be represented at the third annual National Boys' and Girls' 4-H Club Camp, which will be held in Washington, D. C., under the direction of the United States Department of Agriculture from June 19 to 25, by Oland Howard, of Frederick county, Caroline Ebling, Caroline county, David Trundle, Montgomery county, and Dorothea Enfield, Harford county.

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PLANS have been completed, according to Dr. R. A. Jehle, specialist in plant pathology for the University of Maryland Extension Service, to conduct the annual Worcester county potato tour on June 21. This tour, which is held under the auspices of the Extension Service and the Experiment Station of the University of Maryland in cooperation with the Worcester County Farm Bureau, is a continuation of a similar one held in the two Eastern Shore Virginia counties the day previous. Six farms in all will be visited in Worcester county and the work inspected will cover everything from the value of various fertilizers on potato plots to the importance of size in the seed piece.

I SPENT a very pleasant days with the Guernsey breeders of Lancaster county last Thursday, the occasion being their annual field day and picnic held on the farm of Harry Snavely near Willow Street. These folks seem to be able each year to pick out an ideal day for this event, for the weather was all one could hope for. But this very weather kept many farmers away, for they were in the midst of tobacco planting and cultivating corn. A later date for the event might bring out more people.

The chief feature of the day's program was the showing and judging of twenty-three club Guernsey heifers. These were distributed among the boys in two clubs on last year's field day. The heifers made excellent growth during the year and as a whole were shown in excellent condition.

George Maule and John Hastings showed the best two animals in the Colevaine Calf Club round-up, and Harold Brenneman and Ben Snavely took first and second places in the Better Butter Dairy Calf Club exhibit.

M. H.

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THE increasing crowds that attend the Devon Horse Show held each spring on the fair grounds at Devon, Pa., is simply more evidence of the fact that good saddle horses and fancy driving horses are coming back into popular favor. This may not be of much interest to an average farmer, but to the man in position to produce the kind of horse wanted by city folks it may open up the opportunity for a profitable enterprise.

COMING EVENTS

July 29-Aug. 2.—International Baby Chick Ass'n, annual convention, Minneapolis, Minn.
July 31-Aug. 1.—Second annual gladiolus show, Convention Pier, Cape May, N. J.
Aug. 26-31.—New York State Fair, Syracuse, N. Y.
Sept. 16-17.—Trenton flower show, 2nd Regiment Armory, Trenton, N. J.
Oct. 15-19.—National Dairy Show, St. Louis.
Sept. 15-21.—Eastern States Exposition, Springfield, Mass.

TIGHT BINDING TEXT CUT OFF

The Timber Treasure

By FRANK LILLIE POLLOCK

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THE wood was so old and weather-worn that it was impossible to identify it; Fred whipped out his knife, and as he chipped off the outer skin, he saw the unmistakable rich, hard, dark grain. He had discovered the timber treasure—or part of it, at any rate.

Here it must have been sunk, in the shallow water near the shore where it had been driven that stormy night twenty-eight years ago. Later, the water had receded, and a crop of evergreens, springing up quickly, had concealed the visible part of it from the few who had passed that way. It might have remained forever lost if the fire had not laid it bare.

Fred poked into the sand with a sharp stick, and felt more timber here and there at a little depth. A veritable mine of black walnut lay beneath him. The story said that the raft had contained forty or fifty thousand feet. Probably that was exaggerated and probably not all of it had grounded here; but black walnut is worth a high price nowadays, and Fred felt that what was there should be worth enough to cover the loss of the pulp-wood.

He hurried here and there excitedly, probing the sand, chipping into the visible logs. He was so absorbed that he noticed nothing until, turning, he saw Harrison within a few yards, observing him with the utmost interest.

"What are you doing? I've got the canoe," said Harrison.

He strolled forward, tapped one or two of the logs, and eyed them critically. "Some fellow's been fond of cutting his initials on the timber. 'DM,' isn't it? Who do you suppose 'DM' was? It looks old."

"Hard to say," replied Fred, suddenly and nervously on his guard. "Let's cross over."

He wanted to get his companion away from this spot at once. The walnut timber, to be sure, was deposited on land where his father had bought all the timber, and whether the timber was fallen or standing was surely all one. Still, he did not want any one to detect the treasure till he had well established his claim.

Harrison did not hurry. He surveyed the spot for some minutes, and then they crossed the channel and walked up the shore again to the spot where they had spent the night.

Above all things, Fred was now impatient for Bert to reappear. He wanted to get away from the lake at once, to go back to Toronto, and to arrange for digging up the raft. Still, he could not abandon the naturalist, who owned all the food supplies; and, moreover, the canoe would carry only one at a time.

He established himself on the point of the headland again, with his back against a tree. The smoke had greatly cleared, and Bert could hardly come down the lake without their seeing him. At a little distance Harrison sorted his wet supplies, and laid them out to dry.

THE day had become warm and sunny, and Fred was very tired. In spite of his excitement, he felt himself growing drowsy, shook himself awake twice or thrice, but finally lapsed into a dream of fabulous millions.

He awoke with a guilty feeling that he had slept a long time. In fact, the sun showed that it was fully noon. There was no canoe on the lake, and he could see nothing of Harrison. He called him several times, but got no answer. He went down to look along the shore, and found that the canoe was gone.

The naturalist might have gone out to explore a little, he thought. But the next minute he made a more alarming discovery. He found Harrison's boat bottom up, the planks so beaten in with a heavy stone as to be beyond repair. And all the supplies that it had contained were gone from the shore, where they had been drying—the flour, the bacon, even all the dry matches. Harrison must have transferred everything into the canoe while Fred slept, and departed.

The boy was stranded in the wilderness.

For some minutes Fred could not realize how heartlessly he had been deserted. Then his astonishment grew into hot indignation. It was little better than murder to desert a man in the woods like that without means of transport or of making a fire, and without provisions. He had probably saved Harrison's life, and Harrison had repaid him with this dastardly blow.

The reason of it was plain. The fellow also must have discovered the walnut logs.

Fred could not doubt it, and as the probabilities fell into line, he struck his hands together in anger that he had not been more watchful. The boat with the glass bottom for examining the depths of the lake, the absurd explanation of the fish baits—it was clear enough now. Harrison had probably been prospecting there for weeks, and, by ill luck, Fred himself had shown him what he sought.

And now Harrison had undoubtedly hurried away for help, leaving Fred, as he supposed, crippled in the woods.

If only Bert would come with the other canoe! Fred walked up and down the shore, looking down to the place where the treasure lay, and tried to remember all that he had heard of the sinking of the raft.

Thirty years ago, there was rather more life in that part of the Ontario wilderness than there is now. Some short-lived attempts at settlement were being made, and lumbering was still an active industry. Logging roads, now choked with brush, were to be seen here and there, and there was a sawmill on the Bala River, ten miles west of Coboconk Lake.

The David Wilson Lumber Company, a small concern of which Wilson himself had virtually complete control, had cut most of the pine thereabouts, and had also cut the walnut raft. At that time no one regarded black walnut very highly. A market was lacking, and the rich timber was used for firewood and fence-rails; but Wilson had got a government contract to supply a large quantity for shipment to England, where it was to be made into rifle-stocks for the British army.

The timber was brought out to the head of Big Coboconk, and was to be floated down to the foot of the lower lake at the end of the fall. Thence they would haul it to the Bala mill to be squared and cut into pieces of more convenient size. Later, they would have to haul it to the railway, then sixty miles away.

The start of the raft, for some reason, was delayed until too late in the season. It was early in November when it was finally put together with pine logs to keep it afloat, and launched down the lake. There is a gentle drift from north to south, and the lumbermen aided this with huge sweeps and a sail.

They were not more than halfway down Big Coboconk, however, when a strong northwest wind sprang up, it turned cold, and began to snow. It was then late in the afternoon; the wind continued to rise, and toward midnight the huge raft began to go to pieces. The men aboard it had to take to their bateaux and row ashore in a howling storm of wind and snow.

A blinding blizzard blew all the next day, when it cleared, there was nothing visible of the raft. A search of the shore revealed a good deal of the pine framework, but almost all the walnut timber had evidently broken loose and gone to the bottom.

That storm marked the beginning of a very early winter. For in another day the lake was freezing. Nothing more could be done. During the winter Wilson got a fresh supply of timber for his contract. In the spring no trace could be found of the lost raft, but the story entered into local tradition, and for years spasmodic attempts were made to find it, without any success. The lumbermen were in no way sure where the raft had been when it broke up; in that dark night, the lake is large, and a few miles' drift had been believed that the timber must be somewhere in the mud to be recovered.

Fred now felt that he could not be in error. Some of the timber, at any rate, was there. There should be thirty or forty thousand feet, scattered along a great reach of the shore. Walnut was then worth, in logs, from $150 to $200 per thousand; but if the wood was cut up and dressed in his father's yards and sold direct to the consumers, it would be made to fetch a much higher figure. Fred felt little doubt about the ownership of the raft. Not only might it come under the head of treasure-trove, but it lay on the land where his father had bought the timber—all the timber, new and old, standing or fallen.

EVIDENTLY Harrison looked at the matter otherwise, probably ignorant of Gillespie's claim. Possibly, he counted on getting the lumber off the lake and selling it before the news of its discovery could spread. As soon as it was dug up, the timber could be sold where it lay.

Fred, thinking matters over, felt confident of his ability to block this plan. Lake Nelson, where the university party that he had intended to join was encamped, was not more than twenty or thirty miles away. There were eleven men there, nearly all intimate friends, and he felt sure that he could depend on them to help him. With such a force, he could hold the fort in spite of Harrison.

He continued to look out for Bert, however, until it struck him as probable that Harrison had met Bert, and sent him astray. He might have told him that Fred had perished in the fire, or that he had gone north or south. Fred felt that he dared not wait longer at the lake.

From a previous study of a large scale map, he remembered that Lake Nelson lay to the northwest, with a large river, the Wanegan, flowing into it from the east. There was no sort of trail, so far as he knew, but the lake and the river together formed too large a target to miss in thirty miles.

Fred was exceedingly hungry, having eaten nothing since early morning, but he knew that the longer he waited the emptier he would grow. He cast a last searching glance up and down the lake, and struck out to the northwest.

Half a mile back from the lake the land began to rise in great, rolling uplands, and as he reached the top of these, Fred beheld an immense area of wilderness in every direction, a sea of bluish-green spruce, with here and there a spot of silvery shimmer that marked a little forest lake.

The afternoon proved fine. The ground was not too rough for traveling at a vigorous pace all the rest of the day, although Fred's empty stomach grew more and more ravenous as the hours passed. It was a bad time of year for foraging in the woods. There were neither nuts nor berries as yet, and Fred did not know the edible roots. He had no fishing-tackle; and although partridges were so plentiful and tame that he could have killed them with the rudest weapon he had not the weapon, nor the means of making a fire to cook them; and above all, he dared not waste precious hours on what might be fruitless hunting. By the time the sun reached the treetops, he calculated that he must have come more than two-thirds of the way.

Through the long, northern twilight he stumbled doggedly on, up and down the spruce ridges of that season and place it does not grow fully dark until nearly nine o'clock, and it was still light enough to see when he heard the sound of a large and rapid river. Feeling certain that he struck the Wanegan, he hurried joyfully forward. But to his consternation, the stream was flowing in the wrong direction—southeast instead of southwest.

(To be continued.)

The Cheerful Plowman



A TEST OF FRIENDSHIP

YES, we were pals, the Hills and we, for many, many years, throughout the days when all of us fought hardships, stress and tears. Our progress then, the gains we made, were quite the same, you see, and every little gain we made was made by slow degree. But, once I had a streak of luck, my crop grew rank and fair, while Hill's good farm was hit by hail which left it thin and bare.

The friendship of the Hills cooled off, at least it seemed that way; associations lost the touch they had in former day. We each built homes, but our home stood with larger wall and floor, and then the friendship of the Hills cooled off a little more. We built a barn as time went on, a larger barn than Hills', a shed that had a longer sweep and more expansive sills, and then the Hills, —I'm sure I'm right,—who felt the pinch of debt, looked at those buildings over here and grew much cooler yet.

In time the Hills took on a car and we did, too, of course, but our car was a larger car, it had more size and force, and then although no words were said to show the Hills were sore, I'm satisfied their coolness then was multiplied by four.

And, so it's been, year after year we've prospered more than they, we've found more butter in our cream, more fragrance in our hay, and even though we'd loan the Hills our choicest cup or plate, and even though we bear the Hills no envy, spite or hate; yes, even though we wish the Hills had twice as much as we, there is a coolness in the Hills we cannot help but see. J. E. T.

The Farm Home

Why Children's Teeth Decay

By HEPSY NEFF

NOTHING has been more surprising in the health work of the schools than to find the many decaying teeth of young children. Even the first teeth are sometimes more broken and discolored stumps. Sometimes they loosen and come out too soon, leaving an empty space in the jaw. The rapid general growth of the child lessens this space so that the new tooth is often forced into a space too small for it, leaving a crooked tooth for life. After we have read that uncivilized people have strong, clean, white teeth we begin to ask questions.

Only in recent years has any one been able to tell what is the cause of this early and serious decay of children's teeth. Naturally, our most dependable information has come from dentists and naturally, too, the first cause is defect in diet, beginning with the mother. A healthy tooth has a surface coating of enamel almost as hard as steel and back of that is plenty of lime in the system. When a dentist finds this protecting outer layer as soft as a fingernail he knows there is no hope for a lasting tooth. But why this soft surface layer?

Since farming has taken on the methods of big business and is more and more demanding "why," we have learned that a soil can become too sour to produce a big and vigorous crop of corn. By adding lime to that same soil a fine crop can be produced next year. We have learned the needs of the soil and we must learn the needs of the body if we want a perfect crop of boys and girls. Lime is as necessary to the growth and health of the body as it is to a crop of corn. We can only cure the lack of lime in our bodies by eating foods rich in food-lime. Fortunately our scientists have gone so far in a study of the chemistry of foods that we can now know definitely how to meet such lack.

Strawberries stand at the head of the list as food rich in lime. They are also rich in food-iron, equalled only by fresh figs and raspberries. The vegetables that contribute both food-lime and food-iron are fresh young Lima beans and green peas. But all vegetables are at their best in mineral salts only when freshly gathered and when very young. String beans in which the shape of the bean barely shows are rich in mineral salts but the same beans when fully grown are deficient in mineral salts. Even the best of sweet corn loses when too mature and is so changed in twelve hours after it leaves the stalk that it is of less food value, even dangerous for young children. It is the precious mineral salts, the vitamins in fruits and vegetables and milk which keep the blood sweet and rich and keep health up to par.

When we were children we were told that, "An apple a day keeps the doctor away." Our fathers learned the value of apples by experience and many of us remember the big bowl of apples always brought into the sitting-room after supper. In these days our trained chemists and research workers are telling us that apples are "rich in phosphorus, sulphur, iron, magnesia and lime; in fact, the best of all fruits." Apples are especially valuable in winter when for months we are shut away from sunshine and fresh air. If our apple growers want to put on a campaign to increase the use of apples they will find plenty of material in the hands of food specialists to show that the apple heads the list of fruits both as a food and as a medicine.

We Pull Out

THE after-the-war slump caught us in bad shape. Our parents—farmers on both sides of the house—felt that there was no hope for us.

"We've worked ourselves almost to death with our hands," we decided. "Let's sit down and work with our heads." Things looked pretty discouraging but we made six resolutions which we have stuck to for five years. And we're pulling out all right! Here they are; maybe they will help some one else:

1. To raise our own supplies as far as possible, food for ourselves and feed for our stock. Our feed costs diminished but always will amount to considerable because my husband believes in giving his stock as good a ration as he can get.

2. To pay as we go just as far as possible. The best 'manager' in the world will buy a little more carefully if cash is paid for the purchase. And paying cash eliminates many mistakes in accounts.

3. To contract no unnecessary debts; to use our good credit as sparingly as possible; to expand our business gradually as a natural growth. Our progress has been a little slower but it has been surer. For example, we did not gamble in high-priced cows, choosing rather to raise our own best heifer calves. But when we found a fancy market for our cream we borrowed money to buy a good separator.

4. To preserve our present buildings in the best of shape but not to build unnecessary new ones during the period of inflated prices. We've kept roofs tight and buildings painted. We've tried to make improvements that cost little or nothing such as planting trees and shrubbery, grading the lawn and clearing away brush and stones.

5. To budget our debts. We worked out a system of paying a stated amount each month or each quarter. This gave us a goal to strive for and gave our creditors a feeling of assurance. It is surprising how regular payments, even though small, will wear away a debt.

6. To keep our own work right up to the mark so that we could sometimes do a little extra work outside without neglecting things at home. It is surprising how much can be "picked up" during the year by means of a little outside work with the tractor or truck or a little occasional shop-work.

A. M. A.



Farm house in Czechoslovakia. The entrance is through the arch in the corner. Some farm employes live in the section at the left and next to them are the cows. Behind the ornamental outer staircase is the piggery. These splendid big white animals look like pure-bred Chester Whites and are living in an arch-ceiling room that looks as though it might have been a castle hall. Straw is stored in the second story.

Note the pile of manure in the center of the court. Chickens and geese wander everywhere. Barefoot women do all the barn work. Diagonally opposite the entrance and also facing on the center court, live the employer and his family with only an arched passage-way separating his home from the horse stable. E. E. B.



Food Combinations That Are Different

By ELLEN S. BRINTON

WE are continually being told that for health's sake we should eat plentifully of spinach, carrots, prunes and other rather commonplace fruits and vegetables. To find a new way of preparing them is a real help. Here are some combinations I have recently enjoyed at the homes of various friends.

Spinach and Cheese

Butter a baking dish. Place in a layer of spinach. Sprinkle over with grated or very thin slices of cheese; add another layer of spinach and cover again with cheese. Place in a moderate oven and heat long enough to melt the cheese and slightly brown the top. This is a good way to use left-over spinach. It is a delicious dish and does not taste like either spinach or cheese.

Carrots and Onions

Cook diced carrots and sliced onions separately until tender. Pour off the water from both and save for soups. Combine the two vegetables, add a thin cream, thicken with flour slightly, let cook thoroughly and season with salt and pepper. Those who cannot be coaxed to eat plain carrots will often enjoy them this way.

Tomatoes and Eggs

Butter a baking dish, either enamel or aluminum. Cut fresh tomatoes in slices, place in the pan and cook on top of the stove until tender and brown on both sides. Season with salt and a little pepper. Pour over the tomatoes an omelet mixture of eggs and milk in proportion of one cup of milk to six eggs. Cook slowly until eggs are set and send to table at once in the same pan. If cooked on top of stove, cover while cooking the egg mixture. Preferably use the oven so as to brown the top.

Dried Beef and Tomatoes

This is just plain frizzled beef, but either stewed tomatoes, or strained tomato juice is substituted for about half of the milk. Frizzle beef in drippings as usual, add flour and brown slightly. Then add the tomatoes and bring to the boiling point. Lastly add the milk and cook, stirring constantly to prevent lumps. This never curdles if combined as directed, and is a most delicious combination.

Stewed Apples with Orange and Lemon

Slice an orange and a lemon very thin, cutting across the grain in complete circles. Cook in a syrup of sugar and water until almost tender, then add apples cut in quarters. Continue cooking until the pieces of apple are tender and clear but still whole. York Imperial apples are especially good for this as they hold their shape well when cooked.

Prunes and White Cherries

Cook prunes as usual, taking care to keep them whole. When done add equal quantity of white ox-heart cherries—either home or commercial canned variety. Let boil up once to blend the flavor. This combination is not only good to eat but the black and white color makes a very rich-looking dish.

To slice hard-cooked eggs without crumbling use a hot, dry knife.

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Salt the fish both inside and out before stuffing to get the best flavor.

TIGHT BINDING TEXT CUT OFF

GREEN FOREST HUSKY CHICKS

English and Tancred Strain

Ship C. O. D.	25	50	100
S. C. White Leghorns	$2.50	$4.75	$ 8.00
S. C. Barred Plymouth Rocks	2.75	5.25	10.00
Mixed chicks	2.25	4.25	7.00

We guarantee 100% strong chicks on arrival.

GREEN FOREST POULTRY FARM.
J. W. Amig & Son, Star Route, Richfield, Pa.

BABY CHICKS

	25	50	100	500	1000
Wh., Bl., Bf. and Br. Leghorns	$2.75	$5.50	$10	$49	
Rocks, Reds and Wyandottes	3.50	7.00	13	64	
Heavy Broilers	3.25	6.50	12	59	
Light Broilers	2.75	4.50	8	39	

Twenty-four page catalogue free. 19 years in business. Hogan tested flocks. Postage paid. 100% delivery.

JOHNSON'S HATCHERY, ICKESBURG, PENN'A

ULSH'S Superior CHICKS

	50	100	500
White Wyand....	$5.25	$10.00	$47.50
Wh. & Bfd. Rocks	5.25	10.00	47.50
Heavy Mixed	4.25	8.00	37.50

100% live delivery guaranteed. Postage paid.

JAS. E. ULSH, Beaver Springs, Pa.

HILL SIDE CHICKS Will Ship C. O. D.

Special Workoff Strain	8 cts per 100
Special Tancred Strain	8 cts per 100
S. C. W. Leghorns	9 cts per 100
Barred Rocks	9 cts per 100
Owens Strain Reds	9 cts per 100
Light Mix	7 cts per 100
Heavy Mix	8 cts per 100

100% live delivery. Special prices on large lots. Less than a hundred, add one cent a chick.

T. J. EHRENZELLER, Prop.
United Phone Box 11, McAlisterville, Pa.

Reduced Chick Prices

In effect June to October. 25 50 100 500 1,000
Large Type Wh Leghorns 42.50 $5.00 $10 $47.50 $90
Bfd. & Wh. Rocks, Reds 3.00 6.00 12 57.50 110
Wyandottes, Orpingtons 3.25 6.50 13 62.50 120

Light Assorted 8c, Heavy Assorted 10c.
Live Delivery Guaranteed. Catalog Free.

Lantz Hatchery, Tiffin, Ohio

BABY CHICKS Order direct from this ad and save time

Free Range bred 25 50 100 500 1000
White & Brown Leghorns $2.25 $4.25 $ 8.00 $ 39.00 $ 75
Anconas & Blk. Leghorns 2.25 4.25 8.00 39.00 75
White and Barred Rocks 2.75 5.25 10.00 49.00 95
Colors, Wyan & R.I. Reds 2.75 5.25 10.00 49.00 95
Heavy Mixed Broilers 2.50 4.75 9.00 44.00 85
Light Mixed Broilers 2.00 3.50 6.50 31.50 60

Full count and quality guaranteed. Catalog free. For Greater Profit Lish Poultry Farm & Hatchery, Hatchery Chicks Box F, Port Trevorton, Penn'a

STOP! LOOK! and take notice to the special low prices on Cockerels, Black Minorcas For June Delivery.

	25	50	100
Tancred strain White Leghorns	$2.50	$4.50	$8.00
Regular Strain Brown Leghorns	2.50	4.50	8.00
Barred Rocks and S. C. Reds	2.50	4.50	8.00
Light mixed	2.25	3.50	6.00
Heavy mixed	2.50	4.50	8.00

100% live delivery guaranteed. Parcel post prepaid. Special prices on 500 and 1000 lots. Free circular.

COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

PENN'A CHICKS FOR JUNE

Have vim and vigor—hatched by men with 18 years experience. Prepaid and 100 per cent live delivery guaranteed.
S. C. White and Brown Leghorns, 9c each; Rocks, 10c; Reds and Minorcas, 12c; Heavy mixed, 8c; Light breeds, 8c; $70.00 per 1,000. Circular free.

THE PENNA. HATCHERY, Liverpool, Pa.

Quality Chicks at Low Prices

Variety	100	500	1000
United Strain Leghorns	$7.50	$36.00	$70.00
Barron or Workoff Leghorns	8.00	37.50	75.00
Special Leghorn Workoff only	9.00	42.50	85.00
Barred Rocks	9.00	42.50	85.00
Mixed Chicks	7.00	34.00	65.00

L. E. STRAWSER, McAlisterville, Pa.

PEARIS STRAIN WHITE LEGHORN CHIX

Our breeders are large birds; long, deep, rectangular bodies. Selected for size, type and egg production.
$8.00, per 100; $37.50, 500; $70, 1,000
JUNIATA POULTRY FARM, Box P, Richfield, Pa.

Chicks 7c Up Long's Large Type Barron Strain

S. C. W. Leghorns, 2 yr. old breeders, $10.00 per 100
S. C. W. Leghorns, 1 yr. old breeders, 8.00 per 100
Barred Rocks ..... 10.00 per 100
Assorted ..... 7.00 and 9.00 per 100

Prepaid live arrival and satisfaction guar'd. Catalog.

TURKEY RIDGE HATCHERY, Millerstown, Pa.

Klines' Barred Rocks

Healthy stock. Penna. State Col. mates. Strong chicks guar. Prompt del. C.O.D. $10.00,-100; $90.00, 1,000. Write or wire.

S. W. KLINE, Box 20, Middlecreek, Pa.

WYCKOFF STRAIN WHITE LEGHORNS CHIX

$8.00 per 100 $37.50, 500 $70.00, 1,000

100% prepaid safe delivery guaranteed

J. J. Haas Poultry Farm, Box A, Richfield, Pa.

Chicks, Barron Eng. Wh. Leghorns 8c

White Leghorns 7½c; Barred Rocks 10c; heavy mixed 8c; light 7c. Reduced on large orders. 100% guaranteed. "New Circular Free." July and August delivery.

TWIN HATCHERY, McAlisterville, Pa.

S. C. W. Leghorns, $8.00-100, Barred Rocks, $10.00-100. White Rocks and Reds, $11.00-100. Broilers, $8.00-100. Add 2c if less than 100 lots. My chix are all from good culled stock. I pay postage. Special prices on large orders. Circular free.

JACOB NEIMOND, Box 4, McAlisterville, Pa.

Navy Brand Concentrated Buttermilk

From Tuberculin Tested Cows

28 per cent milk solids, 8.6 per cent lactic acid, thick as cream with no foreign ingredients. Reduces leg-weakness and lessens danger from coccidiosis. Increases egg production and promotes fertility and hatchability. Used for chicks, broilers and laying hens. Sold direct from the factory in barrels of about 185 lbs. Write for prices.

TITUSVILLE DAIRY PRODUCTS CO.
Titusville, Pa.

WHITE CAMPINES

Greatest All Year-Round Layers

Superior to Leghorns. One customer writes: "2435 per profit in 5 months." Another: "A flock of 24 hens laid an average of 194 eggs in a year." Sold another 210 Leghorns had 38% production in Dec. and 35% production in Jan. while 247 White Campines had 42% production in Dec. and 29% in Jan. CATALOG FREE, stamps appreciated.

NABOB POULTRY FARM, Box 22, Gambier, Ohio

BROILER—RAISERS

SHIPPING CRATES LOANED FREE

SHIP YOUR LIVE BROILERS and other poultry to New York's oldest Live Poultry House. Est. 1887. We are Soudat commission merchants. Birds fed, returns made daily. Higher prices. Our outlet is unlimited. Inquire quick us. Write for quotations, crates, tags, shipping instructions and Historic Calendar. Folder F 2. KRAKAUR POULTRY CO., Inc., West Washington Market, New York City.

BABY CHICKS

PROMPT DELIVERY—WILL SHIP C. O. D.

	50	100	500	1000
Light Mixed	$4.00	$7.00	$33.00	$62.00
Heavy Mixed	4.50	8.00	37.50	70.00
S. C. W. Leghorns	4.50	8.00	37.50	70.00
Bd. & Wh. Rocks	5.50	10.00	47.50	90.00
S. C. R. I. Reds	5.50	10.00	47.50	90.00

PINECREST POULTRY FARM & HATCHERY
Herbert Miller, Prop. Box 2, Richfield, Pa.

BABY CHICKS

FROM HEAVY LAYING FREE RANGE FLOCKS

	25	50	100	500	1,000
S.C.W. & Br. Leg.	$2.50	$4.50	$8.00	$37.50	$70
S.C. Rocks & Reds	3.00	5.50	10.00	47.50	90
S.C.Buff Orpingt'as	3.00	5.50	10.00	47.50	90
Wh. Wyandottes	3.00	5.50	10.00	47.50	90
Assorted Chicks	2.25	4.00	7.00	32.50	60

100% prepaid safe delivery guaranteed. Order from this ad or write for circular.

J. N. NACE POULTRY FARM Richfield, Pa. Box 3.

BABY CHICKS

	50	100	500	1,000
White Leghorns	$4.50	$8.00	$37.50	$70.00
R. Rocks	5.50	10.00	47.50	90.00
S. C. R. I. Reds	5.50	10.00	47.50	90.00
Buff Orpingtons	6.50	12.00	57.50	110.00
White Rocks	6.50	12.00	57.50	110.00
Heavy Mixed	4.25	8.00	37.50	70.00

All chicks from free range farm flocks. 100% live delivery guaranteed. Send 20% deposit, balance C. O. D.

MONROE HATCHERY, Box 10, Richfield, Pa.

Baby Chicks

From Free Range Selected Flocks

June and July. 50 100 500 1,000
White Leghorns $2.50 $4.50 $8.00 $37.50 $70
R. Rocks & Reds 2.75 5.50 10.00 47.50 90
Light Mixed 2.25 4.00 7.00 34.00 65
Heavy Mixed 2.50 4.50 8.00 38.00 75

100% Prepaid Safe Delivery Guaranteed
Fair View Poultry Farm, R. 3, Millerstown, Pa.

ValleyViewChicks

	50	100
Tancred Strain Wh. Leghorns	$2.25	$3.50
S. C. W. Leghorns	2.50	4.50
R. Rocks & R. I. Reds	3.00	5.50
Heavy Mixed	$3.00	Light Mixed $7.00

500 lots 5c less—1,000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for free circular

C. F. LEISTER, McAlisterville, Pa.

BABY CHICKS

Tancred Str. Wh. Leghs.	$9 per 100
White Leghorns	8 per 100
Barred Rocks	10 per 100
S. C. Reds	10 per 100
Heavy Mixed	9 per 100
Light Mixed	7 per 100

500 lots 5c less—1,000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for free circular

C. F. LEISTER, McAlisterville, Pa.

BEST QUALITY CHICKS

(Cash or C. O. D.)

	25	50	100
Tancred Strain White Leghorns	$2.50	$4.50	$ 8.00
S. C. Brown Leghorns	2.50	4.50	8.00
S. C. Barred Rocks	3.00	5.50	10.00

Light Mix $7.00. Heavy Mix $8.00 per 100.
100% arrival. Postpaid. Special price on large lots.

Chester Valley Hatchery, R. 2, McAlisterville, Pa.

LOOK! DUCKLINGS

Postpaid. Live Arrival Guaranteed. White Pekins, White and Fawn Indian Runners, Rouens, and Buff Orpington Ducklings. They make the most profitable broilers known. Will weigh 5 lbs. in 8 weeks. Catalog free. Stamps appreciated.

KABUS POULTRY FARMS, Box 22, Gambier, Ohio

ZELLER'S EXTRA QUALITY CHICKS

from Large Type S. C. White Leghorns. Trapnested, production bred matings 19—190; 211—250; 185—1000. Also quality Rock and Reds. 10% books order.

EDGAR A. ZELLER,
2016 Manada St., Harrisburg, Pa.

WHITE LEGHORNS	$7.00 a hundred
Brown Leghorns	7.00 a hundred
Black Minorcas	10.00 a hundred
Rocks	10.00 a hundred

Mixed chicks, $6.00 & $8.00 for light and heavy.

ECLIPSE HATCHERY, Port Treverton, Pa.

BARRON and WYCKOFF STRAIN

S. C. White Leghorn chicks for June 9 cents each; $80.00 per 1000. Prepaid and safe delivery guaranteed Our 12th year. Circular free. 31 books order.

THE PENN'A HATCHERY, Liverpool, Pa.

JUST GOOD CHICKS

Barred and White Rocks, R. I. Reds...$11.00 per 100
Leghorns and heavy mixed ..... 9.00 per 100
$1.00 per 100 deposit, balance C. O. D. Member IBCA.

SUSQUEHANNA HATCHERY
R. Ray Miller, Prop. Millersburg, Pa.

For Warm Days



No. 3483. The Important Style Set. Designed in sizes 1, 2, 3, 4 and 6 years. Size 4 requires 1¾ yards of 36-inch material with five yards of binding.

No. 2541. New Loveliness. Designed in sizes 16, 18 years, 36, 38, 40 and 42 inches bust measure. Size 36 requires 3⅞ yards of 40-inch material with ⅝ yard of 27-inch contrasting.

No. 2717. Refreshingly New. Designed in sizes 16, 18 years, 36, 38, 40 and 42 inches bust measure. Size 36 requires 3¾ yards of 40-inch material with one yard of 32-inch material for camisole.

How to Order

Write your name and address clearly. State number and size of each pattern. Price 15c each, two for 25c. Our Fashion Magazine will help in preparing your wardrobe. Copy alone 15c; with a pattern only 10c. Address Pattern Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

When Eggs Are Plentiful

HERE are a few delicacies we try having at this season when eggs are not too high priced nor scarce to forbid such goodies.

Chocolate Delight.—Carefully melt two squares of unsweetened chocolate. Beat the yolks of six eggs and add one cup sifted granulated sugar. Then beat hard and frothy. Add the hot melted chocolate slowly, beating constantly, as the heat of the chocolate partly cooks the eggs.

Now beat the egg whites till dry. (If all right you can turn the bowl upside down and the eggs stay put). Fold the beaten whites into the chocolate mixture, lightly, adding also one teaspoon vanilla and a pinch of cinnamon. Set in the ice box for a few hours and serve in tall glasses, just piling the cool "delight" in with a spoon.

Potato balls.—To each two cups of boiled potatoes—mashed, add two tablespoons butter, one-half teaspoon salt, one-fourth teaspoon pepper, two tablespoons sweet cream, and the yolks of six eggs. Beat till very light and fluffy, then add the whites beaten stiff. Bake in a rather quick oven until the eggs are set and the mixture is nicely browned. Dip out the portions in the shape of balls, giving each a dash of paprika.

Parsnip croquettes.—Wash and scrape six good-sized parsnips. Cook in plain boiling water until tender, then remove all hard centers and mash. Add two well-beaten eggs, two tablespoons sugar, one-half teaspoon salt, a dash of pepper and a pinch of cayenne. Beat well and add one tablespoon flour. Shape into round flat balls or usual croquettes, roll in cracker dust, and fry in deep hot fat. Serve hot.

Clarice Raymond.



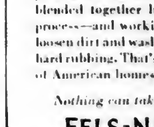
Summer frills...

Gay organdies, crisp ginghams—they make summer days lovelier than ever. And Fels-Naptha washes them easily and quickly! The extra help of the golden bar makes washing easier. It gives you two safe active cleansers blended together by our exclusive process—and working together they loosen dirt and wash it away without hard rubbing. That's why, in millions of American homes...

Nothing can take the place of

FELS-NAPTHA

ORDER FROM YOUR GROCER TODAY



Just Put it on the Roosts!

—Before the chickens roost, fumes are given off that penetrate the feathers; killing lice. Effective individual handling of birds. Ask your dealer or write

Tobacco By-Products & Chemical Corp., Inc., Louisville, Ky.

"Black Leaf 40"

Kills Poultry Lice



LOOK!

Baby Turkeys and Hatching Eggs

Mammoth Bronze. Hen Bronze strain of prize winner Holland and Thanksgiving turkeys. Aaron's strain of prize winners, Bourbon Reds. Aaron's strain of Pekin Ducks. Hatching eggs. Price right. Live and safe arrival guaranteed. Catalogue free.

NABOB POULTRY FARMS, Box Z, Gambier, O.



HERBSTER'S QUALITY

CHICKS

Summer Prices
Can. ship C. O. D.
R. Rocks & Reds, $10 per 100
Heavy Mixed $ 8.00 per 100

Herbster's Poultry Farm, Bx.171, McGrann.

Bigger Chicks

Hatched from two-ounce eggs or better.

	50	100	500
White Leghorns	$5.50	$10.00	$47.50
Wh. & Bd. Rocks	6.50	12.00	57.50
S. C. Reds	6.50	12.00	57.50
Jersey Black Giants	9.50	18.00	
Mixed	5.50	10.00	47.50

COVALLEN POULTRY FARM,
F. W. Mutzabaugh, Duncannon, Pa.

BARRON LEGHORN CHICKS

From Large Type Barron Strain S. C. White Leghorns. Hens weigh 6 to 7 pounds. Extra quality chicks from free range stock at 10c per chick. 142 pullets entered Hackettstown Contest. Pullets laid 2,037 eggs. 100% live delivery guaranteed. Order direct from this ad or write for free booklet.

ROBERT L. CLAUSER, Box N, Hackettstown, N. J.

TAKE NOTICE

150,000 CHICKS for June and July Delivery

	25	50	100	500
S.C. White Leghorns	$2.50	$4.50	$8.00	$37.50
Barred Rocks	3.00	5.50	10.00	47.50
Rhode Island Reds	3.00	5.50	10.00	47.50
Silver Laced Wyandottes	3.50	6.50	12.00	57.50
Light Mixed		4.00	7.00	32.50
Heavy Mixed		4.50	8.00	37.50

From carefully selected free range flocks. 100% prepaid. Write for illustrated catalog.

THE RICHFIELD HATCHERY, Box 3, Richfield, Pa.

Penn'a State "Superbred" CHICKS

Flocks inspected by officials from Penn'a Dept. of Agri. & College. Penn'a State Leghorns. Hi-record Barred Rocks. Hi-record R. I. Reds. S. C. Reds. 10% books order.

THE KEYSTONE HATCHERY,
(The Old Reliable Plant) Box 52, Richfield, Pa.

STRICKLER'S SUPER-QUALITY CHICKS

High Egg Production Bred, Healthy, Large size Tancred-Barron English S. C. White Leghorns. 274-316 egg line matings. No lights used; chicks are extra hardy and vigorous. These quality pure chicks shipped parcel post prepaid, 100% live delivery guaranteed and week in June at $9.00 per 100; $85 per 200; $41 per 500; $80 per 1000 White Rocks, Barred Rocks, $10 per 100. Ship C. O. D. Catalog free.

LEONARD F. STRICKLER, Box F, Mount Joy, Pa.

ESTABLISHED — 1842

Eshelman GUARANTEED FEED



NOW IS THE CRITICAL AGE

From six weeks old until they reach laying maturity—proper feed decides how profitable your flock will be. Eshelman Growing Mash builds the strong, sturdy constitutions that can stand up later under the drain of heavy egg production. Ingredients proportioned and balanced to give the growing chick everything it needs for bone and body—Proteins, both vegetable and animal, in most highly digestible form—Eshelman Growing Mash is economical not only in first cost, but particularly because of the results it produces.

And, remember, Eshelman Feed has behind it 87 years' practical experience. Give your young chicks, now, the benefit of that practical experience. Eshelman Growing Mash has made profits for others—it will for you.



FREE!

This 64-page, 25-cent, book on poultry raising is yours for the asking. Written by a leading poultry authority—one of our staff—from one of our State Agricultural Colleges, it is a simple, sensible talk on profitable poultry raising.

JOHN W. ESHELMAN & SONS
Lancaster, Pa.

Eshelman GUARANTEED FEED

is most every feeding requirement for livestock and poultry—backed by 87 years' experience—made of only the finest materials—economical



ESTABLISHED — 1842

Nest Box Notes



By R. L. SCHARRING-HAUSEN

IT doesn't take very long for the growing birds to outgrow their drinking fountains. Refrigerator pans costing about fifty cents each take the place of the founts and will last for years. I like them because they hold a quantity of water—ten or twelve quarts—and are shallow enough for a young pullet to scramble out if she gets in the water by mistake.

• • •

THE necessity for plenty of water cannot be too strongly emphasized. Not only will birds be stunted in their growth if they do not get enough water to drink, but lacking water will often start them to picking each other, especially if they are closely confined in confinement.

• • •

ABOUT this time comes a special danger of coccidiosis appearing in the young stock. Cleaning out the litter and replacing with fresh material every few days will help prevent this. Birds which have been infected with coccidiosis are certainly impaired, and an expensive and troublesome course of treatment is necessary to save them at all, so if we can avoid trouble by preventive means we are that much ahead.

• • •

A WEEKLY letter from the New Jersey Laying Contests suggests that now is a good time to cull the laying flock and sell all birds which are evidently not laying. Such birds, being in good shape, can often be marketed as roasters while later the culls will be thin and not only fair stewing. The price for market fowl is good now, while later it will be decidedly low.

• • •

IF you have not been watching for the loafers in your flock the foregoing suggestion will be of value if carried out. Look for the hens with shrunken combs, yellow legs and beak, small vent and those which show signs of moulting. Such hens are the poor producers, and it will be much more profitable to sell them than to keep them.

• • •

I GO over my laying flocks weekly and generally find it possible to pick out a half dozen or more hens which are no longer laying. By culling out the non-producers I have been able to keep the flock average above 60 per cent.

• • •

A RECENT extension service letter which came to me outlined methods for keeping up production during the summer months which are generally very profitable if good production is maintained. Among the points made were to keep the houses clean and littered somewhat thin with fresh litter; to make sure that the birds are free from lice and mites; to be particularly careful that there is always a clean drinking water in the laying houses and that the houses are kept as cool and well ventilated as possible. In regard to feeding it is best to substitute a moist laying mash for the grain fattening mash and to cut down the grain somewhat, unless the birds are thin. Fresh green feed is also of assistance to the birds and keep their appetites good.

• • •

WHILE I am on the subject, I'll venture to say that while we have been getting the corn in and doing other spring work the hen houses may have been neglected through force of circumstances. If this has been the case, it will pay to clean them out at once. A good clean house acts like a tonic.

Sieb's OVERSIZE Chicks

ALL PURE BRED

SIEB'S "OVERSIZE" CHICKS are from PURE-BRED Flocks of THE WORLD'S FINEST BLOOD LINES. They are a new Sieb Development—an advanced step in scientific breeding to produce chicks that grow larger, stronger, mature quicker and lay more and larger eggs. All one quality only THE BEST.

WHY SIEB CHICKS PAY BETTER

It costs just as much to raise a chick that weighs 6 lbs. at 6 months old as it does a Sieb Chick that will weigh 8 lbs. or more at 6 months old. If you want larger, stronger stock, more eggs, more meat, and more profits, buy Sieb's "OVERSIZE CHICKS". Our great capacity of over five million per year insures quick delivery, cuts down cost of production and enables us to give you THE BEST GRADE ONLY at prices even less than many hatcheries charge for second and third grade chicks. SEND FOR CATALOG or order from this ad. 100% live delivery guaranteed.

ASTONISHING LOW PRICES

WHY PAY MORE?

Prices Prepaid	25	50	100	500	1,000
Wh., Br., Buff Leghorns	$2.75	$5.25	$10.00	$47.50	$ 90.00
Barred & White Rocks	3.00	5.75	11.00	52.50	100.00
S. C. R. I. Reds & Wh. Wyandottes	3.00	5.75	11.00	52.50	100.00
R. C. R. I. Reds & Buff Rocks	3.25	6.25	12.00	57.50	110.00
S. C. Wyan., Wh. & Buff Orps	3.25	6.25	12.00	57.50	110.00
Wh. & Black Minorcas	3.25	5.25	10.00	47.50	90.00
Anconas & Heavy Assorted	2.50	4.75	9.00	42.50	80.00
Heavy & Light Assorted	2.50	4.75	9.00	37.50	70.00
Light Assorted	2.25	4.25	8.00	37.50	70.00

SIEB'S HATCHERY, Box 310 LINCOLN, ILL.

Members Int'l. Mid-West. Ill. & American B. C. P. Associations



NATIONAL "SUPERBRED" CHICKS

100,000 Chicks for Delivery in June

	50	100	500	1,000
S. C. White, Brown, Buff Leghorns	$5.25	$10.00	$47.50	$100.00
Barred & White Rocks, Reds	6.75	13.00	62.50	120.00

Light Mixed, $9.00 per 100. Heavy Mixed, $10.00 per 100. Also White Wyandottes, Black and White Minorcas, Anconas and Blue Andalusians. Send for our Catalog and price list. We guarantee 100% live delivery. Member International Baby Chick Association.

NATIONAL CHICK FARMS, Box 404. MIFFLINTOWN, PENNA.

WOLF SELECTED CHICKS

CHICKS C.O.D. Send only $1.00 and pay Postman the balance.

Special pen mated and extra high bred chicks at slightly higher prices. Shipments made any time you wish.

	25	50	100	500	1000
S.C. Wh., Br. & Buff Leghorns, Anconas	$2.25	$4.25	$ 8.00	$38.00	$ 75
Bd. & Wh. Rocks, S.C.&R.C.R.I. Reds, Bl. Min.	2.50	5.00	10.00	48.00	95
White Wyandottes, Buff Orpingtons	3.00	5.50	11.00	52.00	100
Jersey Black Giants	4.50	8.50	15.00	72.00	140
Assorted Heavy Mixed Chicks	2.00	3.75	7.00	32.50	60
Light Mixed	2.00	4.00	7.00	34.00	65

Last Hatch July 1st

WOLF HATCHING & BREEDING COMPANY, Box 43, Gibsonburg, Ohio



IMMEDIATE DELIVERY

SATISFACTORY CHICKS

100% Live Delivery Guaranteed.

For Years We have Matured and Sold Postpaid Prices Effective June 17

	25	50	100	500
White, Buff and Black Leghorns	$2.00	$3.50	$ 6.50	$ 30.00
Anconas, Chanticleers, Br. Leghorns	2.25	4.00	7.50	35.00
Barred & White Rocks, Bl. Min.	2.75	5.00	9.50	45.00
Buff, Wh. & Silver Laced Wyandottes	3.00	5.50	10.50	50.00
Buff, Red, White Wyandottes, Buff Minorcas	3.25	6.00	11.50	55.00
R. I. Reds, Buff Orpingtons, Barred Rocks	3.50	6.50	12.50	60.00
White & White Leghorns, White Minorcas	4.00	7.50	14.50	70.00
Heavy Mixed 2c	Light Mixed 1½c	Black Giants 4c	Light Brahmas 12c	Pekin Ducklings 18c

Order C.O.D. if desired. Bank References. Member I. B. C. A. Send now for beautiful 4-color catalog. FREE.

THE NEW WASHINGTON HATCHERY CO., Box D, NEW WASHINGTON, OHIO



HUBER'S RELIABLE CHICKS

Chicks 8½c and Up Make extra profits with Huber's Reliable Chicks. 81 three years of careful development.

Order from this ad—10% down Rest C. O. D. if you wish. per 100

Barred and White Rocks, R. I. Reds and S. C. R. I. Reds, Bl. Minorcas	$12.50
Buff Orpingtons and White Wyandottes	12.50
S. C. White Minorcas and Columbian Wyandottes	14.00
S. C. White Leghorns	11.50
Special Mating White Leghorns	9.50
S. C. White and Brown Leghorns, S. C. Anconas	8.00
Heavy Assorted	7.00

Heavy Assorted ..... 50c per hundred less on orders for 400 or more.

HUBER'S RELIABLE HATCHERY, N. Main St., FOSTORIA, OHIO



BIG CHICKS FROM HIGH RECORD MATING—Prices Effective June 1

300 to 326 Eggs S. C. White Leghorns. Our long experience in Breeding will prove a satisfaction to our customers at the following prices:

	100	500	1,000
Heavy Mixed	$ 8.00	$38.50	$75
Light Mixed	7.00	33.00	65
Black Minorcas, Barred and White Rocks, Buff Orpingtons	11.00	52.50	100
S. C. Reds, White Wyandottes, Barron Leghorns	12.00	57.50	110
Jersey Black Giants	17.00	85.00	170
Light Mixed	7.00	33.00	70
SPECIAL TANCRED WHITE LEGHORNS	14.00	67.50	130

Your order will receive our special attention. Satisfaction guaranteed

UHL PIONEER HATCHERY & EGG FARMS, Box P, New Washington, O.

Albert Studer, Prop. Ref.: Farmers State Bank

CHERRY HILL CHICKS

S. C. W. Leghorns—Workoff Strain	$ 8.00
S. C. Everlay Brown Leghorns	8.00
Barred Rocks and R. I. Reds	10.00
Heavy Mixed	8.00
Owens' R. I. Reds	10.00
Heavy Mixed	8.50
Light Mixed	7.00

Add 1c per chick in 500 lots. 1c less in 1,000 lots. For less than 100 chicks add 2c per chick. 100% live arrival guaranteed. Parcel post prepaid. Bank references. Order direct from this ad or write for free circular

CHERRY HILL POULTRY FARM
Wm. Nace, Prop., Box P, McAlisterville, Pa.

BABY CHICKS C.O.D.

Send no money, just mail your order. We ship C. O. D. and guarantee live delivery of chicks. From pure-bred inspected and culled flocks.

Prices on	25	50	100
S. C. Wh. and Br. Leghorns	$1.00	$3.50	$10.00
Bd. Rocks and R. I. Reds	3.50	6.50	12.00
Wh. Rocks and Wh. Wyandottes	4.00	7.50	14.00
Broiler Chicks	2.50	4.50	8.00

Box 906
Bellefonte Poultry Farm, Bellefonte, Pa.

BABY CHICKS

For arrival	25	50	100	500
White Leghorns	$2.25	$4.25	$ 8.00	$37.50
Barred Rocks	2.75	5.25	10.00	47.50
R. I. Reds	2.75	5.25	10.00	47.50
Heavy mixed	2.75	5.25	8.00	37.50
Light mixed	2.25	4.25	7.00	32.50
Anconas	2.00	3.75	6.00	
Mixed Ducklings	2.50	4.50	25.00	

JOHN SHADEL HATCHERY,
R. 2, Box 9, McAlisterville, Pa.

Special Offer STARTED CHICKS

2 and 3 wk. old high quality stock for immediate delivery. Prepaid to your station, at the following prices: 2 wk. 3 wk. 1 wk.

English Wh. Leghorns	18c	22c	26c
Barred & White Rocks	20c	24c	28c

Order direct from this ad 100% live delivery and satisfaction guaranteed.

MONARCH HATCHERY, Box E, Holgate, Ohio

CHIX from large breeders

SUMMER PRICES

	50	100	1,000
Ferris Strain W. Leg.	$4.50	$8.00	$70
Everlay Brown Leg.	4.50	8.00	70
Reasner's Barred Rocks	4.50	10.00	90
Black Minorcas	6.50	12.00	110
Owens' R. I. Reds	6.50	10.00	90
Heavy Mixed	4.50	8.00	70
Light Mixed	4.00	7.00	60

Our breeders are selected for size, type and egg production. The kind that lay and pay. Send for literature. It is free. Tells all about our great egg machine.

JUNIATA POULTRY FARM
CHIX Box P, Richfield, Pa.

FOR GREATER PROFITS Hatchery Chicks

27,000 CHICKS WEEKLY FOR JUNE

	25	50	100
Barred Rocks and R. I. Reds			$5.50
White Wyandotte			6.00
Leghorns and Anconas			5.00

100% live arrival and all breeders culled for health and egg production. Catalog free. ORDER NOW.

Dept. G L. R. WALCK HATCHERIES, Greencastle, Pa.

BARRED ROCK CHICKS

A Big modern Breeding Farm and Hatchery of trapnested pedigreed stock.

BARRED PLYMOUTH ROCKS
MARVEL POULTRY FARM, GEORGETOWN, DEL.

BABY CHICKS

From Free Range Selected Flocks

Prices on	25	50	100
S. C. White Leghorns	$2.50	$4.50	$ 8.00
Barred Plymouth Rocks	3.00	5.50	10.00

Send no money. Just mail your order. We ship C.O.D. and guarantee live delivery and satisfaction guaranteed.

MINGOVILLE POULTRY FARM, Box 305, Mingoville, Pa.

TIGHT BINDING TEXT CUT OFF

THE YOUNG PEOPLE

The First Flag

A Playlet—Two Scenes

BETSY ROSS appears upon stage, accompanied by a small girl who recites the following:

Just out of the history, primly she comes,
With slender pink fingers and deft little thumbs;
She brings a bright needle—a skein of soft floss—
A thimble and scissors—this quaint Betty Ross.

She skilfully sews some long strips, red and white—
And cuts with quick fingers five pointed stars bright;
Then puts all together, and with a proud toss,
She holds up a banner—this quaint Betty Ross.

Beloved Old Glory! So fearless and true,
In bright starry splendor of red, white and blue,
Forever your stars, with their beautiful gloss,
Shall bring us sweet thoughts of our quaint Betty Ross!

(Both leave.)

Scene I—The Home of Mistress Ross

(Mrs. Ross, Mrs. Hall and Mrs. Green are busily knitting.)

Mrs. Betsey Ross—I wonder what they are doing in the war now.

Mrs. Green—I hope our soldiers won't be killed.

Mrs. Hall—I have a cousin in the war. I hope his life will be spared.

Mrs. Ross—I hope so, too.

Mrs. Green—I think war is dreadful. I hope this one will soon be over.

Mrs. Hall—I think we had better hurry and get these mittens ready to send. (Knits.)

Mrs. Green (looking out of window)—Here comes some one. I think we must go.

(Exeunt Mrs. Green and Mrs. Hall. A knock is heard.)

Mrs. Ross (goes to door)—Come in.

(Enter George Washington, John Adams and Robert Morris.)

George Washington—Is this Mrs. Betsy Ross?

Mrs. Ross—Yes.

George Washington—I am George Washington and these are my friends, John Adams and Robert Morris.

(Gentlemen all bow and Mrs. Ross makes a courtesy.)

Mrs. Ross—What can I do for you?

George Washington—I have heard, Mistress Ross, that you sew nicely and I have called to see if you will make a flag for our country.

Mrs. Ross (with another courtesy)—Thank you, General Washington; I will gladly make the flag, if you will tell me how you wish it made. Come, be seated.

(George Washington, Mistress Ross, John Adams and Robert Morris seated near table, where Mistress Ross has laid her work.)

George Washington—We want thirteen stripes of red and white, one for each of our colonies. Then in the upper left-hand corner we want a field of blue, dotted with six-pointed white stars.

Mrs. Ross—The stars in the sky have only five points. (With a single stroke of the scissors she cuts one and shows it to George Washington.) I can make five-pointed stars of white to sew on the blue.

George Washington—All right, make it that way. I will come for it in a few days.

Mrs. Ross—Did you bring the goods?

George Washington—I did not, because our country is so poor. Have you any goods?

Mrs. Ross—Well, (pausing) I believe I have an old red flannel petticoat.

George Washington—I have a blue army coat.

Robert Morris—I have a white shirt I will give. Do you think that will be all right?

Mrs. Ross—Yes, I will finish the flag so that you may have it tomorrow afternoon.

(Gentlemen bid Mrs. Ross "good afternoon.")

Mrs. Ross (leaving stage)—I must waste no time, if the flag is to be finished tomorrow.

Scene II—The Following Day
(Same place and costumes as Scene I)

Mrs. Ross (sewing diligently)—Just a few more stitches and the flag is done.

(A knock is heard and Mistress Ross goes to the door. Enter George Washington.)

George Washington — Good-afternoon, Mistress Ross; is the flag ready?

Mrs. Ross—Good afternoon, General Washington (courtesy). Yes, the flag is made as you suggested. Here it is.

(They spread it out and the General inspects it with care.)

George Washington—This is very satisfactory. I cannot thank you enough, Mistress Ross. I am very sorry we have no money with which to pay you.

Mrs. Ross—I was glad to do it for our country.

(George Washington folds flag and makes a bow to Mistress Ross.)

George Washington — Good-afternoon, Mistress Ross.

Mrs. Ross (courtesy) — Good-afternoon, General Washington.

(With exit of George Washington, the curtain falls.) —Caroline Redden.

WE'RE SORRY

IT'S the same old excuse—lack of space—which has prevented us from keeping our word that the prize-winning cartoons would be published in this paper. It is always nice to have something to look forward to, so watch for your name next week.

The Camera Contest has brought some good pictures to our desk. There are no rules or restrictions—anybody may send a picture. Book prizes will be given for the ten most outstanding. Name and address should be written on the back. Enclose two-cent stamp if you desire it returned. The contest closes June 20, so send in your photo immediately.

Address Camera Contest, Young Folks' Editor, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

Honor the Flag

THE fourteenth of June, Flag Day, is rapidly taking its place among the more important American anniversaries. On that date in 1777 Congress passed the famous resolution that the flag of the United States be thirteen stripes, alternately red and white, and that the Union be thirteen white stars in a blue field, representing a new constellation.

On June 14, 1897, the anniversary of the birth of our present national flag was first observed, when, as the result of an order by the Governor of New York, the Stars and Stripes was raised on all public buildings in that state.

On June 14, 1923, a National Flag Conference convened at the call of the American Legion in Memorial Continental Hall, Washington, District of Columbia. This conference, composed of delegates from the principal national, patriotic, fraternal, educational and civic organizations, adopted a code for the use and care of the flag of the United States and urged that every citizen be governed by this code.

On Display

Do not permit disrespect to be shown to the flag of the United States of America.

Do not dip the flag of the United States of America to any person or any thing. The regimental color, state flag, organization or institutional flag will render this honor.

Do not display the flag with the union down except as a signal of distress.

Do not place any other flag or pennant above or, if on the same level, to the right of the flag of the United States of America.

Do not let the flag touch the ground or the floor, or trail in the water.

Do not place any object or emblem of any kind on or above the flag of the United States of America.

Do not use the flag as drapery in any form whatever. Use hunting of blue white and red.

Do not fasten the flag in such manner as will permit it to be easily torn.

Do not display the flag on a float in a parade except from a staff.

Do not use the flag as a covering for a ceiling.

Do not carry the flag flat or horizontally, but always aloft and free.

Do not use the flag as a portion of a costume or of an athletic uniform. Do not embroider it upon cushions or handkerchiefs, nor print it on paper napkins or boxes.

Do not put lettering of any kind upon the flag.



Vergie and Her Niece with Tommy

Cat Goes South

I HAVE a yellow cat and his name is Tommy. He went away in the fall of 1927 and did not come back to me in the spring on Easter morning. Last fall he went again but he came home this spring, April 14. I suppose he goes south to spend the winter months. Almost every morning when Father goes out to feed the stock Tommy is at his heels and just as soon as Father opens the feed box Tommy jumps right in and catches a big fat mouse. Tommy follows me almost everywhere I go and he gets mad when we pat him on the head and tell him he wants to scratch and fight and bite.

Vergie A. Eppley.

York county, Pa.

How many hairs are there in a gray cat's tail?—None; they are all outside.

• • •

What is the most useful thing a person can possess in the long run?—Breath.

• • •

What four letters would frighten a thief?—O I C U.

Little Folks' Corner

CAN YOU FIND THESE ADS?

THERE have been many letters saying how much the Little Folks' readers enjoyed hunting the advertisements in the dropped-word poem, so here is another. You will find these ads in the June 8th issue. Don't bother rewriting the poem, just put down the advertisements and the pages on which you find them. Then write a short letter telling what you know about these advertisements.

The first three prizes will be beautiful pencil-boxes with everything you will need next September at school. Then for the next three winners there will be gold pencils for the girls and pen knives for the boys. Remember, the prizes will go to the writers of best letters accompanied by the correct page numbers of the ads. Just one week for this—so get busy.

The dropped letters in the following verses will spell three advertisements in the June 8th Pennsylvania Farmer:

THEY ALL ADVERTISE

- hen is not supposed to have
Much common sense -t fact,
Yet every time she -ays an egg
She cack-es f-rth the fact.

A rooster hasn't got a lot
Of intelle-t to show,
B-t none the less most roos-ers have
Enough good sense to crow.

The busy l-ttle bees they buzz,
Bulls bellow and -ows moo,
The watchdogs bark, the ganders q-ack,
And doves and pigeons coo.

The peacock sp-eads his t-il and struts
Pigs squeal and ro-ins sing,
-nd even se-pents know enough
To hiss before they sting.

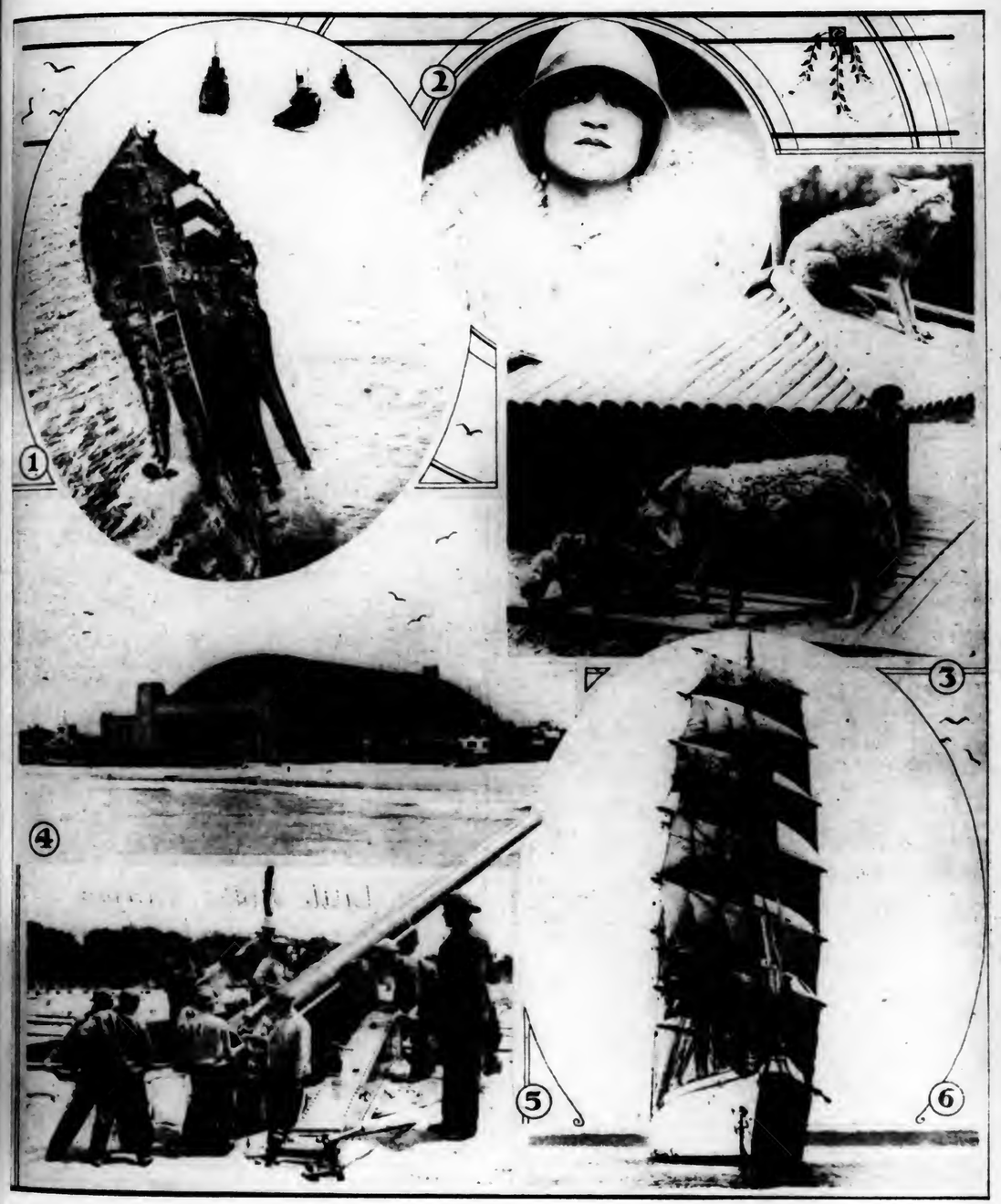
But man, the greatest masterpiece
That nature could devise,
Will ofte- stop and hesitate
Before he'll advertise.

Send your letter to Little Folks' Corner, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.



Lester and Chester Burns, Twins, with Their Pet Dog Spot

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1. Salvaged from a watery grave. German warship scuttled during war at Scapa Flow is towed as British prize to Scotland. Photo shows not a strange new kind of houseboat, but the ship, top side under water, being towed under the great bridge at Firth of Forth, Scotland, to Rosyth where it will be broken up. The salvagers are camping out on the bottom of the ship. Note the four queer legs where the four screw propellers were.

2. London, England.—Photo shows Mme. Rosa Ponselle, the only American-born and trained prima donna, a former member of the Metropolitan Opera, who will shortly be heard on the English stage.

3. London.—A glimpse into the home life of prairie wolves at the Zoo here. All day long and into the night, the proud papa stands guard on the roof of his little home, protecting his wife and youngsters. When one comes too near he dashes down, seizes the pups and carries them inside.

4. Atlantic City, New Jersey.—A view of the nearly completed Coliseum, which will be the world's largest convention hall. It covers a whole block, bounded by the Boardwalk, Mississippi, Georgia and Pacific Avenues. The building was erected at a cost of fifteen million dollars, and has a seating capacity of 45,000—over twice that of Madison Square Garden in New York.

5. Virginia Beach, Va.—Photo shows one of the crack 155 millimeter guns of Battery A, 51st Coast Artillery from Fort Eustis at practice off the Virginia seashore. These guns were made in France during the war, and are being fired at targets ten miles out in the sea. The firing of one shell entails as much mathematical calculation as does the work in a college geometry exam.

6. A majestic ship of old. Photo shows an excellent and picturesque view of the Finnish four-masted barque, Herzogin Cecilie, photographed during her voyage from Falmouth to Birkenhead.

TIGHT BINDING TEXT CUT OFF

ARE YOU LOSING INTEREST ?

Money Loaned on Long Term Mortgages

At Only **5 1/4%** *Interest*

36 YEARS TO PAY

MONEY

To buy land for Agricultural purposes.
To pay off mortgages.
To purchase fertilizers, seeds, livestock or farm equipment.
To make improvements on land or buildings.
To pay any debt incurred for agricultural purposes or any debt incurred before 1922.

Apply to

The Federal Land Bank *of* Baltimore

THROUGH YOUR NEAREST SECRETARY-TREASURER

List of Associations in Pennsylvania and West Virginia follows:

PENNSYLVANIA

Name of Association	Secretary-Treasurer
Adams Co.	C. E. Stahle, Gettysburg
Allegheny Co.,	Henry S. Bepler, Wexford, RD 1
Armstrong Co.	G. H. Burns, Jr. Borns Bldg., Kittanning
Beaver Co.	H. H. Wilson, Beaver
Bedford Co.	B. F. Madore, Bedford
Berks Co.	J. W. Perry, 816 Washington St., Reading
Blair Co.	John Woodcock, Hollidaysburg
Bradford Co.	A. Carl Fanning, Towanda
Bucks-Lehigh Co.,	Linford Preisler, Quakertown
Butler Co.	E. W. Humphrey, Butler
Cambria Co.	Ivan J. McKendrick, Ebensburg
Cameron Co., (Inc. in Clinton & McKean Co.)	
Carbon Co.	Allen S. Lewis, Mauch Chunk
Centre Co.	Miss Alice I Thompson, State Col.
Chester Co.	S. R. Howell, West Chester
Clarion-Forest Co.	F. M. Mohney, Clarion
Clearfield Co.	J. A. Frank, Curwensville
Clinton-Cameron Co.	W. E. Shaffer, 143 E. Water St., Lock Haven
Columbia-Montour	C. W. Dickson
(Inc. Northumberland) Berwick Sav. & Trust Co. Bldg., Front St., Berwick	
Crawford Co.	Leland Culbertson, Meadville
Cumberland (Inc. Franklin),	Bennett Woods, Carlisle
Dauphin Co.	W. R. Zimmerman, 1627 North St., Harrisburg
Elk Co.	C. R. Rickard, Box 177, Ridgway
Erie Co.	Thos. W. Spofford, 512-515 Masonic Temple, Erie
Fayette Co.	M. B. Porter, Scottdale
Forest Co.	(Included in Clarion Co.)
Franklin Co.	(Included in Cumberland Co.)
Greene Co.	Allen A. Iams, Deer Lick, Pa.
Huntingdon Co.,	C. D. Fetterhoof, Huntingdon
Indiana Co.	D. E. Trimb, Fourth Floor, Indiana Theatre Bldg., Indiana
Jefferson Co.	Mrs. Kathryn Hoffman Brookville
Juniata-Perry Co.,	Edgar A. Ulsh, Port Royal
Lackawanna Co.	Mrs. J. O. Barrett, Room 308 Connell Bldg., Scranton
Lancaster Co.	M. E. Garber, Mt. Joy, R. 3
Lawrence Co.	D. E. Glamer, 6 East St. New Castle
Lebanon Co.	Sayler Y. Hartman, N. Railroad St. Palmyra
Lehigh Co.	(Included in Bucks Co.)
Luzerne Co.	E. D. Stettler, Shickshinny, R.D.
Lycoming Co.	W. F. MacVeagh, R.D. 8, Muncy
McKean Co.,	C. W. Catlin, Smethport
Mercer Co.	Jos. J. Weber, R.1, Mercer
Mifflin Co.	W. W. Uttley, Lewistown
Monroe Co.,	L. A. Ackerman, Hollenback Bldg., 2 N. 7th St., Stroudsburg
Montgomery Co.	A. R. Kriebel, Worcester
Montour Co.	(Included in Columbia Co.)
Northampton Co.	E. J. Cooper, Portland
Northumberland Co.	(Included in Columbia-Montour and Union-Snyder)
Perry Co.	(Included in Juniata-Perry)
Pike Co.	(Included in Wayne and Monroe Co.)
Potter Co.	George W. Daniels, Coudersport
Schuylkill Co.	G. M. Paxson, Pottsville
Snyder Co.	(Included in Union-Snyder)
Somerset Co.	W. C. Troxal, Somerset
Sullivan Co.	J. H. Thayer, Dushore
Susquehanna Co.,	C. L. Van Horten, Montrose
Tioga Co.	Ernest H. Green, Wellsboro
Union-Snyder (Inc. Northumberland),	Frank A. Kuhl, Lewisburg
Venango Co.	Miss Helen Gorton, Franklin
Warren Co.,	F. E. Nelson, Allen Block, Warren
Washington Co.	J. C. Judson, Washington, 9 Court Square
Wayne-Pike Co.,	A. G. Rutherford, Honesdale
Westmoreland Co.,	A. Scott Christeer, Scottdale
Wyoming Co.	R. E. Frear, West St., Tunkhannock
York Co.	E. U. G. McCleary, R. D. 5, Dillsburg

WEST VIRGINIA

Name of Association	Secretary-Treasurer
Barbour Co.	H. J. Poling, Philippi
Berkeley-(Potomac)	J. T. Nedenbosch, Martinsburg
Braxton Co.	(Included in Calhoun)
Brooke Co.	(See Pan Handle)
Cabell Co.	L. M. Doolittle, (Day & Night Bldg., Huntington
Calhoun Co.	Elliott Chenoweth, Grantsville
Clay Co.	(Included in Calhoun)
Doddridge Co.	(Included in Ritchie Co.)
Fayette Co.,	(Inc. in Somerset & Greenbrier)
Gilmer Co.	F. M. Stevenson
Grant Co.	W. C. Mossman, Petersburg
Greenbrier Co.	Miss Florence Gobeen Lewisburg
Hampshire Co.	L. V. Thompson, Romney
Hancock Co.	(See Pan Handle)
Hardy Co.	J. W. F. Combs, Fabius
Harrison Co. (only)	C. W. Lockhart, Clarksburg
Jackson Co. (Putnam),	M. C. Archer, Ripley
Jefferson Co.	L. Bushong, Charlestown
Lewis Co.,	G. H. Lingo, 28 McCoy Ave., Weston
Lincoln Co.	Mrs. Lillian V. Heffley, Hamlin
Marion Co.	Chas. Shaver, Nat'l Bank, Fairmont
Marshall Co.	(See Pan Handle)
Mason Co.	S. H. McNeill, Point Pleasant
Mercer Co.	F. W. Bassett, 1st Nat'l Bank Bldg., Princeton
Mineral Co.	Emory Tyler, Keyser
Monongalia Co.	T. Nelson Stewart, Morgantown
Monroe Co.	R. M. Humphreys, Union
Morgan Co.	Roy A. Everett, Berkeley Springs
Pan Handle Co. (Inc. Hancock, Brooke, Ohio & Marshall)	Court House, Wheeling (See Pan Handle)
Pendleton Co.	H. M. Calhoun, Franklin
Pleasants Co.	(Included in Ritchie Co.)
Pocahontas Co.	P. T. Ward, Marlinton
Preston Co.	L. F. Brethauer, Terra Alta (See Jackson Co.)
Putnam Co.	
Raleigh Co.	G. C. Hedrick, Beckley
Randolph Co.	Lesley Bee, Elkins
Ritchie Co.	Lincoln Wilson, Harrisville
Roane Co.	G. P. Rodgers, Spencer
Summers Co. (Inc. Fayette),	R. E. Allen, Hinton
Taylor Co.	G. W. Ford, Grafton
Tucker Co.	W. Pritt, Parsons
Tyler Co.	(Included in Ritchie Co.)
Upshur Co.,	Will T. Burnside, Buckhannon
Wayne Co.	C. E. Walker, Wayne
Webster Co.	(Included in Ritchie Co.)
Wirt Co.	Hugh Prather, Elizabeth
Wood Co.	A. D. Ireland, Parkersburg



When writing advertisers please mention Pennsylvania Farmer

Orchard Windfalls

By. S. W. FLETCHER

THE dread disease fire blight does not appear to be serious this year in central Pennsylvania. In 1928 it hit some growers very hard. Last year at this time one of the best apple orchards in Lawrence county looked as though swept by fire. The entire crop of Rhode Island Greening was lost to blight and most of the crop of Rome. There was one row of pear trees through this orchard, these were killed to the ground. This grower had been warned several years before that he was "playing with fire" by leaving pear trees in his apple orchard.



The infection comes from live overwintering cankers on the trunks and larger limbs. It is better to cut them out in late fall or early winter, then the wounds need not be disinfected; if cut out after the trees have started to grow in the spring, disinfection of tools and wounds is necessary. Summer cutting of blighted limbs is not advisable.

Several years ago a Bradford county orchard had a very severe attack of blossom blight. It was the judgment of the owner that it was connected with rather heavy applications of nitrate of soda, so he discontinued fertilizing. Probably this was a mistake. His sod orchard needs nitrogen to secure wood and spur growth, but in moderate amount—two or three pounds a tree, perhaps, instead of five to eight. Even a good thing may be overdone. Excessive vegetative growth does not cause blight; it merely favors the development of the disease if the bacteria are present.

Crown Gall

For many years nurserymen have felt that they have a grievance against federal and state crop pest officials for their rigid condemnation of nursery stock that apparently is affected with crown gall. The inspectors will not certify trees that have any root enlargements, however small, that resemble gall. Fruit growers have been advised to destroy all such trees rather than to take a chance by planting them. The investigations of pathologists seem to indicate that this is sound practice.

The American Association of Nurserymen, however, has conducted an investigation of its own, the results of which have convinced that organization that only about five per cent of the trees condemned as infected with crown gall really have that disease; the other 95 per cent of suspected trees, according to this report, are merely "over-callused." The nurserymen admit, however, that because of the stand taken by pathologists, fruit growers are "prejudiced" against nursery stock that shows any enlargements on the roots whatever, and that it is almost impossible to overcome this prejudice. Hence, the results are the same for the nurserymen, whether they are right in their contention or not. So many nurserymen have abandoned root grafting of apples and resort to budding exclusively; there is no possibility of "over-callusing" on budded stock.

Market News by Radio

The Market News Service established by the Federal and State Departments of Agriculture some years ago may be abandoned. It has been of distinct value to fruit growers, but is now somewhat out of date. Market news by radio comes much earlier than by newspaper or letter.

In the discussion at Harrisburg last winter of the possibility of establishing a clearing house for apples, especially Yorks, in the Shenandoah-Cumberland region, it was shown that it would be necessary to control 80 to 85 per cent of the crop in that region before a clearing house could be successful. Moreover, the Yorks from this region are in direct competition with those from several other districts that ripen at the same time, so that it would be impossible to control the market. How. The radio helps to aggravate the situation.

A radio report of a small number of cars of Yorks on the piers in New York, for export, probably would lead to a number of growers hurriedly shipping in more fruit. Market reports in newspaper or letter now reach the grower so late that the market situation may have changed quite materially because in the meantime certain growers have acted on radio reports.

Commercial Pack Exhibits

It will be interesting to observe the outcome of the new policy on exhibits adopted by the Horticultural Association and the Farm Products Show. There will be specially selected exhibits, as usual, but the feature of the apple show next winter will be the commercial pack class. Representatives of the Show will go over the entries, buy, out of storage, ordinary commercial barrels, boxes and bushels of apples. For this year, at least, these will be scored and exhibited under numbers not under the name of the grower, who may save some of us from embarrassment. At any rate, it ought to be a first-class educational feature and produce evidence that will favor the compulsory grading law that some of our growers are advocating.

Tariff and Apple Growing

The shouting and the tumult Washington over farm relief and tariff have more than an academic interest to Pennsylvania fruit growers, although with our good local markets it is difficult for us to get excited about it as some of our cousins do. My own conviction is that if the farm and stabilization plans now proposed are put into operation, eastern fruit growers are more likely to be hurt than helped. This is particularly true in the case of apples.

We now export about 18 per cent of our commercial apple crop. This percentage has an importance far greater than the figures seem to indicate. The 18 per cent exported makes the difference between a good year and a bad year for the apple grower, and can we afford to jeopardize our foreign trade by raising tariff barriers on articles, which may result in retaliatory duties on our apples, yet that is what is likely to occur.

Peach Leaf Curl

Does leaf curl affect peaches while being borne on trees affected?
George

THE leaves are "the lungs and stomach" of the tree. In them the food is prepared, or "digested," under the influence of sunlight, the nutritious material that is necessary for the growth of any part of the tree. If, therefore, the leaves are unhealthy and their function fully the supply of food material is reduced.

Peach leaf curl is a fungous disease which greatly reduces the healthy leaf surface. In severe cases it may cause partial defoliation. This is of little

FROM MILKING TIME TO MARKETING TIME



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Farm & Dairy

By L. W. LIGHTY

I HAVE a letter from a young man who started some years back with a few pure-bred dairy cows and built up a nice little herd, but now he thinks he could do better with another breed and asks me about making the change.

There may be legitimate excuses for making a change, but as a rule it is a bad practice. Consider the matter carefully before you make your selection and then continue with that breed. A pure-bred herd entails considerable extra expenses and those must be made up, and also some profits should be made, all of which requires the finding of buyers for your surplus. To secure these buyers you must advertise and let folks know you have surplus stock of the particular breed and that your stock is of a high quality. This advertising is done in many ways and after a length of time you will be known and have a reputation of being a breeder of that certain breed and folks will come to you or write you relative to their needs. It is utterly demoralizing if they write you or come to you as an established breeder of reliable Ayrshires and find you now have a bunch of Shorthorns. You have lost a lot of time and money in making the change.

The successful breeder has an ideal, a goal in view, and he is working for that end which is the acme in production and the blue ribbon in competition. There is where the real pleasure and profit materialize and the man who scatters his energies in trying to change his ideals and ends hardly ever makes a success. Take time, consider carefully before you select the breed you would develop and stick to that breed.

When Buying Feeds

In the olden days every business farmer bought a supply of feed just as the new crops came in. The mills and merchants desired to empty their bins for the new crop and the prices were accordingly lowered. But great changes have come. The world has grown so small that new crops are coming to us all the time. Comparative storage capacity has greatly increased. And worst of all politicians have started monkeying with the farmer's private business, which as always spells calamity.

But with all these drawbacks the producer of dairy products, who is the most extensive feed buyer, can practice business principles as any other business man does. The most important is to buy in lots so large that it interests the dealer and pay spot cash. Thousands of dairymen buy in little driblets and buy on that abominable plan called "deferred" payment. The dealer by experience knows that some payments are deferred entirely too long and he has to make the price accordingly. From a long experience I know that when the dealer sees the cash dangling before his eyes and the quantity bought is worth while he is ready to shade prices to the bone. Do not forget you reduce the cost of the milk by just this much and it is clear profit.

Ideals

I had my say about the garden spade and garden spading, but promptly a farmer comes back and tells me the old-fashioned garden and the spading plan is one of his ideals and he and his wife will continue to live up to their ideal regardless of my sayings.

It looks to me as though that was living down to an ideal. I knew men in my early days whose ideal of farm power was a well-trained ox team. We all should have ideals to work to and when we achieve our past ideals we should promptly set them higher so we may continue to improve. A tractor may not be as romantic as an ox team, but its use gives us more time to indulge in real romance of life.

Does your dog chase cows?
No, he's a bulldog.—Purple Cow.

Herd Infection—

Write for information. Ask for a FREE copy of THE CATTLE SPECIALIST and how to get the PRACTICAL HOME VETERINARIAN a livestock Doctor Book without cost. Find out why your cows lose calves—why they retain the afterbirth—why they fail to breed—why they have garget—why your calves have scours and scours—why you have a shortage of milk. Veterinary Advice Free. Write to

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For Sale 100 young ewes, 150 goats, 60 steers, 90 beefgrade yearlings, 40 bred Guernsey-Jersey heifers. W. Hundley, Boydton, Va.

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Selected Chester and Yorkshire crossed, Berkshire and Chester crossed.
6-7 wks. old, $5.50 each. 8 wks. old, $6.00 each
Two months old Chesters, also Durocs, boars and unrelated sows, $7.50 each. Ship any number C. O. D. on approval. Pay your expressman on arrival if satisfactory. If not, return at my expense. My stock have the size, quality and breeding. They are easy feeders, fast growers, and will give satisfaction. All orders promptly filled.
W. J. Dailey Farm, Lexington, Mass. Tel.-1085.

Chester White Pigs Properly mated. Ask me about these.
H. L. MUNCE, Canonsburg, Pa.

CHESTER WHITES.—Pedigreed big type Champ. blood, all ages, 12 sows farrowed 153 pigs, priced low, must please. C. E. Cassel, Hershey, Pa.

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Reg. Berkshires Superior breeding stock. All ages, Both sexes. Choice immune.
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BETTER BERKSHIRES.—Boars ready for service, bred gilts, young pigs, prize-winning stock. Near-By Stock Farm, Pottsgrove, Pa.

BUY Big Type Polands. Good fall boars and sows yet for sale at real bargain prices. O. S. HALL, Farmdale, Ohio

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C.T.A. Reports

Coventry Cow-Testing Ass'n

THE Coventry Cow-Testing Association finished their seventh year March 1, 1929, with nineteen whole-year members. There were 600 cows in the Association during all or part of the year.

Eight herds with an average of five or more cows exceeded an average production of 300 pounds of butterfat. A complete list of these herds follows:

Owner	Breed	Lbs. Milk	Lbs. Fat
Wm. M. High	R.H.	11,746	402.1
Arthur H. High	R.H.;G.H.	10,709	390.5
Porter Farms	R.G.;G.G.	7,228	374.9
Mrs. E. H. R. Toland	R.J.	6,947	363.3
H. E. Soyer's	G.G.;G.H.	8,092	345.0
H. L. Stoltzfus	R.H.;G.H.	9,244	342.6
Herman H. Geyer	H.&G.	8,710	316.3
Pennhurst State School	R.H.;G.H.	9,113	314.8
L. R. Shingle, Tester		Wm. Vandegrift, County Agent.	

• • •

Chester Valley

THE Chester Valley Cow-Testing Association finished their eighth year April 1, 1929, with twenty-two whole-year members. There were 497 cows in the Association during all or part of the year. The results for the eight years testing are as follows:

Year	Av. No. Cows	Lbs. Milk	Lbs. Fat
1922	100.57	6,616	278.3
1923	335.82	6,970	280.9
1924	353.74	7,247	294.6
1925	370.73	6,186	283.1
1926	280.05	6,011	276.3
1927	445.67	6,085	291.0
1928	464.07	6,482	313.6
1929	456.07	6,606	311.1

Ten herds with an average of five or more cows exceeded an average of production of 300 pounds of butterfat. A complete list of these herds follows:

Owner	Breed	Lbs. Milk	Lbs. Fat
Wallace Pearson	R.J.	7,563	394.1
Mrs. Mary Carter	R.G.;G.G.	7,979	388.6
Dr. Clyde L. King	R.J.	7,651	380.1
Brandywine Meadow Farm	R.J.;G.J.	8,432	372.1
Oswald B. Piel	R.J.	6,625	366.1
John Kent Kane	R.G.;G.G.	7,332	361.9
James Latta	G.G.;G.H.	7,787	350.2
G. Fairlamb Beale	R.J.	7,004	345.7
Harry B. Shenk	R.G.	6,558	337.7
Frank A. Keen	R.H.	9,200	317.9
L. R. Shingle, Tester		Wm. Vandegrift, County Agent.	

Compiled by I. O. Sidelman.

A Light Milker

We have a small Jersey cow that looked like a good one, so when the calf was three weeks old we weaned it, started her on a feed of a fairly good grade of soy-bean hay with some corn stover, together with 30 per cent dairy feed and ground ear corn, gradually increasing the dairy feed to six pounds per day and 12 pounds ground ear corn or 18 pounds grain and we have not been able to get more than 22 or 23 pounds of milk daily.

Is it necessary to grind ear corn. Won't grounel shelled corn do as well?

F. M. Gum, Jr.

I THINK the trouble with your Jersey cow is more in the cow herself than in her feed. In fact it would appear that you are giving her more grain than is necessary.

A total of 18 pounds of grain for 22 or 23 pounds of milk is largely in excess of her requirements. With a good grade of soy-bean hay and corn fodder, it would seem that a total of eight pounds of grain daily would be ample. I would suggest, however, that the grain mixture be modified so as to make it half ground ear corn or ground shelled and half 30 per cent dairy feed. It would seem likely that the best course to pursue would be to dispose of this cow if she has shown no further increase in her milk yield.

Ground shelled corn is naturally a better feed, pound for pound than ground ear corn. However, there is a little food value in the ground corn cobs, especially if they are ground fine, and their bulk serves to lighten the grain mixture somewhat. Either ground ear corn or ground shelled corn may be used as is most convenient.

A. A. Borland.



Flies "seriously diminish the Milk Flow"



[*Says dairyman Jared Van Wagenen, Jr., in his book, "The Cow," published by Macmillan Co. Page 59.*]

The cow's business is to make milk, and the time she wastes swinging her head is just so much out of your milk supply. Klip is the only cow-spray that is guaranteed to keep cows free of flies while milking, and for long periods in the pasture.

For five years three state entomologists and a state Agricultural Experimental Station worked developing Klip. This new cattle spray is made by the makers of Flit, the world's greatest household insecticide. Klip kills every fly it hits, and it is the only cow spray which, by agricultural experiment station tests, gives complete protection against cow flies (horn flies) in stable and pasture.

It can't taint milk, can't stain, and is absolutely harmless to cattle, even if licked. Use it on cows, horses and mules.

On sale at Hardware, Feed, and Farm Supply Dealers in one gallon cans, $2.50; and five gallon cans, $11.45. If your dealer hasn't got his supply yet, order direct from us. Be sure to send us your dealer's name when ordering. Address Stanco Inc., 2 Park Ave., New York City.

FREE
Proof that Klip Works Best

If your dealer hasn't got Klip yet, fill in and send us the coupon and we will send you absolutely free (with no strings on it) a pint of Klip—enough to keep one cow happy for five days. You can't lose. Make this test yourself. If you're not using a rattle spray, this is the way to find out how much easier it is to milk a flyless cow and how much more milk a quiet cow delivers. If you are using a spray, this will prove to you the superiority of Klip over anything on the market. This offer is introductory only and will soon be withdrawn.

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I'm willing to be shown. You can send me a pint of Klip, FREE, and I'll try it.
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Address.....
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Hand-operated or automatic plants, with either electric or gas-engine drive; all types, using cold water tank or brine system, with or without tubular milk cooler, as desired; makes ice when required.

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TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

FEELING in the hog trade is perceptibly brighter, though there is not a likelihood of a material advance in prices for a few weeks, depending largely on the June run. At western points during May both lard and meats were reduced, and both were under the June 1 figure a year ago.

The other reason for improvement is found in a number of reports that foreign demand is likely to be better from now on. The settlement on reparations is expected to be beneficial.

Off to a bad start on Monday, the hog market recovered quickly and there was a good trade all week, with prices at the close showing an advance of 35 cents over last week's close. And this in spite of receipts larger than last week.

Average price for the week at $10.65 is the same as last week, due to the low sales early in the week. The market is practically a dollar higher than a year ago at this time. Last year there was an almost steady advance from this time on to the latter part of September when the weekly average price reached $12.45. That, of course, does not mean that the same thing will necessarily happen this year, though a summer advance is the usual thing.

Improved Cattle Trade

Cattle trade continues to show improvement. Prices have not advanced much but the feeling is decidedly better. Receipts this week were quite a bit larger than last week, but there was a good active trade all week and prices held steady with a week ago with top grades strong to a little higher.

The price spread is still very narrow and a change in that respect is expected. The feeding now is that it will be in both directions, perhaps as much on the top as on the lower grades. There is much discussion of how high tops are likely to go this summer with much reluctance to make guesses. Some are willing to gamble even on $16.50 but above that ask odds. On the other end of the market, while some decline is expected, one factor mentioned is a potential demand for feeders that is likely to become active should prices decrease a half dollar or more.

Feeder trade has been meager because supply has been small and prices high. One kind of cattle packers say are much too high is half-fat steers, the kind selling around $13.50 here now. The opinion is expressed that it will pay those having steers of some quality to market this summer to put plenty of feed into them and make them good.

Steers averaged $13.95 this week, against $13.75 last week and $13.60 the same week last year. Tops brought $15.25, against $15.10 last week. There were fewer top and near top cattle on sale this week than last week.

Lambs Gain a Little

There was some gain in the lamb market this week, for a change. Both spring and yearling lambs were a quarter higher, and feeder lambs were a quarter lower, bringing them more nearly in line. Average price of lambs this week was $16.20, against $13.30 last week, which calls for explanation. Quotations were changed this week from lambs of last year's crop to those of this year's. Thus, in the quotations, springers are now lambs, lambs are yearlings, and yearlings are wethers.

Top lambs this week brought $17, that price being paid for Idaho's, native lambs topping at $16.65. Yearlings (last season's lambs) brought $12.50.

About 6,000 lambs were received from southern points this week. So far this season Chicago has received 13,700 of these lambs against 21,000 at the same time last year. It is reported here that more of these lambs than usual are going direct to eastern markets this year. Apparently the country is liberally supplied with sheep, and markets are likely to be oversupplied at any time.

Sensitive Wheat Market

It is probably true, as charged, that the surplus of wheat has been over-advertised. But that was due mostly, if not entirely, to the severe price decline. The sensitiveness of the market was shown by the sensational advance at the opening of trade this week. July wheat advanced from a low of 96 last Friday to a high of $1.09 on Tuesday, when the December option reached $1.19. Later in the week there was some recession in prices, but a substantial gain was held.

The advance was due largely to the promise of prompt passage of the farm relief bill, with the opinion expressed that the new board would at once set aside 100 to 200 million dollars to stabilize wheat prices.

It was felt to be possible for the government purchase to fix wheat prices under the bill if the board chose to say, for instance, that it would finance the purchase of wheat when cash price falls under a dollar, and would "advise" its designated speculation corporation to sell at $1.25 or higher. Under such a policy it is quite certain that price could be controlled within these limits for a time at least. At the same time, it is apparent that wheat at a dollar or better to the grower does stimulate production.

The growing crop is in good condition, and yield now promises to be larger than that of last year. It is a little early to know what to expect in Canada.

Corn is a good stand and much cultivated, but has received its first cultivation. It is not likely that corn acreage will show much change. Watson.

Chicago, June 8, 1929.

(Based on last year.)

Produce Market Review

THE Philadelphia egg market was irregular during the week although prices generally held steady. The demand continued selective and with general falling off in quality of average nearby receipts there was a tendency toward a wider spread in prices.

The poor showing of considerable nearby stock has created much comment among the trade and some receivers have declined to handle them at the prices truckers are asking. On official grading it is probable that many lots arriving would not grade a first, which is hardly what would be expected at this time if producers and handlers were exercising ordinary care.

Western and Southern cut offerings have been liberal but generally a trifle more than last week. Unloads graded cuts ... declined around 2¢ while some cuts ... declined around to 42¢. Dealers ... on values closed the week at ... a considerable average quality ... stock sold down to 40. Heavy graded ... sold at 34½@35½c but this ... in the early ... The wagon movement ... the ... was at 736-34c.

The butter markets were steady throughout the week. There were no changes in prices of the higher scoring grades with the eight-cent basis noted on newer grades. Extra lots as reported or favorable delivery basis, but it is felt that prices are somewhat overdone when compared with a year ago. There has been considerable interest in the storage of the. Such lots are said to be liberal that storage holdings are somewhat ... last year. Ordinary lots ... have shown little change.

Live fowl were in light supply on the New York market during the week. The demand was soon with prices about the same as the week previous. Broilers were ... moderate to liberal supply. Rock and ... broilers were in good demand and ... steady. Leghorn and colored fowl ... quoted at 35c. Rock broilers at 40c; ... 37@38c; 45c and leghorns at 42@43c.

Dressed poultry was in rather light supply but the demand was slow and prices steady. Fowls brought 30@40c per pound, broilers 47@55c and ducks 24@28c.

The potato situation is uncertain. Prices have held up fairly well and have averaged higher than last year, but at the close of the past week heavy shipments caused price levels to drop sharply. North Carolina was the heaviest shipping state and with favorable weather the growers were making every effort to get their crops on the market. Present indications are that this state will have marketed more than half of its crop by the end of this ... Prices at shipping point declined ... to $3.50 per barrel f. o. b.

The movement of potatoes from the Eastern Shore of Virginia gained rapidly ... shipments rose to 200 cars daily ... close of the week. On account of heavy movement loaders were slow ... chase f. o. b. Shipments from the ... section of Virginia were heavier and ... thought that the heaviest movement of ... this section will occur during the ... of June 17th.

Old potatoes were generally dull ... the week and prices did not make ... material change. Pennsylvania ... whites were graded at $1.25@1.40 per ... pound sack in Philadelphia and at $1.50 ... in Baltimore during the month of May ... there were 1044 cars of potatoes received in Philadelphia compared with 979 ... the same month a year ago. This ... was due to the earlier season in the ... producing sections.

Receipts of strawberries from ... Delaware and New Jersey were light ... the Philadelphia market and the ... was strong. Receipts in New York ... were lighter and prices advanced. ... in New Jersey and Pennsylvania ... that the crops is in need of rain and ... this is causing lighter picking. ... ranged from $2 to $6.50 per 32 quart ... in Philadelphia with most stock moving ... $3@5. In New York city prices ... from 8c to 25c per quart.

W. E. R.

Miscellaneous Produce

Pittsburgh

Butter.—(Creamery) prints, 92 ... 50@53c; tubs, 49@50c; local ... to 48.

Eggs.—Fresh, select, white, ... brown, 32@33c; current receipts, ...

Poultry.—Heavy hens, 31@32c; ... 28@29c; broilers, 46@47c; roosters, ... ducks, 28@32c; geese, 20@22c; ... 50@60c per pair.

New York

Butter.—Creamery, higher than ... 43½@44c; extras, 43c; firsts, 40½@... seconds, 38@39½c.

Eggs.—White eggs, current receipts, ... storage extras, 37½c; extra firsts, ... mediums, 34@35c.

Poultry.—Live, by freight, fowls, ... 34c; broilers, 34@42c; ducks, 26c; ... 20@30c.

Philadelphia

Eggs.—Firsts, 31c; seconds, 28½c.

Butter.—Creamery, tubs, 92 score, 43c.

Poultry.—Fowls, 26@33c; broilers, ... 42c; old roosters, 21@24c; pigeons, per ... 30@45c.

Apples.—U. S. No. 1, per bu., ... Romes, Winesaps, $1.50@2.75.

Strawberries.—Various varieties, ... crate, 82½c.

Asparagus.—Pa., Del., N. J. and ... doz. bunch crates, green, $1@4.25.

Beans.—Lima, Fla., ½ bu. hmp., ... 3.50; S. C., bu. hmps., 50c@1.75; ... green, bu., $1.50@2.50.

Cabbage.—E. S. Va., ½ bbl. hpr., ... 85c; Pa., bu., $1.

Cucumbers.—S. C., bu. hmps., ... 50c.

Onions.—Texas crates, yellow U. S. ... 1, $1; yellow boilers, 75-@$1.

Potatoes.—Pa., round whites, per ... $1@1.50; new stock, per bbl., ... Rose, U. S. No. 1, $4.75@5.

Sweet potatoes.—N. J., bu., yellows, ... 2.75; Md., Del., bu. hmps., $1@1.25.

Tomatoes.—Tex. lugs, $2.50@3.25; ... fa. $1.15@1.50.

Radishes.—Nearby, bu., 30@60c.

Rhubarb.—Nearby bunches, 3@4c.

Cauliflower.—Calif., crates, $1.90@2.

Kale.—Nearby bus., 25@50c.

Peas.—Calif., bu. hmps., 85@2.25; ... bu. hmps., 65c@$1; N. J. bu. hmp., ... @1.75; Md., bu. hmps., $1@1.25.

Cash Grain

Chicago, June 10.—The following ... prices ruled here today: No. 2 hard ... $1.09; No. 3 yellow corn, 99@$1.01; ... mixed corn, 91¾@92¾c; No. 2 white ... 46¾c.

Frederick Co., Northern Md.

June 3: Weather the past three ... has been ideal for spring planting. ... tically all corn is planted. Most ... corn is up and looking good. Farmers ... busy cultivating early plantings and ... ing soy beans which latter crop is ... rather uncertain this year in view of ... bean beetle which is already ... gardens in large numbers. Grass and ... look good. Early potatoes look fine ... ries scarce, strawberries plentiful ... reasonable. Spring chickens have ... in price to 26c, eggs steady. Rye ...

LIVESTOCK

PITTSBURGH

Cattle

MONDAY'S supply was close to 40 carloads. It included some good fat cattle but none to class with those which brought $14.75 last week. Heavy steers, particularly if rather plain, were slow and looked a little lower. A few averaging over 1,225 lbs. brought $14.50, but nothing over 1,300 lbs. sold above $14.25, at which several carloads of heavy steers changed hands. Coarse, heavy cattle would not sell up to $14 per cwt., even if fat. Handy and light-weight steers were generally steady. Several carloads of them, showing good finish, brought $14.50. Good fleshy butcher steers went around $14, with fair kind $13.25@13.50 and common $12@12.50. Heifers were scarce and firm. Cows showed little change. Fresh cows and springers were dull. Bulls were wanted and higher, good but not choice butcher kind selling around $10.75. Common bolognas went around $9 per cwt.

Choice grain-fed steers, 1,200 lbs. or over	$14 40@14 75
Good to choice	14 00@14 35
Fair to good, do.	13 50@14 00
Plain heavy steers	13 25@13 75
Choice handyweight steers	14.25@14 50
Good butcher steers, 1,000 to 1,150 lbs.	14 00@14 25
Fair to good, do.	13 50@14 00
Ordinary to fair, do.	13 00@13 50
Common, do.	12 25@12 75
Good light butcher steers	13 75@14 00
Fair to good light steers	13 25@13 75
Common to medium, do.	12 50@13 00
Inferior light steers	10 00@12 00
Feeders	Nominal
Stockers	Nominal
Choice heavy bulls	10 50@10 75
Choice handy butcher bulls	10 75@11 00
Good handy bulls	10 25@10 75
Fair to good bulls	9 50@10 25
Common to fair bulls	9 00@ 9 50
Inferior bulls	8 00@ 8 50
Choice fat heifers	13 25@13 50
Good to choice heifers	12 50@13 25
Fair to good heifers	10 50@12 00
Common to fair heifers	9 00@10 00
Choice fat cows	10 50@11 00
Good to choice fat cows	10 00@10 50
Fair to good cows	9 00@10 00
Common to fair cows	7 00@ 8 50
Canners and cutters	5 50@ 7 00
Fresh cows, calf at side	50 00@150 00

Hogs

Monday's supply was about 35 double-deck carloads. Demand was tight good and trade fairly active on light and handyweight hogs but very slow on heavy weights. Prices were steady to a dime lower than at last week's close. Heavy hogs brought $11@11.25 unless extremely heavy, when it was hard to get $11 for them. Handy-weights went at $11@11.05, about half of them at the outside figure. Light Yorkers of the right kind would sell up to handy weights but most of them went around $11.50. Pigs were few and brought $11@11.25. Sows were easier at $9.50@9.75. Receipts are running largely to medium weights or lighter, few light weights showing up.

Heavy wts., 250 lbs. or over	$11 00@11 25
Mixed mixed	11 50@11 60
Medium wts., 180-200 lbs.	11 00@11 65
Heavy Yorkers, 165-180 lbs.	11 00@11 65
Light Yorkers, 125-150 lbs.	11 00@11 00
Pigs, 90-100 lbs.	11 00@11 25
Roughs	9 25@ 9 75
Stags	6 00@ 8 00

Sheep and Lambs

The demand for sheep continues unsatisfactory, and the few here showed no improvement in price. Good wethers were not quotable above $7.50. A few ewes brought $5@6. Most of the seven carloads on sale were yearlings and spring lambs, all clipped lambs now rating as yearlings. The best of these, light and handy weights, brought $13 per cwt., some nice light ones which could supply the trade for spring lambs going at the outside figure. Receipts of spring lambs are increasing. Prices here have been out of line with other markets because of short supply, but buyers forced a dollar off as soon as they found enough on the market. Best lambs brought $16 per cwt., the medium class $13.50@14.50 and culls largely $12@13, some little thin lambs less.

Good to best wethers	$7 00@ 7 50
Fair to good wethers	6 25@ 7 00
Good mixed	6 50@ 7 00
Fair to good, do.	6 00@ 6 50
Common to fair	4 50@ 6 00
Inferior sheep	3 00@ 4 00
Yearlings	7 00@13 00
Spring lambs	11 00@16 00

Calves

With 1,350 calves on sale the market was fairly active. Best veal calves brought $16 per cwt., seconds, $11.50@13 mainly and inferior $7@10.

CHICAGO

Chicago, June 10.—Today's cattle receipts totaled about 16,000 head. The market was strong. Good to prime corn-fed steers are quoted at $14@15.25, good to prime yearlings $13.50@15.15.

Fifty-three thousand hogs were on sale. The market was steady to a dime higher with top at $11.25.

Receipts of sheep and lambs amounted to 10,000 head. The market was steady, western lambs selling at $12@17 and natives at $12@16.50. Feeder lambs are quoted at $12@13.50.

SEEDS AND NURSERIES

EXTRA SPECIAL TO MARKET GARDENERS ... per cwt. Treated, free disease, new and ... cabbage, which insure you greater crop ... barrel, now ready for your late crop. ... Ballhead, Wakefield and dar varieties. ... 500, $1.25; 1,000, $2.00. Tomato, ... Stone, Greater Baltimore, same price ... Charges collect $1.00 thousand. Sweet ... sweet potato, Marglobe tomato. Prices: ... 500, $1.25; 500, $1.75; 1,000, $2.75 ... special price on quantities. Thousands ... customers. Insure satisfaction. Re... Plant Co., Franklin, Va.

FROSTPROOF CABBAGE and ONION ... Copenhagen Market, Ballhead, Wakefield, ... 100, $1.00; 500, $1.50; 1,000, $2.50, ... 10,000, $18.00 expressed. Tomato plants, ... $1.50; 500, $2.00; 1,000, $3.50 prepaid. ... $15.00 expressed. Pepper and Sweet Potato ... 500, $2.50; 1,000, $4.00 prepaid. Cabbage ... 250.00 expressed. Transplanted Tomato ... plants, 100, $1.00; 500, $3.00; 1,000, ... Pepper plants, 100, $1.00; 500, $3.00; ... 1,000, $3.00. Good delivery guaranteed ... 1,000. Satisfaction Guaranteed. Canners, ... prices. Service Plant Company, Franklin, Va.

CABBAGE PLANTS—Millions, June-July deliveries. Early Jersey Wakefield, Charleston Wakefield, Copenhagen Market, Succession, Danish Ballhead, Flat varieties, cabbage, Baltimore, Stone, Marglobe, tomato. Prices: 100, 50c; 300, $1.00; 500, $1.25; 1,000, $1.75. Other plants, sweet potato, sweet pepper. 200, 75c; 500, $1.75; 1,000, $3.00. Special prices on large quantities. Prompt delivery guaranteed. Virginia Grove Plant Farms, Franklin, Va.

MILLIONS VEGETABLE PLANTS Cabbage, Copenhagen, Wakefield, Flatdutch, Danish Ballhead, Succession, Enkhuizen, Stone, Marglobe, tomato, Peppers, Sweet Potatoes, Aster, Snapdragon, Zinnia, 3 doz. 25c; 100, 50c; 300, $1.00; 500, $1.50; 1,000, $2.50 postpaid. Express collect, 1,000, $1.50; 5,000, $6.00; 10,000, $10.00. Safe arrival guaranteed. Satisfaction guaranteed or money refunded. Ideal Plant Company, Franklin, Va.

MILLIONS OF FIELD-GROWN VEGETABLE ... Cabbage, Copenhagen, Danish Ballhead, ... and Late Dutch, Charleston and Wakefield, ... Stone and Marglobe Tomatoes, Baltimore, ... Bermuda Onions, Triumph Egyptian Beets, ... Ruby King pepper plants, 100 50c; 200, $1.00; 500, $1.25; 1,000, $1.95 postpaid. Cabbage and tomatoes ... Porto Rico and Nancy Hall Potato Plants, ... 500, $2.25; 1,000, $3.50 postpaid. Express collect, ... 1,000. Cabbage and tomatoes ... 1,000 expressed. Safe arrival guaranteed. Satisfaction guaranteed or money cheerfully refunded. Old Dominion Plant Company, Franklin, Va.

MILLIONS FIELD-GROWN VEGETABLE plants—Cabbage, Jersey and Charleston Wakefield, Dutch, Danish Ballhead, Copenhagen Market, Tomatoes, Baltimore, Stone, ... 500, $1.50; 1,000, $2.50. Sweet Potatoes, ... 500, $1.75; 1,000, $2.75. Peppers, Cabbage ... 500, $2.00; 1,000, $3.50. Express collect, ... 1,000. Prompt shipments. Satisfaction guaranteed. Joyner's Plant Farms, Franklin, Va.

PLANTS POSTPAID—All varieties. Beet, Cauliflower, Onions, Parsley, 3 doz. 25c; 100, 50c; 500, $1.50; 1,000, $2.50. Cabbage, Kale, Lettuce, Mangel, Turnips, 3 doz. 25c; 100, 50c; 500, $1.00; 1,000, $1.50. Egg Plant, Onions, Parsnips, Peppers, Tomatoes, 3 doz. 25c; 100, 65c; 500, $2.00; 1,000, $3.50. Aster, Snapdragon, Zinnia, 3 doz. 25c; 100, 50c; 500, $1.75; 1,000, $2.75. Special prices on large quantities. Thousands of customers. Insure satisfaction. Reference: Peoples Bank. Plant Co., Franklin, Va.

ACRES CABBAGE, CAULIFLOWER Plants, ... grains Danish Seed, chemically treated, ... delivery or nursery grown. Copenhagen, ... Copenhagen, Succession, Enkhuizen, Early ... Flatdutch, Ballhead, Red Rock, Marglobe, ... Stone, Tomatoes, Peppers. Prices: 100, $1.00; 500, $1.25; 1,000, $1.75. Other plants. 1,000, $2.25; 10,000, $10.00. Sweet potato, sweet pepper 500, $1.75; 1,000, $3.00. Express collect, 1,000, $1.50; 5,000, $6.00; 10,000, $10.00. Safe arrival guaranteed. Satisfaction guaranteed or money refunded. Virginia Grove Plant Farms, Franklin, Va.

SPECIAL FOR 30 DAYS—30 Acres Fine Cabbage Plants—Copenhagen, Ballhead, Flatdutch, Stone, Tomato Plants, Stone, Baltimore, Marglobe at $1.00 thousand; 5,000, $4.25; 10,000, $8.00. Sweet Potato and Pepper Plants $2.00 thousand. Prompt shipments, absolute satisfaction guaranteed or money cheerfully refunded. Old Dominion Plant Company, Franklin, Va.

FROSTPROOF CABBAGE, TOMATO, ONION plants, three leading varieties. Not the cheapest, but the best grown, grouped for direct delivery, greater crop yield. 300, $1.00; 1,000, $2.50; 10,000, $20.00. Quick delivery, satisfaction guaranteed. Maple Grove Plant Farms, Franklin, Va.

LOOK—MILLIONS TOMATO and CABBAGE Plants, Tomato Stone, Baltimore, Marglobe. Cabbage, Wakefield, Flatdutch, Succession, Enkhuizen, Copenhagen Market, Ballhead. 200, 50c; 500, 75c; 1000, $1.00; 5,000, $4.00; 10,000, $7.50 express collect. Sweet pepper 200, 50c; 500, $1.25; 1,000 $1.75 prepaid. Good plants. Quick service guaranteed. Evergreen Plant Farm, Courtland, Va.

MILLIONS CABBAGE PLANTS—Copenhagen, Danish Ballhead, Wakefield, Flatdutch, Succession, Stone, Marglobe. Matchless. 300 75c; 500 $1.00; 1,000 $1.50 postpaid. Express $1.00, 1,000. 5,000 $4.00; 10,000, $7.00. To grow new varieties and show you what we send out, rush orders. Satisfaction Guaranteed. H. A. Lankford Company, Wholesale Growers, Franklin, Va.

ACRES OF NICE FIELD-GROWN CABBAGE plants. All leading varieties. 500 75c; 1,000 $1.00; 1,000, $1.40 postpaid. 10,000, $7.00 express collect. Tomatoes, Sweet Potatoes, Peppers, 500 $1.00; 1,000 $1.50; 1,000, $2.40 postpaid. Full count. Quality at low cost. Seiler Plant Co., Selbyville, Va.

CABBAGE—Wakefield, Flat Dutch, Copenhagen, Ball Heads. 300, 75c; 500 $1.00; 1,000, $1.50 postpaid. Tomatoes, Sweet Potatoes, Peppers. 300, $1.00; 500 $1.50; 1,000, $2.75 prepaid. Prompt shipment. Plant and night service. Piner Brothers, Franklin, Va.

EXTRA NICE CABBAGE and TOMATO Plants, all varieties. 200, 85c; 500, 95c; 1,000, $1.45 postpaid. Express collect, 1,000 $1.00. Ruby King Pepper 200 $1.00; 500, $1.50; 1,000 $2.40 guaranteed satisfactory. Joyner's Plant Farm, Franklin, Va.

CABBAGE PLANTS, best kinds, $1.25; 1,000 Lettuce, Onions, Beets, $2.00; 1,000 Peppers, all kinds, $2.00; 1,000. Cauliflower, $2.50; 1,000. Egg Plant, $4.00; 1,000. Tomato all varieties, $2.00; 1,000. All ready for field. Send for list. J. C. Schmidt, Bristol, Pa.

100 ACRES VEGETABLE PLANTS.—Cabbage $1.00 thousand. Onion, $1.50. Pepper, $2.00. Sweet Potato, $2.50; 10,000, $20.00. Tomato, $1.25; 10,000, $10.00. Prompt shipments, good delivery guaranteed. Farmers Supply Company, Franklin, Va.

SPECIAL FOR JUNE.—Millions of vegetable plants. Cabbage, Ballhead, Copenhagen Wakefield and Dutch, Baltimore, Stone. Matchless tomatoes. Crosby's beets, $1.00 thousand, charges collect. Prompt shipments. Moss Packed. Cedar Hill Plant Co., Franklin, Va.

CABBAGE PLANTS—Copenhagen, Ballhead, Wakefields and Flats, 200, 50c; 500, $1.00; 1,000, $1.50 postpaid. 5,000, $6.00; 10,000, $10.00 expressed collect. Tomato, Onion, Collard, same price as cabbage. Celery and Pepper, 100, 60c; 1,000, $5.00. Virginia Plant Farm, Courtland, Va.

LEADING VARIETIES.—Cabbage, Tomato, Onion and Collard plants, 100 25c; 500, $1.00; 1,000 $1.50 postpaid. 5,000, $5.00; 10,000, $9.00 expressed. Celery, 100, 50c; 500, $2.00. Pepper, 100, 60c; 500, $2.50 postpaid. Burnett Brothers, Courtland, Virginia.

HIGH-GRADE PLANTS, carefully packed, large well-rooted open field grown, leading varieties Cabbage, 75c; 1,000; Tomato, $1.00; Porto Rico Sweet Potato, $2.00; 1,000. Acme Plant Co., Quitman, Ga.

FINE CABBAGE and TOMATO PLANTS, leading varieties, 300 75c; 500, $1.00; 1,000 $1.50 postpaid. 1,000, $1.00; 5,000, $4.50; 10,000, $8.00 express collect. Nice plants, prompt shipments. American Wholesale Plant Co., Franklin, Va.

SELECTED PLANTS—Tomato, Cabbage, 500, $1.00; 1,000, $1.50. Potatoes, $2.50 prepaid. Satisfaction guaranteed. Rexall Plant Co., Franklin, Va.

CABBAGE.—Collard, Tomato, 1,000, $1.00. Nice plants. C. W. Burgess, Route 2, Courtland, Va.

SPECIAL ON CABBAGE PLANTS FOR JUNE. Wakefield, Flat Dutch, Ballhead and Copenhagen, $1.00 per thousand, charges collect. Mrs. Vincent Lankford, Franklin, Va.

FROSTPROOF CABBAGE PLANTS, 75c; 1,000; Collards, 75c; Tomato, $1.00; Ruby King Pepper, $2.00; Porto Rico Potato Plants, $1.50. Quitman Plant Co., Quitman, Ga.

MILLIONS CABBAGE ONION and TOMATO Plants. $1, 1,000. Pepper and Potato Plants, $1.75, 1,000. Clark Plant Company, Thomasville, Ga.

CLASSIFIED DEPARTMENT

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SEEDS AND NURSERIES

EXTRA NICE CABBAGE PLANTS. Ballhead, Flatdutch, Wakefield, Succession, 300 75c; 500, $1.00; 1,000, $1.50 postpaid. 5,000, $4.00; 10,000, $6.00 express collect. Tomato Plants: leading varieties, 300 75c; 500 $1.00; 1,000, $1.50 postpaid. 5,000, $5.00; 10,000, $9.00 express collect. My Grade plants at low cost. Drake Plant Co., Franklin, Va.

LOOK—MILLIONS TOMATO and CABBAGE Plants, Tomato Stone, Baltimore, Matchless. Cabbage, Wakefield, Flatdutch, Succession, Enkhuizen, Copenhagen Market, Ballhead. 200, 50c; 500, 75c; 1000, $1.00; 5,000, $4.00; 10,000, $7.50 express collect. Sweet pepper 200 50c; 500 $1.25; 1,000 $1.75 prepaid. Good plants. Quick service guaranteed. Evergreen Plant Farm, Courtland, Va.

MILLIONS CABBAGE PLANTS—Copenhagen, Danish Ballhead, Wakefield, Flatdutch, Succession, Stone, Marglobe. Matchless. 300 75c; 500 $1.00; 1,000 $1.50 postpaid. Express $1.00, 1,000. 5,000 $4.00; 10,000, $7.00. To grow new varieties and show you what we send out, rush orders. Satisfaction Guaranteed. H. A. Lankford Company, Wholesale Growers, Franklin, Va.

ACRES OF NICE FIELD-GROWN CABBAGE plants. All leading varieties. 500 75c; 1,000 $1.00; 1,000, $1.40 postpaid. 10,000, $7.00 express collect. Tomatoes, Sweet Potatoes, Peppers, 500 $1.00; 500 $1.50; 1,000, $2.40 postpaid. Full count. Quality at low cost. Seiler Plant Co., Selbyville, Va.

CABBAGE—Wakefield, Flat Dutch, Copenhagen, Ball Heads. 300, 75c; 500 $1.00; 1,000, $1.50 postpaid. Tomatoes, Sweet Potatoes, Peppers. 300, $1.00; 500 $1.50; 1,000, $2.75 postpaid. Prompt shipment. Plant and night service. Piner Brothers, Franklin, Va.

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100 ACRES VEGETABLE PLANTS.—Cabbage $1.00 thousand. Onion, $1.50. Pepper, $2.00. Sweet Potato, $2.50; 10,000, $20.00. Tomato, $1.25; 10,000, $10.00. Prompt shipments, good delivery guaranteed. Farmers Supply Company, Franklin, Va.

SPECIAL FOR JUNE.—Millions of vegetable plants. Cabbage, Ballhead, Copenhagen, Wakefield and Dutch, Baltimore, Stone. Matchless tomatoes. Crosby's beets, $1.00 thousand, charges collect. Prompt shipments. Moss Packed. Cedar Hill Plant Co., Franklin, Va.

CABBAGE PLANTS.—Copenhagen, Ballhead, Wakefields and Flats, 200, 50c; 500, $1.00; 1,000, $1.50 postpaid. 5,000, $4.00; 10,000, $7.50 expressed collect. Tomato, Onion, Collard, same price as cabbage. Celery and Pepper, 100, 60c; 1,000, $5.00. Virginia Plant Farm, Courtland, Va.

LEADING VARIETIES.—Cabbage, Tomato, Onion and Collard plants, 100 25c; 500, $1.00; 1,000 $1.50 postpaid. 5,000, $5.00; 10,000, $9.00 expressed. Celery, 100, 50c; 500, $2.00. Pepper, 100, 60c; 500, $2.50 postpaid. Burnett Brothers, Courtland, Virginia.

HIGH-GRADE PLANTS, carefully packed, large well-rooted open field grown, leading varieties Cabbage, 75c; 1,000; Tomato, $1.00; Porto Rico Sweet Potato, $2.00; 1,000. Acme Plant Co., Quitman, Ga.

FINE CABBAGE and TOMATO PLANTS, leading varieties, 300 75c; 500, $1.00; 1,000 $1.50 postpaid. 1,000, $1.00; 5,000, $4.50; 10,000, $8.00 express collect. Nice plants, prompt shipments. American Wholesale Plant Co., Franklin, Va.

SELECTED PLANTS—Tomato, Cabbage, 500, $1.00; 1,000, $1.50. Potatoes, $2.50 prepaid. Satisfaction guaranteed. Rexall Plant Co., Franklin, Va.

CABBAGE.—Collard, Tomato, 1,000, $1.00. Nice plants. C. W. Burgess, Route 2, Courtland, Va.

SPECIAL ON CABBAGE PLANTS FOR JUNE. Wakefield, Flat Dutch, Ballhead and Copenhagen, $1.00 per thousand, charges collect. Mrs. Vincent Lankford, Franklin, Va.

FROSTPROOF CABBAGE PLANTS, 75c; 1,000; Collards, 75c; Tomato, $1.00; Ruby King Pepper, $2.00; Porto Rico Potato Plants, $1.50. Quitman Plant Co., Quitman, Ga.

MILLIONS CABBAGE ONION and TOMATO Plants. $1, 1,000. Pepper and Potato Plants, $1.75, 1,000. Clark Plant Company, Thomasville, Ga.

SEEDS AND NURSERIES

CAULIFLOWER and CABBAGE PLANTS, 100, 10c; 1,000, $2.50; prepaid. Satisfaction guaranteed or money refunded. E. Potter, Lewisburg, Pa.

GLADIOLUS 60, none alike, $1.25; 10 Dahlias, $1.25, evergreen trees, roses. Catalogue. Gladiolus Farms, Chicopee Falls, Mass.

CABBAGE and TOMATO PLANTS: 300, 75c; 500, $1.00; 1,000, $1.75; postpaid. $4.00 thousand cash. East Virginia Plant Farm, Franklin, Va.

PLANTS.—Nice Variety, tomatoes, $1.50; 1,000. Cabbage, $1.25, 1,000. All prepaid. Prompt shipment. Rex. Ribble Brantley, Bluefly, Va.

WILSON and VIRGINIA 202 BEANS. Elm Lodge Farms, Centerville, Md.

MISCELLANEOUS

WHY BLAME THE BULL when your cow does not breed? **Use Cow Gain.** 1 hour before service. Results or your money back; 90 cents for one cow, $2.90 for five cows, postpaid. Wyndcroft Farm, Route 2, Box 59-C, Boonton, Washington.

ROOFING PAPER.—2-ply, $1.35 per roll, 108 square feet. Prepaid. Asphalt shingles, roof coating, paint. Send for price list. Winslow Bros., Millis, Mass.

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CORN HARVESTER

RICH MAN'S CORN HARVESTER, POOR Man's Price—Only $25.00 with bundle tying attachment. Free catalog showing pictures of harvester. Process Co., Salina, Kans.

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WANTED—MAN WHO KNOWS FARM LIFE to travel in country. Steady work. Good profits. McCutcheon & Company, Room A2308, Winona, Minn.

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REGISTERED THOROUGHBREDS, fresh, $80; grades, $45; bred yearlings, $30, fine buck, $25. Pairs, trios, herds, wholesale. Eastern Headquarters Worlds Best California heavy milkers. Goldsborough's Goatery, Mahaffey, Pa.

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WE BUY or HANDLE on commission, all grades hay and straw. George L. Rogers & Co., Wabash Bldg., Pittsburgh, Pa.

FOR THE HOME

100 ASSORTED dishes packed as first quality consisting of cups, saucers, plates, bowls, oatmeals, platters, etc. All useful. Slightly imperfect. $5.50, prepaid. Send money to us for immediate shipment. Home China Co., Millis, Mass.

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MAKE BIG PROFITS with Chinchilla Rabbits. Real money makers. Write for facts. 646 Conrad's Ranch, Denver, Colo.

DOGS

FREE DOG BOOK.—Polk Miller's famous dog book on diseases of dogs. Instructions on feeding, care and breeding with symptom chart. 68 pages. Illustrated. Write for free copy. Polk Miller Products Corp., 1025 W. Broad St., Richmond, Va.

COLLIE and FOX TERRIER PUPS. Shadowmere and Intelligent, London Kennels, Grove City, Pa.

BEAGLE PUPS.—Two months old. T. E. Sterner, Emleton, Pa.

SITUATION

DO YOU NEED FARM HELP.—We have Jewish young men, able-bodied, some with, but mostly without experience, who want farm work. If you need a good, steady man, write for an ordered basis. Ours is not a commercial agency. We make no charge. The Jewish Agricultural Society, Inc., Box C, 301 E. 14th Street, New York City.

TOBACCO

GUARANTEED HOMESPUN TOBACCO.—Chewing, 5 pounds, $1.50; $2.50. Smoking, 5, $1.25; $1.75. Pipe free. Pay Postman. United Farmers Cardwell, Kentucky.

LEAF TOBACCO.—Good sweet chewing, 5 lbs., 90c; 5, $1.25; 10, $2.00. Smoking, 2 lbs., 50c; 5, 90c; 10, $1.50. United Farmers, Mayfield, Ky.

BABY CHICKS

WHITE LEGHORN HENS and MALES now half price. Thousands of eight-week-old pullets. Also baby chicks and eggs. Trapnested, pedigreed foundation stock, egg bred 29 years. Winners at 29 egg contests. Records to 329 eggs. Catalog and special price bulletin free. I ship c.o.d. and special price bulletin free. I ship c.o.d. George B. Ferris, 980 Union, Grand Rapids, Mich.

MARTIN'S CHICKS. Barred, White, Buff Rocks, Reds, Buff Orpingtons, White Wyandottes, 12c; White, Buff Leghorns, Anconas, 10c; Heavy Mixed, 11c; Light mixed, 8c. 100% delivery, postpaid. Martin's Hatchery, Mt. Victory, Ohio.

CHERRY HILL S. C. White Leghorn Chicks from my personal supervised breeders on our farm. They are truly larger, more vigorous, more profitable producers of white-shelled eggs than you will find elsewhere at such reasonable prices. Circular free. Cherry Hill Poultry Farms, Wm. Nace,



You bet . . .
the farmer knows!

THE MODERN FARMER knows how to buy—what to buy. He pays a premium for the best seed, fertilizer, chicken feed, because in so doing he increases his chance of profit on his own product. He knows the best is cheaper in the end.

He knows how to get the most out of, and to care for, his equipment—the many trucks, tractors and passenger cars required on a large farm. He knows care means economy.

That is the reason why so many farmers are now using Ethyl Gasoline. They have proved to their own satisfaction that engines run more smoothly, develop greater power, and, most important of all, are less liable to be laid up for repairs when Ethyl is used—and every farmer knows what a costly thing is the laying off of farm machinery for even a day.

Ethyl Gasoline speeds up farm operation. It keeps the equipment *in action*.

It saves time ordinarily lost through frequent carbon removal—and the saving in repairs, the greater profits more than offset the small extra premium which Ethyl costs.

Keep stocked up on Ethyl. It's on sale everywhere.

Ethyl Gasoline Corporation, 25 Broadway, New York City; 56 Church St., Toronto, Can.; 36 Queen Anne's Gate, London, Eng.

GOOD GASOLINE plus ETHYL FLUID equals ETHYL GASOLINE
Knocks out that "knock"

ETHYL GASOLINE

E.G.C. 1929



WHO
gets the profits?

If everybody doesn't get a profit, business stops

JOHN JONES must get a profit in greater health and increased enjoyment from the eggs, poultry, milk and beef he consumes.

You must get a profit from the products you supply to him. The fowl and cattle you keep must get a profit from the feed they eat. The dealer must get a profit from the feed he sells. The railroads must get a profit from the feed they haul. The manufacturer must get a profit from the feed he mixes—and he must mix and price his feed in such a way that it will give profit to everybody, right back to the ultimate consumer.

The feed manufacturer's laboratory creates the formula. His experimental farms test it. The mill transmutes it into a commercial feed, packed for shipment. Then the costs are established. But the profit is the essential point—if the feed can show a reasonable profit to everybody, the cost does not matter.

It is on the experimental farms that the profits of Park and Pollard feeds are really proven. There the feeds are tested in terms of eggs and milk. If the feed can produce in sufficient quantity to yield the farmer more than he would ordinarily expect, it can be considered a success. And it must be proven capable of earning greater profits or it will not be offered to the farmer. For if he benefits everybody shares—the ultimate consumer, the dealer and The Park and Pollard Company.

The Park & Pollard Co
Boston, Mass.—Buffalo, N. Y.

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PENNSYLVANIA FARMER

Published Weekly — Established 1877

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PENNSYLVANIA STOCKMAN *and* FARMER

June 22, 1929

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Farm Facts and Fancies

By ALVA AGEE

THE close connection between the big financial world and farmers, that was commented on recently on this page, has a marked illustration in the experience of some farm implement corporations. The drop in the price of wheat was accompanied by a drop of sixty-six millions of dollars in the market value of one great farm machinery concern, twenty-eight millions in another and nine millions in another.

I do not mean to say that all this drop of over a hundred millions in market value was due to the decline in wheat prices during the last half year. Speculators had pushed up the prices of many stocks beyond any reasonable level, as figured from net earnings, but when reaction came the dark prospect for wheat scared the holders of shares in this class of manufacturing concerns, and they wanted to get out at any price. When wheat went below a dollar a bushel, these stocks again tumbled. The reasoning was that there must come a less acreage of wheat to be seeded and harvested, and most of all that there would be inability to replace old machinery with new.

Bankers, investment trusts and other wealthy corporations and individuals who have hundreds of millions of dollars invested in these enterprises have as much reason to fear dollar wheat as the producer, and it is just as well that they can appreciate the farmers' situation.

Influencing Prices

When the price of wheat jumped as a result of an announcement that the national government was planning to have a considerable part of the surplus stock taken off the market for the time being, I was glad that we had a national government whose attitude toward agriculture was friendly. The soundness of the action may be another matter, and our view of it later on will depend on the size of the world crop.

If weather conditions are unfavorable to growing wheat, and if the hope of higher prices does not lead to plans for increased acreage, the steadying of public sentiment may mean the disposal of our heavy surplus at better prices than could be possible if it were dumped in a fit of discouragement. If this year's crop is a bumper one, and increased planting is encouraged, we have only hunted trouble and found it.

Anyway, the government came near owing the farmers something on account of the responsibility it must bear for the size of the big surplus on hand at this time. If it had not advised storing in the latter part of last year, probably we should have moved more wheat into the world's markets when the price level was much better. As it was, we stood aside and let Canada and other countries get the better prices, and now are nursing an unwieldy surplus. Of course the government's predictions on prices were well meant, but they were wrong.

For the Long Pull

There are good reasons for relatively low prices for wheat as the years come along. The crop fits into the general scheme of things in the countries that have the most undeveloped land. Soil and climate favor it above most farm crops in Canada, Argentina, Australia, Russia and the countries having an old-time established agriculture like this country and much of Europe. The fitting of the ground, the seeding and the harvesting are being made easier. Wheat is not perishable, and storage is not expensive. In general farming it stays with us even when other crops are bringing greater returns because it fits into the rotation.

Our friend Zinn wonders whether the farmers in the East can longer afford to grow wheat. Certainly not if it required the condition of soil and the time of year for seeding that corn and potatoes demand, but as matters stand I reckon one can figure a bigger profit by dropping it than by growing it under ordinary farm conditions. Be that as it may, and let come what may, any attempt at orderly marketing of the world may reasonably expect that China is going to eat more and more wheat, more bread because heavier wheat production is coming along with the years. It looks that way.

Incompetent Folks

This item may seem to be without personal grievance, but there is reason for mentioning it. Always I have avoided a great deal, and want to continue to do so. When some eye-strain has grown a bit worse a year or two ago, I went to an oculist recommended as highly competent. He used pains in fitting glasses, the strain continued. A second and a third later on got me nowhere. Then I consulted firm of optometrists was tried, and they reported that the lenses were right. That left me nowhere. Then I picked on a bright young man, recently trained in a university and with a few years of practice. He spent three or four periods merely in testing and rechecking. Then he was sure he had the trouble located, and he corrected it. His predecessors got my money, but I suffered the discomfort simply because they were incompetent.

Doubtless very many people have got the right lenses and not only accept the discomfort but take risks. Only a competent man could take away pain and discomfort. This is written as a suggestion that no one should be content with impaired vision if the troubles are fundamentally sound. There is risk in doing so, and there is some one who has the skill to correct the trouble. It would be better to economize on anything else and insure one's eyes.

Aimee Semple McPherson

The other afternoon I went out to the Aimee Semple McPherson Angeles Temple—a wonderful building Echo Lake and near the heart of city. The streets were congested motor cars, as is usual, I am Some were limousines because regular attendants are very some were poor enough.

On this particular day over dred inmates of the County Home guests, having been brought at the charge of a wealthy the church. They were taken in the crowded audience treated just as well as rich folks ice to the destitute of the city carried on by the church all and when money is needed made by the speaker and are handed in. The rich and mixed together, and work in loyalty to their leader. day contributes twenty-five the radio message may go to

That is the spirit and the the thousands most closely with this leader in work for wanted to set down this simple

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THE establishment of a $14,000 to be divided scholarships and fellowships to the members and leaders clubs, juniors in the state colleges and junior students hundred high schools has just nounced by the donor, Wm. forth of St. Louis. The will be awarded through forth Foundation cooperating American Youth Foundation in special study courses this

The scholarship to 4-H bers will be awarded to most outstanding club members United States. Scholarships be given to twenty agricultension club leaders who will pany the club members to the can Youth Foundation Camp ter Ossipee, N. H., and for a two week leadership

Farm Practice

By W. D. ZINN

A DELAWARE reader asks how much Sudan grass should be with two bushels of soy beans. Sudan is a very suitable crop for soy beans, but I almost cut the beans one season by too much Sudan. We sowed 15 to 20 pounds of Sudan grass acre. Ten pounds of Sudan is all should be sown per acre.

In Webster County, W. Va.

EACH year Webster county holds an annual Farm Bureau meeting for three years in succession I have invited to attend this meeting and been present. It is the big day the farmers of the county. The have been held at Camp Caefor the 4-H camp of the county.

This is one of the best equipped in the state. It has 14 cottages, dining room large enough to seat two hundred persons, a kitchen shed, a stadium where the campfire are held, a large octagon shaped auditorium capable of seating three hundred persons. This building is supplied with chairs that have been donated by the good people of Webster and adjoining counties. Besides all this have a livestock pavilion 100 feet and large enough to accommodate the livestock that is brought to the each year.

The camp is along side of the Gauley which makes the location ideal. than $15,000 has already been on this camp and the county said they were not yet satisfied the equipment. Other things are

Many organizations hold their anual gatherings here. Among the numare the Sunday school conventions, school meetings of the county the clubs of the county and many meetings. There is scarcely a during the summer that the camp not occupied.

Below ten o'clock on Saturday morning May 25th, the farmers and their began to arrive and the countagent at once ushered them into the where we had a most delightful round-table of an hour and a Never have I seen farmers more to ask questions. A free dinner served to the entire crowd and chickens were consumed.

It was a red-letter day for the farmers of Webster county. They were from every nook of the county all seemed to enjoy the day. Mr. Wolfrom is the county agent. He been in the county for ten years to him more than to all other percombined is due the rapid strides county has made in club work and agriculture. Webster county is not strictly speaking an agricultural county but the 4-H Club work has been more fully developed here than in most counties. Some prominent boys and have gone out from the clubs this county and have made for themselves a state reputation.

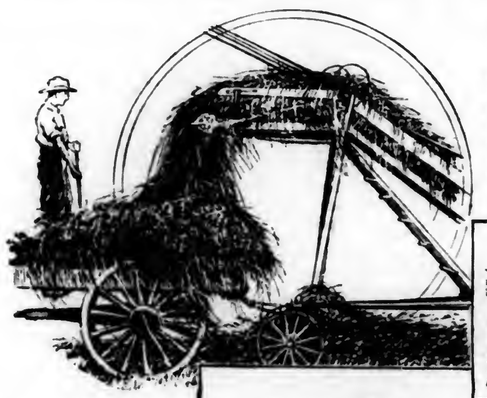
Turning Rye for Potatoes

PENNSYLVANIA reader asks whether it would be safe to turn four feet high for potatoes this soon. It would certainly be very dry. If the weather should be very dry for the next two months it might do much damage, otherwise it might ruin the potatoes. The rye would have been turned under before was two feet high. Besides rye when turned down impoverishes the soil—something we did not know a few years ago.

Land intended for potatoes if not very rich should have a heavy application of all three elements of plant food. The reason for this is that they grow in a short time and should have an abundance of plant food right at hand when growing. A 4-16-10 goods would be a good formula, or something near it.

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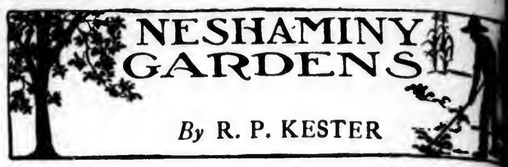
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By R. P. KESTER

I THINK it must be thirty years ago that I began raising strawberries. We have grown them almost continuously since we planted the first 1,000 plants. But never have I seen such a set of berries as we have this year. We set three thousand plants last spring—two thousand Premiers and one thousand Big Joes. We picked the first quart of ripe berries on Decoration Day, and they have been turning off in geometrical progression ever since. The Premiers are a little earlier than the Joes, probably a week. Our berries were not quite as early this year as usual because of the mulch we applied last fall. But that is to our advantage as the supply from farther south begins to decrease about now.



• • •

I became interested in berry raising when I was a boy. A great uncle bought a few acres from father and started the development of a fruit farm, including all the berries. He had lived in Vineland, N. J., for a few years and imbibed the spirit of the fruit grower while there. But he did not make it go, and returned to Clearfield county, Pa., without capital but with some experience and much enthusiasm. He bought the land and built a house entirely on credit, and started into a business which it was thought could succeed only in a warmer climate and on a different soil.

• • •

Although he was more than fifty years of age at the time he bought the land he paid it out and had a nice, comfortable home when he died several years ago. But it required hard work and much economy. Besides doing most of the planting and cultivating, he did his own marketing, retailing from door to door in a town twelve miles away, driving a horse and covered wagon. He read and talked his subject in season and out of season, and his enthusiasm and success started several others including myself to raising fruit. Hardly any of the varieties of berries he raised are on the market today.

• • •

The old Kentucky strawberry was his money-maker, and the one we planted first. Compared with the best varieties today, it was not much. Then the Glen Mary and Wilson were thought to be better and were substituted. I suppose that Uncle tried dozens of varieties, many of which never paid for the trouble of setting them. He tried a great many kinds of blackberries and raspberries, and finally settled on the Gregg and Cuthbert raspberries and the Snyder blackberry. Of these varieties, only the Cuthbert has come through the years to now.

• • •

He lost considerable time and money by following the over-statements of nurserymen about new varieties of apples, plums and the like. I sometimes wonder why nurserymen are allowed to get away with exaggerated claims concerning new varieties. We have "blue sky" laws to protect the public on stock promotion schemes for questionable enterprises, yet such securities are no whit worse than a lot of new nursery propaganda that was foisted on the credulous fruit grower a generation ago, and to a less extent today. Some of the big flops Uncle tried were the Gold Plum, the Apple of Commerce, the King David apple (in his locality) and many others, the names of which I have forgotten.

• • •

But to get back to the strawberry crop at Neshaminy Gardens. When I got home last evening I found they had picked six crates and sold them. We had orders for eight more crates today, Saturday. But it is raining! What a prospect for a disappointed day! I do not know, as this is written, what will be the outcome. It is hot today, the berries are ripe, and they must be sold. But it is one of the many occasions in a farmer's life that test his fortitude and patience. It is the frequent recurrence of such experiences in the life of farmers that begets a spirit of stolidity in their lives.

I find that city people pay little attention to the weather. In the summer about the first thing people say when they meet is to remark about the weather. I have heard city people say that this was because of the narrowness of their lives, that they did not have anything else to talk about. That is not true. They talk about the weather because it is the greatest limiting factor in their lives,—the factor that makes or breaks them, yet they have no control over it!

Friendly Talks

By Edgar Viguers

"FINE and dandy! Never better in my life."

That is the answer everybody when he calls up a young farmer I know; and the best of it is the ring in her voice backs up the she speaks. You just know she every word of it. If you don't to your work with a happier your heart after a moment's this bright, cheery lady, you are ent from most folks I am with, for those words and the panying tone are enough to of us to better living.

Some folks are not that way Every time you get caught with these people of the blue you have to listen to a string luck stories a mile long; and ordeal is over you feel as if going to have a sick spell you only knew when such was calling, wouldn't you bee line for the back end of and stay there till you were was gone?

But what a lot of good it low to come in contact with who keeps his heart cheery, how heavy the clouds hang world! We all need the good, kind, happy-hearted the best we can, there is much to depress and underour efforts to "make this the yet."

Have you heard of the when disturbed leaves behind dark stream of liquid? The that for self-protection. It hind the cloud of darkness out. Seems as though some that way. Wherever they make other people sad and fortable.

God bless the happy-hearted this world! And there are them than we know—many we only can find them. And can't we all, you and I and of us, be that way? If we it would soon make this a world to live in. Let's begin now!

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Crossing the Nevada desert. The mountains appear close, but they are miles away. Notice the white streak at the right—not water but vast alkali beds.

Lessons in Geography

Seeing America with a Score of Farm Paper Editors

By C. L. WHITE

As I write these lines I am approaching the end of a three weeks' 10,000-mile tour in geography sponsored by the American Agricultural Editors' Association. Nearly every year the association conducts a tour for its members, partly for their pleasure, partly to obtain "copy," i.e., material for articles, but principally to give the editors a broader outlook and a more intimate knowledge of national and international farm conditions.

Europe, Mexico and western Canada have been toured by various groups of the agricultural editors but this year's lessons in geography are being taken in the south, southwestern and Pacific Coast sections of the United States. It is my good fortune this year to be a member of the class which includes twenty-two other editors, also that number of wives and three small boys.

We are now climbing up the long Feather River Canyon in eastern California, the first stretch of our home journey. Although we still have almost a week before us, the whole crowd has seen and heard so much that is new and strange that we welcomed our first twenty-four hours of travel on the train. What would otherwise be a tedious ride is an opportunity to digest our impressions."

Early this morning while we were all sound asleep in our special train we left the capital city of California, Sacramento. We make our next stop at Salt Lake City tomorrow forenoon. Our train is climbing along on a narrow roadbed carved out of the side of the canyon wall. Opposite the railroad, on the other side of the Feather River, is another road cut out of the almost perpendicular mountainside a hundred feet above the water. It has followed the river for miles—rather, we have followed it. For that matter, a used and very narrow footpath along the canyon was there long before the railroad. It was started by some of the forty-niners and their pack mules. This mountain country is the site of much of the hectic, heart-breaking activity of gold rush days.

We have been climbing steadily for hours, and now, at noon, May 21st, we can see snow on the mountain tops in all directions. Soon we will reach the summit about six thousand feet above sea level—nearly twice the elevation of the highest point in Pennsylvania. Then we shall drop down a little and cross the Great Salt Lake to the capital of Utah.

Missouri Beats Ohio at Checkers

But why write about what's ahead when we have already seen so much. Anyway, Charlie Ziervogel, the dining-car steward, has announced lunch. We must go and help John Case of the Missouri Rural-ist celebrate his victory. He now calls himself the checker champion of California, having defeated Ray Corey of the Ohio Farmer. But they had to play off to finish the series before we crossed from California into Nevada.

Eight hours later: We had lunch and have just finished an eight o'clock dinner and now I hasten to take back what I wrote this forenoon about the crowd welcoming this day on the train. For just after noon we left the canyon and set out across the Nevada desert. We had seen desert before on the trip, but nothing like this. We seemed to be traveling down the middle of a very broad, flat valley bordered by great mountains which at times were quite near, but usually far away, fifty miles or more, their details obscured by a purple haze. The air was hot and the land was bare of vegetation, except for scattered clumps of sage brush or grease wood. In some places there must have been a little dried-up grass, the exact color of the sand, for a few range cattle were trying to pick up a living. But for hours there was no sign of animal life.

At times we could see no life of any kind, plant or animal, for scores of miles. The bare sand was relieved by immense areas of alkali. In the distance the deposits looked like large lakes; nearby they would pass for snow or ice if one were insensitive to the burning sun.

Iced Tea for Dinner in the Desert

Worse than the heat and the glaring sunshine was the dust which swirled around the train all afternoon. It swept up into the observation platform in clouds, driving everyone indoors. It came in around the windows faster than the industrious porters could clean it away. The bridge players had to wipe off the tables after every deal.

Just before sundown we reached Winnemucca, about a third of the way across Nevada. The town seemed like an oasis. We alighted while the ice bunkers were filled and were surprised to find a cool breeze. It felt so good the afternoon's heat seemed almost worthwhile. As every easterner does, we wondered how the evening could be so cool after such a blistering day.

At nightfall we left the worst of the dust—so we proceeded to clean up and get ready for Charlie's dinner call. The men appeared in clean collars, the women in fresh cheerful colored dresses. Now the cool air and a leisurely meal in the dining car have put everyone in a happy mood.

What did we eat out here in the desert? Well, we started off with grapefruit and followed it with roast stuffed duckling with fixings too numerous to mention, all topped off with iced tea and a very good ice cream sundae of unidentified but much appreciated flavor. The meal was typical of all the good ones the Missouri Pacific boys have been giving us ever since we left St. Louis on May fifth.

Now that we are all fed and contented some have gone back to the bridge games, some are talking—this really is a traveling convention—some are preparing to retire for the night, and the rest have assembled in the club car for a song and talk fest.

Thus do traveling editors pass the time on a long journey—all but this one who is still cogitating on the two eventful weeks just past and trying to digest his impressions—and his dinner.

Looking out across the moonlit desert I see reminders that we are not so far from civilization after all. The night air mail beacons are flashing along our route. The desert is so flat that three or four of them can be seen at once.

The quick mail service and our night travel have deprived us of much of the sense of the bigness of our country which I had expected to gain on this trip. One loses all idea of distance by going to sleep in one town and waking in another several hundred miles away, as we have been doing.

Perhaps I shouldn't draw conclusions now, but I doubt if the next few days in Utah, Colorado and Kansas will change the two things which have impressed me most so far. One is the similarity of our American cities; the other is the diversity of farming interests in various parts of the country.

Except for differences in residential architecture Boston, Philadelphia, St. Louis, Fort Worth, Phoenix, Los Angeles and San Francisco appear much alike. The same goods are advertised in the store windows; clothing styles are identical; newsboys speak the same language and their papers contain the same syndicated features.

But on the farms it is a different story. How many eastern farmers have even heard of the Box Bill? It deals with the immigration of labor, mostly farm labor, from Mexico. We heard it mentioned dozens of times in the Southwest.

Where in Pennsylvania are farmers interested in flood control or irrigation canals? Yet in Louisiana people showed us the high-water mark half way up the side of countless farm homes and pled for our sympathy with their efforts to remove the danger of future floods. And in the South and West we were shown how hundreds of thousands of acres of the finest fruit and garden land would revert to desert again if the supply of irrigation water should be interrupted even for a few weeks.

Further cogitation may produce some ideas that will be of interest later. But in the night we change from Pacific to Mountain time, which means we lose an hour of sleep. Besides, everyone wants to be up in time to see the long bridge on which our train will cross the Great Salt Lake—where "you float like a cork."

Spuds for Brawn

NO doubt the reason why we have so many Irish policemen in our cities is because as a race they are strong and robust. But the famous Danish food expert Doctor Hindhede goes deeper into the matter. He says they are big and strong because they eat such large quantities of potatoes.

Investigations made by him on human diet in European countries showed that the families of western Ireland which were very poor were forced to live mainly on potatoes for economic reasons. Yet, here he found the most robust men. Here, too, he found the lowest death rate among the groups of European people. M. H.

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F. L. Beckley

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OHIO DAYS

EVERY year Pennsylvania and West Virginia farmers drive out to Wooster, Ohio, to attend Wheatfield Day at the Ohio Experiment Station. This year the Station has two days, Wheat and Clover, June 26 and 27. The speakers are W. D. Zinn of West Virginia and Frank I. Mann of Illinois, and their talks will be illustrated by the things growing on some of the six thousand field plots of the Experiment Station.

SAVED BY A BULL

A BULL'S blind fury probably saved the life of the man it threatened last week when Lester Blair of Idaville, Ind., was tossed over the fence by the animal which had attacked him. With the fence between them the bull could no longer continue tramping and goring his victim, who escaped with serious injuries. A fence sturdy enough to stop a bull in all cases is one of the first safety requirements, although it cannot always figure in so lucky an escape as in this case.

HERD IMPROVEMENT

THE 1,090 dairy herd improvement organizations in this country represent a gain of 50 per cent in the last four years. Books are now being kept on 465,804 cows, which looks like a respectable number; but when we recall that some 21,000,000 cows are being kept in the hope that they are worth their board and lodging, but without definite data to support that hope, it is fairly evident that the recent gain in herd improvement does not exhaust the subject. Cows tested and retained are more profitable on the average than those not tested, and until all are being subjected to the Babcock test and their output weighed dairymen can still work toward lower cost of production without wasting time.

OUR FRIENDS' REFUGES

EIGHT million dollars will be spent during the next ten years on migratory bird refuges. The first $75,000 will become available next month, according to Paul G. Redington, who as head of the Bureau of Biological Survey is directing the work. Birds are traditional friends of the farmer, who will be glad to know that certain areas are to be set aside for nesting places where they may live and multiply without danger from their debtor and their enemy—civilization.

ELECTRIC EQUIPMENT

SEVEN per cent of the cooking ranges in rural areas surveyed by the rural electric service committee of the National Electric Light Association were found to be electric. This compares with one per cent in municipal areas and was one of the factors which drew the attention of the Association to the field of electricity on farms and induced the organization, at its recent meeting in Atlantic City, to plan for a special drive to extend the rural market for electric power. The investigation of this field did not go far until it discovered that one of the big problems is the first cost of electrification. Equipment concerns think that they may help solve this problem, and any donation they make to the present knowledge on the subject will be gratefully received by farmers, even if it is tinged with commercialism. The demand for electricity exists on farms today; it does not require urging, stimulation, breaking down "sales resistance," etc., and the more the producers of electricity learn about the many uses to which farmers can and will put their product the more they will appreciate that the farm may be one of their important sources of business.

AT WASHINGTON

THE Senate refused to concur in the report of the conferees on the Agricultural Marketing bill. Senators who favor the debenture wanted a vote by the House on that subject, and they were in the majority. The House promptly accommodated them, voting down the debenture 250 to 113. The Senate then with a vote of 74 to 8 passed the bill, minus the debenture, and sent it to the President, who approved it. Soon we shall know the personnel of the new Federal Farm Board. Plenty of candidates are already in the field, and they are not modestly waiting for the President to discover their conspicuous merits either. The debenture plan is not dead. It will come up again as a part of the new tariff bill and will get about as far as the House of Representatives.

NOT FORBIDDEN

AN advocate of commodity marketing boards, to control production and distribution and stabilize prices as a solution of farm financial troubles, laments the fact that the present bill in Congress does not provide for such concerns. He might be reminded that there is no law against them, that some commodity marketing agencies exist and function successfully, while others which tried to take in too much territory in the control business terminated an ambitious start with a monumental failure. There is no magic in a term, whether it be commodity, board, control or hoss sense, but there is a world of difference in the application.

FERTILIZER PROGRESS

THE National Fertilizer Association held its fifth annual convention at New London, Conn., last week. There was manifest evidence that the fertilizer industry is recovering from the depression which menaced it a few years ago, a fact which is important to farmers, for they can't get service from husted business of any kind. The fertilizer industry is now organized to deserve success, not merely to attain it. For it has adopted a code of trade practice to insure fair dealing within the industry and by the industry with the public. On this solid ground it is bound to become greater than ever before and more serviceable to agriculture. Progress is being made in other respects also, notably in products and in understanding of the needs of agriculture. The tendency continues toward concentrated fertilizers, those containing high percentages of plant food; toward fewer analyses and brands, toward cooperation with research institutions and proper demonstrations. Under the direction of Secretary Charles J. Brand the Association is striving to develop the best possible service to the public and to build increasing good will on that basis. There is no longer any farm problem so far as quality of goods is concerned, for any buyer can now depend on getting what he buys. But there is more than one problem in what to buy and how much to use of it. Probably the latter is now the greatest problem, to learn to use enough fertilizer for economical results.

LARSON RETIRES

WE are sorry to see some men retire from public service because they are so highly useful in it. One of those soon to retire is Dr. C. W. Larson, for some time Director of the National Dairy Council. Before that Chief of the Bureau of Dairy Industry of the United States Department of Agriculture. He has been a faithful and efficient public servant ever since he became an instructor in dairying, and he deserves all the good things business may have for him. One of Dr. Larson's latest contributions to public information is found in the current issue of the Monthly Labor Review, issued by the Department of Labor. In it he shows that the dairy industry is growing in efficiency, for it is now producing thirty billion pounds more milk every year than it did in 1920, with practically no increase in the number of cows.

A RECORD FOR GRADES?

O. E. REED, Chief of the Bureau of Dairy Industry, U. S. Department of Agriculture, suggests that dairy breed associations give some attention to the development of a system whereby grade cattle of good type, high production and possessing a certain degree of pure blood may be registered. His contention is that the best grades are better than some pure-breds—with which most dairymen will agree. It is reasonable to assume that some recognition of this kind would improve a breed. It might also improve the breeder of commercial cattle, for the ownership of cattle which are registered undoubtedly gives a man more pride in his herd and inspires him to a greater interest than if the same cattle had no "papers." If any such plan is tried by a breed organization care should be taken that it in no way contracts from the present position of the registered pure-bred animal, for no matter how good grades may grow they would not have been so good but for the existence of the recognized pure breed. We must never forget the fact that it is the pure-bred which makes possible the excellence of the grade.

THE FIRST CORPORATION

PROBABLY the first stabilization operation to be created under the provisions of the McNary act will handle wheat. We suppose that such a corporation will be formed promptly as is now "the hope of the administration" as stated by a high congressional authority. Then several questions will arise. At what price, in view of the uncertainties of the future, will the corporation begin to buy wheat? How much will it buy? What will it do with what it does buy? When and how will the wheat accumulated by the corporation be sold? If it is held from one crop to another will not farmers who might have had better prices without this accumulation protest against dumping it onto their markets? These are only a few of the questions that will arise when we enter into this experiment in earnest. Another vital one is, how can the market be stabilized by injecting these elements of uncertainty? And still another will come up some day, possibly in the form of a scandal: Will the nine men who know what is to be done in a matter which must affect the speculative market allow their information to leak to their friends?

Some day, after having tried in vain to stabilize markets by increasing their uncertainties, the country will conclude that the plan is more costly than valuable.

New Jersey Farm Comment

By G. W. HARRIS

...never safe to predict profitable prices to trust growers until their fruit is on the market, but the latest report of the New Jersey Bureau of Markets would indicate a decided improvement over last year for the New Jersey peach growers. The condition of the crop on June 1 was reported at 91 per cent of normal in New Jersey, while Georgia and North and South Carolina crops are about 50 per cent normal.

The condition of the crop on June 1 was estimated at 91 per cent of a normal, indicating a total production of 2,868,000 bushels, as compared with 1,810,000 bushels in 1928 and 2,247,000 bushels, the five year production for the past five years.

The forecast of production based on June 1 condition, the 1928 production and the five year average for nearly states were: [illegible] 1,810,000 bushels, 2,247,000 bushels, 1,826,000 bushels, 1,533,000 bushels; Delaware, 441,000 bushels, 255,000 bushels, 503,000 bushels; [illegible] 14,000,000 bushels, 7,247,000 bushels; North [illegible] 1,909,000 bushels, 2,564,000 bushels, 1,562,000 bushels."

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A REQUEST that some Grange in New Jersey prepare a small-cast play for the Middle Atlantic States Lecturers' Conference, to be held at Penn State College, Pennsylvania, in August, has been made by Dr. W. H. Whitsel, lecturer of the New Jersey State Grange.

At this conference from August 12 to 15, 30-minute plays will be given by the various states. Three of these plays will depict the rural life in their respective states and New Jersey should be represented in such a way that will be a credit to the state.

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NEW JERSEY 4-H poultry club members will have a definite course of study to follow as they are being required to own or have complete charge of a poultry flock beginning on November 1. This program has been outlined by J. C. Taylor, poultry specialist at the College, and will cover a two-year period.

While the course is outlined during the first year members will study poultry house construction, feeding of laying hens, brooding and rearing, summer management of young stock and keeping of egg records.

During the second year emphasis will be placed on culling, poultry feeds and feeding, incubation, [illegible] feeds, culling and keeping egg and cost account records. The third year includes a study of [illegible], breeding, breeding records and preparation of poultry for exhibition.

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EIGHTY-THREE head of pure-bred Jerseys brought $70,950 at the sale of W. R. Spann & Son, held at the Spann estate, Oak Burr, near Morristown, N. J., on Thursday, June 6th. The first forty animals sold averaged over $1,000 while the average for the eighty-three head was $855. More than a dozen states and Canada were represented in the 200 cattle buyers gathered at the sale.

John S. Ellsworth of Simsbury, Conn., paid the top price of the sale, $5,000, for Sybil's Successful, a fully bred female. Another cow, Duma of Devon, went to Dr. Oliver W. Means of Brookfield, Mass., for $4,500. Fern Noble, a bull, brought $3,100. Being purchased by P. H. B. Frelinghuysen, owner of Twin Oaks Farms, Morristown, N. J.

Masterman's Belle Rosebay, another outstanding cow, was bought by Walter B. Jennings of Cold Spring, L. I., for $1,750. Mrs. Thomas Hastings of Westbury, L. I., was among the active bidders. Three cows were purchased by Mrs. C. B. Ward of Florham Park, N. J., and Dr. Clifford Mills of Morristown, N. J., also purchased three cows.

Miss Troublesome Lady, one of the fine cows sold, went to Canada, being purchased by Senator A. C. Hardy of Brockville, Canada, for $2,000.

These splendid prices reflect the confidence with which the future of the dairy industry is regarded. On the day preceding this sale the 61st annual meeting of the American Jersey Cattle Club was held at the Hotel Pennsylvania, New York City and attended by Jersey breeders from all parts of the country.

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THE Dairymen's League Cooperative Association, Inc., did a gross business of $85,648,162 last year. This exceeded the previous year's business by $3,146,852, according to Fred H. Sauer, president of the organization. The average net pool price to members, he said, was a fraction of a cent more than $2.59 per 100 pounds, an increase of 4½c over the year before. Total returns to members was $65,678,-



Grand champion Jersey cattle judge at the age of 11 years was an honor attained by Helen Vreeland, Montgomery county, Pa., at the recent Montgomery county Jersey Field Day. Helen won this honor in competition with other boys and girls up to the age of 18. She is shown holding Dairylike Eclairage, one of the Erdenheim Farm's leading Jerseys.

200 and the organization handled 2,484,941,739 pounds of milk during the year, an increase of 65,000,000 pounds. Total participating membership is reported as 43,067.

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ARMY WORMS are making their appearance in Maryland, especially on the Eastern Shore, and threaten serious damage to the corn and wheat crops. Farmers are being urged by Dr. E. N. Cory, specialist in entomology at the Experiment Station, to take immediate steps to check the army-like inroads of the pest.

Several successful methods of control are suggested which help to keep the worms out of the crops subject to attack. One way is to plow a furrow between the wheat and corn fields. Then, when the worms are migrating, a heavy rock can be dragged up and down the furrow to destroy them. Another satisfactory method is to dig post holes in the furrow into which the worms will fall when they turn aside from the steep sides and move along the bottom of the furrow in an effort to find a suitable place to cross. Still another way to stop the pests is to fill the furrows with tar and heavy oil.

The worms also may be eradicated by applying a poison bran mash around corn plants late in the evening so that it will remain moist over night. They usually feed at night and the mash method is especially adapted to check inroads on gardens. Particular attention should be paid to putting the mash on the side that the worms are approaching. The mash contains 26 pounds bran, one-half pound of Paris green, one gallon of molasses and sufficient water to make the material crumbly. The bran and Paris green should be mixed dry on a canvas cloth and the molasses, diluted with water, should be poured on and thoroughly mixed with mash.

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THREE Maryland farmers were recently presented with certificates of merit at the University of Maryland in recognition of outstanding accomplishments in agriculture. This is the second year that such awards have been presented to outstanding Maryland farmers.

Arthur L. Towson, Smithsburg, Washington county; Daniel L. Pearce, Sparks, Baltimore county and Mr. and Mrs. H. M. Baker, Chestertown, Kent county, received the honors.

Mr. Towson is a leader in the field of horticulture, a practical stockman and general farmer and has constantly worked towards the organization and promotion of better agriculture in his county and state. Mr. Pearce, recognized as one of the most progressive dairymen in the state, has for several years been a leader in the campaign for larger alfalfa production in the state and a promoter of cooperative marketing.

The tribute to Mr. and Mrs. Baker came as a result of their joint achievements in the development of improved and more efficient methods of breeding, feeding and marketing of turkeys. They are well known in Maryland and nearby states for their success in the turkey business.

Another Modern Miracle

OF COURSE you have heard of making automobiles out of old tin cans, but did you ever hear of any one serving old packing boxes on toast? There are several important intermediate steps between the raw packing cases and the actual materials served on toast, but that is the story to be told by Thomas Gainfort of the New Brunswick, New Jersey, High School, whose picture is shown at the bottom of this page.

Thomas is a senior this year and is the comedian as well as the magician of his class in vocational agriculture. He is the secretary of the New Brunswick chapter of the new national organization of vocational students, the F. F. A., or Future Farmers of America.

"Two years ago I became interested in poultry," said Thomas in a recent interview. "I had just completed a successful fruit project but decided to start the poultry business in a small way with a view to expansion if the venture proved successful.

"My first problem was that of providing a suitable house. There was an old wreck of a former poultry house which my agricultural teacher said was of little or no account at all. Acting on his advice I tore the old house down, as it was only a harboring place for rats.

"I chose an entirely new location and after securing some plans from the Agricultural College I decided on the type of house I wished to build. We figured out in class that this house would cost about one hundred twenty-five dollars if all materials were purchased new. For various reasons this did not appeal to me and I sought a method whereby the expenses could be reduced.

"Near my home is a factory which secures raw materials in large packing cases. I learned that these cases could be had for the cost of hauling them away, and my most difficult problem was solved. I now had a source of cheap materials satisfactory for my use.

"During the summer I constructed a serviceable house modeled after the New Jersey unit laying house. Not counting my labor, which was done during time which I most probably would have used in play, I built the house for a total outlay of less than $25.

"Last fall I purchased ten White Leghorn pullets and installed them in my new packing box house. They seem to be just as happy as if they were housed in a millionaire's parlor, for on two different days last week they produced ten eggs per day. I seldom get less than eight eggs every day. My records show that if this rate of production continues the ten birds will soon pay for themselves and their packing box house.

"Therefore, haven't I turned the old packing boxes into the equivalent of eggs on toast? Mother furnishes the toast."

L. S. Archibald.



TIGHT BINDING TEXT CUT OFF

The Timber Treasure

By FRANK LILLIE POLLOCK

(Copyright, 1913, by Perry Mason Co. Originally published in the Youth's Companion.)

Synopsis

FRED GILLESPIE, son of a Toronto lumberman, and his friend Bert Winslow, clerk in an office, spending two weeks' vacation in a canoe trip north of Toronto, Canada, are interested in a man they have seen several times on the lake. He explains his name is Harrison and that he is a fish sharp and is writing a book on fly-fishing. For the purpose he has a glass-bottom boat. During the conversation, Fred mentions the lost raft of black walnut logs washed away and sunk many years ago. Harrison does not seem interested. Fred, fishing alone, builds a smudge to protect himself from the insects. He does not extinguish it properly and the forest, which is his father's last hope to recoup the lumber business, is almost entirely destroyed. Fred and Bert become separated during the fire; Fred meets Harrison and accidentally discovers the long lost valuable walnut logs. That night Harrison clears out with the only good canoe and the supplies. Fred determines to reach the camp of friends in the vicinity, some twenty or thirty miles away.

EITHER his sense of direction or his memory of the topography was mistaken, for he felt sure that this must be the Wanegan. He tried to puzzle it out, but the bewilderment had taken the heart out of him, and he felt all at once utterly confused and lost. Every direction looked equally hopeless, and he was too tired to care. He dropped at the foot of a tree, indifferent to everything but rest, and fell asleep.

Gray dawn was spreading over the forest when he awoke, chilled, shivering and intolerably empty. He got rather weakly upon his legs, observed the reddening east and the river, and confirmed his previous belief that the stream ran the wrong way.

It might make a bend, however, and as he was sure that it must be the Wanegan, he started to follow it downward. For some twenty minutes he tramped along its bank; then he caught sight of something that thrilled him.

An empty bottle that had recently contained limejuice was bobbing and circling in a little eddy. It could have come from nothing but some summer camp up-stream; and the idea flashed upon Fred that this river might be an outlet, instead of a feeder of the lake.

He faced about, stimulated by hope, and hurried back. Half a mile beyond where he had spent the night he sighted blue water through the trees; and he broke from the thickets upon the shore of a large, irregularly rounded lake. Within two hundred yards of him he saw a log-built house by the shore, with a timber wharf where lay three motor boats and two canoes.

Smoke was rising from the house; he heard some one cutting wood, and a nude figure ran out and poised at the edge of the lake, with hands extended upward for a dive.

"Hello! Hello-o! Lewis!" Fred shouted, hastening up; and the man, barely recovering his balance, looked round in surprise.

"Good gracious! Fred Gillespie!" he exclaimed. "Where on earth did you drop from? Why, man, you look as if you'd been out all night!"

Lewis was the man above all others whom Fred would have wished to find. He was a third-year student at the law school, goal-player on the Lacrosse team, big, muscular, daring and with a strong fund of common sense.

"Worse than that!' Fred answered, "I'll tell you about it, Lewis—but I haven't eaten since yesterday morning," and he sniffed anxiously at an odor of coffee and frying bacon.

ATTRACTED by the voices, four or five other figures, in every sort of early undress, appeared at the door of the club-house, and there was a yell of greeting when they recognized Fred.

"Breakfast will be ready in ten minutes—can you wait as long as that?" said Lewis. "Never mind," as Fred looked doubtful. "Come in, and we'll start you on something now. What in the world have you been doing?"

That was the key-note of the endless questions that the boys poured upon Fred as he ate; but he did not answer one of them until he had satisfied his first hunger.

"Boys," he said, at last, "I've got hold of something big. I've found—did you ever hear of the lost walnut raft of Lake Coboconk?"

Nobody had heard of it, but Fred noticed that one of the guides, who was frying eggs at the stove, turned suddenly to look at him.

"I see that there's one man who knows about it, anyhow," said Fred, nodding at him. "Well, I've located it, and I want you fellows to come over and help me keep it. They say the raft might be worth fifty thousand dollars, and there's another man after it."

And while he finished his breakfast, Fred told the story of the loss of the raft, of how he had found it, and of how he had been robbed. The boys listened intently, and the guides, one by one, came up behind to hear also.

"Bully for you Gillespie!" cried Gilmore, one of Fred's classmates. "Sure we'll help you out!"

There was a chorus of general assent.

"I counted on you, fellows," said Fred.

"And let me tell you that if the thing belonged to me, we'd share the value of it. But it doesn't; it's on my father's claim. But you can count on it that there'll be a slice of it to go round."

"What do you mean? We're not after the cash!" said one of the boys.

"I know it, but—well, we won't talk about that till it's over. Look here, Lewis, you're a legal authority. The raft belongs to me, or to my father, doesn't it?"

"You seem to have a better claim than this man Harrison, anyway," replied Lewis. "I wouldn't venture to say offhand just how the law stands, but—what were you thinking of doing with the timber immediately?"

"As soon as I could get the men, I thought of rafting it down to the head of the old logging road."

"Good plan. Possession is nine points of the law in this case, and at the worst, you could put in a big claim for salvage."

"Why aren't we men enough to raft it down?" cried Gilmore.

"Just what I was going to say," Lewis replied. "We're getting tired of loafing on the lake here. The guides will help us, too. They work in the woods in the winter, and know all about rafting—eh, Francois? And if that other gang should turn up to grab the plunder, we'll give them a hard jolt."

"It's too much, fellows! You're too kind!" exclaimed Fred, a little overcome.

"Nonsense! It'll be a ... event worth while. But we'll ... tools—axes, I suppose, pike ... and—what do they build log ... with?"

"Francois, here, knows all ... it," said Gilmore. "We'll ... go down to Somerset to get ... and we'll take him with us ... out what we'll need. Two of ... go down in one of the motor ... But how shall we get over to ... lake? Is there any way to get ... boats round to Coboconk ... Dan" he asked the chief guide.

The woodsman reflected. ... guess we can do it," he finally announced. "But it's a long ... round, and it'd take all day ... make it."

"Well, that's good ..." Lewis said. "We'll start across ... woods with you, Gillespie, the ... way you came, to-morrow morning ... if you're rested. Two of the ... will bring the boats round, and ... tools, when they've got them ... danger of your thief coming ... before tomorrow, I suppose?"

"I don't know how to thank ... fellows!" said Fred. "But I ... forget it—that's all!"

"Shucks!" returned Gilmore, ... always wanted to dig up a ... treasure, and this is the chance ... my life."

Thirty-six hours later Fred ... out upon the shore of Big ... conk again with nine of his ... The smoke haze had cleared ... water shone in the level rays ... sun, and no canoe or camp showed along the ... He was first on the field.

As the little group came down the lake ... the shore, a canoe shot into sight from the ... It was driven fast toward them by a single ... dler, and they watched its approach with ... easiness. But as it came up, Fred recognized ... Winslow.

Bert was overjoyed at finding his ... whom he had almost given up as lost.

"I cruised round the lake in the smoke ... the fire, looking for you," he explained, ... smoke was so thick that I couldn't see ... was at the lower end of the lake the next day ... I met that fish crank paddling down the ... a leaky canoe, and he told me that you ... ten miles up the headwaters of the lake, and ... want for me there. I went, couldn't see any ... you, and came back, but I hardly expected ... you. What's been the matter?"

Fred explained briefly, to Bert's huge ... "I guess I can get another week added to ... idays," he said. "I'll see the thing out. You ... all hands if Harrison comes back."

The next day, after having made a long ... the north in order to find navigable ... motor-boats arrived. They were laden with ... shovels, axes, cant-hooks, rope, and ... necessary things that the guides had ... at once the boys set to work.

FIRST of all, they heaved out the logs ... in sight, and rolled them together into ... The result of the first day's labor was a ... heap of timber, 120 pieces in all, that ... a hundred board feet each. Fred had ... that the wood might be rotted, but the ... guides reassured him on that point; a chip ... off with an ax showed the wood firm ... below the outer shell. It was fine, clear ... most entirely free from knots, and it had ... black with age.

The next day they had to dig into the ... the timber, and it was hard to get the logs ... the sandy bed. They had to be hauled out ... rope, and Fred saw at once that horses ... needed to finish the job.

There was plenty of timber to be had. ... of two or three feet the walnut seemed to ... almost solid reef, piled across and ... mingled with some of the pine timbers ... been used as floats for the original raft.

If the raft had been of some light ... would have thought of floating the logs ... the Coboconk River, which flowed ... lower lake; that would have brought ... railway in about forty miles. But ... not be dealt with in that manner, for each ... have to be hooved with pine.

However, the old logging road near ... the lake, although much choked with ... could be used after some clearing; in ... the guides told Fred that timber had ... over a part of it during the preceding ... it seemed, would be the best way to get ... out. But to get it to the road, the raft would ... be rebuilt and launched again.

(To be continued.)

The Cheerful Plowman



FORGETTING FRIENDS

"I'LL write you every week," we said, 'Twas thirty years ago when we clasped hands to say good-bye, myself and freckled Joe. And we did write right faithfully for six long weeks—'twas fine—and then we quit and since we quit we've not exchanged a line.

The Grangie family lived next farm, and oh, the fun we knew, my wife and I, his wife and he, four cronies loyal blue; but then the Grangies moved away, we held their hands in tears and vowed we'd visit back and forth in spite of miles and years. But we have never gone to see those absent pals of ours, nor have we sent them Christmas cards, nor telegrams, nor flowers. And they in turn have never sent a single line to us in spite of all our parting vows and all our parting fuss.

And, so it's been with Wilkin's folks, with Hershey's folks and Kobb's. We've said good-bye to all of these with parting vows and sobs, each family vowing they would write, would visit back and forth regardless of the time and tide, the distance south or north, but all our vows have gone the way the Grangie vows have gone as years have drifted on and on, and on, and on, and on.

A friend's the finest thing on earth. That truth we all admit. It is a truth so evident we've all accepted it, and yet when friends shake hands in tears and say, "Good-bye, good-bye!" and vow they'll keep their friendship up unbroken till they die, they then throw all their pens away and put their cars in store and never write a blessed word nor visit any more!

J. E. T.

The Farm Home

With Fifty Dollars

By GERTRUDE S. STEWART

AS we read the hundreds of wishes that came in spending fifty dollars, we recalled that old poem in one of McGuffey's readers used the little red school houses of long ago. Many you will remember how a brood of baby chicks around the mother one morning each wishing something—one wanted a big fat worm and some nice yellow meal, and so on. Old Bobby came vexed after a lot, and cried out "See here you want any breakfast get busy and scratch." And so it must be with many wishes. We want many things, and to get them we must get busy and scratch. Thirty-three per cent of the wishes ... ing for conveniences as well as for washing ... tubes in the land. Electricity ... kitchens, water in the house, ... and heating ... operators. Kitchen cabinets ... about tied for second place.

No doubt some of us would ... if we knew how many of our country sisters ... the water for all household purposes. Many ... wishing for screens, radios, sewing machines, ... pressure cookers and up-to-date cabinets.

Investing Appeals to One-Fourth

Baby chicks are the most captivating little things ... our farm women, for by far the largest number ... investors would buy baby chicks. "If" Other ... suggested were heifers, lambs, cows, year- ... ewes, pigs, calves, bees, berry plants and as- ... These investing people nearly all suggest ... they could increase their money several fold, ... many conveniences and still have continued ... same.

The prize letter says, "I would invest the fifty ... so as to produce more money. Then I could ... ually be getting various things we need for the ... ment of our little family. Ten dollars would ... at once for strawberry plants. We live 'by the ... of the road' and next year would find us selling ... ries.

"The balance would fix up the little milk room ... now have and turn it into a Waffle and Honey ... where the passers-by could stop for the best ... les you ever ate. Waffles and honey with ice ... sounds good to nearly every one, and I am ... dent that by Christmas my fifty dollars would ... increased ten-fold."

Mrs. C. B.

Another Prize Investment

"With ten dollars, I should buy a fine Jersey calf, ... a few days old. With another ten, I would ... in the chicken business, buying 100 baby ... I'd be so careful of them that within a year ... egg production would grant me a nice weekly ... The cocks would be disposed of as broilers ... help pay the feed bills.

"With another ten, I'd buy two master pictures ... the living room—both reproductions of the best ... tings. One would be 'Can't You Talk?' by Jean ... Millet and the other Raphael's Sistine Madonna. ... fourth ten would go for some choice phonograph ... cords. The sum is dwindling, but I would hope to ... chase a few really choice books (not fiction) and ... scribe for some of the best periodicals. Then ... whatever balance there might be, I'd let the ... ily in on some form of recreation.

"Imagine my delight in a few years, when I come ... the house carrying a big basket of eggs and ... nounce the glad news that 'Ole Jerse' has a ... sndid little calf, and that an old hen came out ... under the barn with a flock of downy chicks! ... Chores done, we could all enter the living-room ... be greeted by two of the world's best pictures ... phonograph would rest us playing a fine selection. ... the table would tempt us with choice reading, ... the savory fragrance of omelette and whipped ... am would draw us all toward the supper table."

H. K.

Repairs—Uplift—Recreation

Paint and varnish, wall paper, linolenm, new ... ces, rebuilding, re-modeling, grading, planting ... ers and shrubbery, repairing leaky roofs, digging ... hes were mentioned again and again in letters ... ing for fifty dollars.

Many of our readers would spend that entire ... unt for community welfare or some personal ... Help! One would buy a wheel ... chair for a hopeless invalid, ... other would take a nervous ... child to a great specialist. ... That reminds us of telling ... these folks that county hos- ... tals are usually glad to loan ... wheel chairs to folks who can- ... not buy. And really great spe- ... cialists are ready to ... their services to relieve poor chil- ... dren who are consulted. ... Here in our county nurses or ... workers are glad to ...



Living-rooms in the home of Master Farmer L. Otis Corkran and Mrs. Corkran, Rhodesdale, Dorchester county, Maryland. The dining-room is seen at the right and a glimpse of the beautiful hall and stairway may be had through the door in the center of the picture. Back of the camera is a cozy reading corner with magazine rack and the radio in easy reach.

... member of our ... Harvest in school- ... the fifty dol- ... would give all to ... missions, and ... subscribe to the ... Farmer first ... for at least five years, ... for even twenty. That ... makes us feel very good, he ... assured.

We were amused at one ... good woman who would go ... on a vacation and stay as long ... as her money lasted. Among ... the other letters seeking pleasure were several who would buy used cars, and many the clothing they have needed for years.

Letters revealed that many farm women need teeth, or other dental attention. Several would have their eyes examined and buy comfortable shoes. Children too have been mentioned, and we wonder if these folks are using the various clinics that try to help where help is most needed. Have you ever got in touch with State Health work? Does your school have nurse service that could lead to dental attention? Is there a P. T. A. in your neighborhood? Do you take any interest in it and its work?

We must ever be alert to the opportuninities that are ours. We must, as the old hen says, "come out and scratch for our breakfasts". While we wish that many of our dreamers could have the fifty dollars, we do fear that some of us might be spoiled getting it too easily.

The Need and Value of Sleep

By HEPSY NEFF

THERE are some human experiences that are too common to need either explanation or argument. In this class belongs the gain of regular and sufficient sleep. Sleep is humanity's best hope. We begin with a need of twenty hours of sleep out of the twenty-four and how far the failure to meet this first great need weakens and cripples the later years we may never know. Up to the sixth year a daily nap is as necessary as the daily food and along with this should go a bedtime hour of seven o'clock with twelve hours of restful sleep if normal growth is to be maintained.

Mothers of today are fortunate in knowing that a monthly, better still a weekly, record of steady gains in weight is the only sure road to health. Even the excitement of evening parties or evening outings of any sort for children under ten years may interfere with sleep and health to the extent of disturbing the regular gain in weight. Our medical men are saying that the best chosen food cannot maintain normal growth if the child is overworked, either in school, in play or in actual toil.

But we are all merely children of a larger growth and only as we keep the eager, open mind of a child can we learn the ever-enlarging lessons of life. So let us not complain if these crowded summer days drive us to the need of a bit of rest in the middle of the day. Rather let us seek a quiet spot after the noon meal and forget the world for an hour. We may need only a half hour's sleep but if we need more it will be time well and profitably spent. Besides, if we take time to rest and protect the health of the body we shall impress our children with a sense of the value of obedience to the laws of health far beyond any advice we may try to give.

More than likely we parents are to blame for the go-as-you-please attitude of so many of our young people today. Only time can teach any of us the difference between the best and the cheap things of life and often we learn too late. Whatever the cause there is no longer any doubt that something is wrecking the health of our girls. A recent health conference gave figures showing a steady increase in broken health among girls under twenty years; even 100 per cent greater than among boys of the same age during the past year. Lowered resistance because of scanty food, clothing, sleep and, worst of all, the new habit of smoking was given as the cause.

The story which appeared on this page a few weeks ago of a young life cut off by tuberculosis is being too often repeated. That terrible disease known as "The Great White Plague" rarely finds entrance to a strong body. It is only the worn and weakened body that falls an easy victim and once the dread germ is at work a lifelong, often a losing struggle is the result. No more alarming danger signal is within reach than a steady loss in weight. But over against this dark picture we may confidently give the assurance of abundant life and abounding health as certainly within our reach as the abundant crop of corn or wheat or fruit which is the reward awaiting any one who is willing to learn and obey the conditions necessary to gain these ends.

Speed the Mending

I FIND that a few minutes spent in getting together materials needed for the weekly mending is time well spent.

If father's shirt needs new wrist bands I find the needed material and fold it inside the garment before I place it in the mending-basket. If sister has torn her dress a suitable piece of material to match is located in the same way. Whenever practical I cut out the patch so that all scraps may be returned at once to the piece-bag.

A great many garments get mended at odd moments that never would be done if I had, each time, to hunt the needed pieces.

Alice Margaret Ashton.

TIGHT BINDING TEXT CUT OFF

Take this economy hint . . .

FIRST save yourself

How much wiser, on washday, to save your precious strength than a few pennies! Fels-Naptha brings you . . . not more bars . . . but more *help*. The *extra* help of two cleaners instead of one. Naptha, the dirt-loosener, and good golden soap, the dirt-remover. Working together, they make your washing easier. Fels-Naptha is a bargain in washday help. Save yourself! . . . buy it today at your grocer's.

Nothing can take the place of

FELS-NAPTHA



FREE—Write Dept. Z-7-I, Fels and Company, Philadelphia, Pa., for a handy device to aid you with your family wash. It's yours for the asking.



Kill Rats Without Poison

A New Exterminator that Won't Kill Livestock, Poultry, Dogs, Cats, or even Baby Chicks

K-R-O can be used about the home, barn or poultry yard with absolute safety as it contains **no deadly poison.** K-R-O is made of Squill, as recommended by U. S. Dept. of Agriculture, under the Connable process which insures maximum strength. Two cans killed 378 rats at Arkansas State Farm. Hundreds of other testimonials.

Sold on a Money-Back Guarantee. Insist upon K-R-O, the original Squill exterminator. All druggists, 75c. Largesize (four times as much) $2.00. Direct if dealer cannot supply you. K-R-O Co., Springfield, O.

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KILLS-RATS-ONLY

CAUSTIC BALSAM

A standard veterinary and human liniment or blister. Sold only in black and white package—a strictly American made product. Make sure you ask for and get Caustic Balsam—all druggists or direct $2.00.
LAWRENCE-WILLIAMS CO.
Established 50 Years : CLEVELAND, OHIO

BROWN FENCE Less Than 1½¢
Direct from Factory
Before you buy Farm or Poultry Fence, Gates, Steel Posts, Barb Wire, Roofing, Paint, Stoves, Heaters, Furnaces, Separators, Tires, Baby Chicks or Brooders, get my new, latest
Free Cut Price Catalog
Size how much my Direct-From-Factory Prices Prepaid plan saves you. Quality guaranteed. 24 hour service. Jim Brown.
THE BROWN FENCE & WIRE CO., Dept. 2909, Cleveland, Ohio

Cuticura OINTMENT
A tried and trusty friend for 50 years.
Sample Free. "Cuticura," Dept. L, Malden, Mass.

SELL or Consign Your HAY To C. A. Schaelbach
Established 1901
Pittsburgh, Pa.

Read the Advertisements
they help you get the most out of life and save you time and trouble doing it.

The Cookie Jar

Do not wait until the children worry you with their cries for "something to eat". Have a tin or tin box in which you keep wholesome food for their afternoon lunch.

Every normal child has times when he not only desires but needs a midafternoon lunch. This is especially true of growing boys and girls.

A mother can profit some of the leisure for in-between meal study by noting where the children can come at a regular hour and to which they are invited to look for a bit of refreshment.

Following are some good bits for the cookie jar.

Ping Pongs

2 eggs	2 tsp. baking powder
1 cup sugar	Pinch of salt
3 cups dry oatmeal (un-cooked)	2 tsp. vanilla

Add sugar to well beaten eggs. Mix oatmeal with baking powder and salt. Add this to egg and sugar. Season with vanilla. Mix well and drop from the tip of a spoon on a well greased tin. Bake in a moderate oven.

Graham Cracker Cake

½ cup butter	separately)
1 cup sugar	⅔ cup milk
½ tsp. baking powder	22 graham crackers (rolled fine)
½ cup nuts	½ tsp. vanilla
2 eggs (beaten)	

Cream butter; add sugar gradually to make creamy mixture, add egg yolks. Alternate milk with rolled cracker crumbs mixed with baking powder. Add vanilla, then nuts. Fold in stiffly beaten egg whites last. Pour in well-buttered pan and bake about 30 minutes in a moderate oven. Use Mocha frosting.

Filled Cookies

1/3 cup butter	2 tablespoons milk
2/3 cup sugar	1¾ cups flour
1 egg	2 tsps. baking powder

Cream butter, add sugar gradually, and egg well beaten and milk. Mix and sift baking powder and flour and add to first mixture. Roll mixture quite thin and cut with medium-sized cookie cutter. Put one teaspoon of filling mixture on one cookie and cover with another cookie, press the edges together. Bake in a moderate oven until browned (makes 30 filled cookies)

Cookie filling.—Put raisins, figs, dates or prunes through the meat chopper, make a paste with lemon juice. Chopped nuts may be added

Soap Not Necessary

FEATHER pillows seem difficult to wash, but the right method easily and successfully accomplishes the task.

The method recommended by the New York state college of home economics at Cornell University is to boil the pillows fifteen minutes in a boilerful of water softened with one tablespoonful of ammonia and one-third of a cupful of borax. Neither soap nor soda is necessary. The pillows may be lifted out, laid on the washboard, and the tick scrubbed with a stiff brush dipped in heavy suds.

Rinse in two changes of water, squeeze as dry as possible, shake and pin to a line to dry. Though warm weather facilitates the drying process, which may take several days, the pillows should always be hung in the shade. Bring them indoors each day before the dew falls. A washing machine of the vacuum cup type will be found very useful for washing pillows.

Dill Pickle Recipe

Please publish a recipe for dill pickles. Mrs. L. H. K.

IT is none too soon to be gathering together in your canning book the recipes you know will be needed during the coming season of "puttin' up" good things on our farms. Dill pickle lovers will want this one. Is there one you are anxious for? Send in your requests to Home Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

To make 50 dill pickles, choose cucumbers [illegible] Wash and drain. Then pack in wooden casks or earthenware crocks. Place a layer of cucumbers, then a layer of dill, using stalks, leaves and seed balls.

A cover of [illegible] solution made by dissolving [illegible] salt to the quart of water. Put a cover on top of the cucumbers, then a layer of cheesecloth, then a layer of horseradish leaves. Put on a plate and a weight to keep the cucumbers under the brine. Keep in a cool place.

G. S. S.

How to Can Peas

BEAT [illegible] are at the [illegible] rules exactly.

1. [illegible] quickly picked.
2. Y[illegible] spots.
3. Sort [illegible] for boiling.
4. Blanch [illegible] minutes [illegible]
5. Pack [illegible] hot pack [illegible] top.
6. Add [illegible] cover with [illegible]
7. Process [illegible] bath water [illegible] hour in pressure [illegible] Store after cooling [illegible]

A self-addressed stamped envelope will bring you a leaflet telling how to solve your canning problems. Address requests to Home Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.



No. 3489.—Slender Morning Dress. Designed for sizes 16, 18 years, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 36 required 2⅞ yards of 40-inch material with ⅝ yard of 36-inch contrasting.

No. 2841.—For Sport Devotee. Designed for sizes 16, 18 years, 36, 38, 40 and 42 inches bust measure. Size 36 requires 2¾ yards of 36 or 39-inch material with ¾ yard of 20-inch light and ½ yard of 39-inch dark contrasting.

No. 2823.—Simple—Smart. Designed for sizes 16, 18 years, 36, 38, 40 and 42 inches bust measure. Size 36 requires 2¾ yards of 39-inch material with ½ yard of fringe and 2 yards of binding.

How to Order

Write your name and address clearly. State number and size of each pattern. Price 15c each, two for 25c. Our Fashion Magazine will help in preparing your wardrobe. Copy alone 15c; with a pattern only 10c. Address Pattern Department, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.



Do You "Baby" Your Baby?

S[illegible] mostly, do you "ba[illegible]" Well," smiles [illegible] You see he's not [illegible] only chick, and [illegible] them."

[illegible] course! But [illegible] well informed and [illegible] as will to [illegible] in spite of her [illegible] will answer the [illegible] happy smile [illegible] Baby him? Merry [illegible]

[illegible] grow up to meet [illegible] level, to realize [illegible] the universe, [illegible] tampering him and [illegible] making a tyrant [illegible] perverted idea [illegible] for him into [illegible] make for his [illegible] growth.

I make very sure, so far as [illegible] that he is properly [illegible] keeps healthy,—that he [illegible] by pictures suitable to [illegible] it homes a place where he [illegible] order and beauty, that he [illegible] with other chil[illegible]

Yes, there are many ways to [illegible] child, who [illegible] leave him unhampered and inspi[illegible] into a normal, [illegible] happy adult who will thank [illegible] that you did not [illegible] your baby.

Marion Cossitt [illegible]

Lunches for Travelers

ONE of the most gracious [illegible] speed the parting guest is [illegible] him (or her) off with a nice [illegible] tucked under his arm. It need [illegible] elaborate. Just what you have [illegible] house put up in the daintiest [illegible] way assures the traveler that [illegible] be well with the inner man [illegible] trains come late or tires go flat.

I shall long remember a [illegible] a kind farm woman placed in [illegible] early one morning last summer [illegible] we were traveling and had [illegible] night under her roof. In want [illegible] she wrapped boiled eggs and [illegible] sandwiches spread with butter [illegible] stone spring house; in a heavy [illegible] bag, so that no dampness would [illegible] ten the bread, she heaped on [illegible] we relish onions), red radishes [illegible] curly lettuce—all fresh from her [illegible] garden. When that lunch was [illegible] noon under an oak tree, the ap[illegible] us was sharp with exclamation [illegible]

Recently I packed in a strong [illegible] box a lunch for a friend who was [illegible] to travel four days by train. In addition to meat sandwiches, [illegible] celery, I included less perishable [illegible] —cookies, candy and fruit. [illegible] paper napkins and a few nap[illegible] laid under the lid added an [illegible] touch.

Once I made a two-pound [illegible] candy for a friend who was [illegible] abroad. Each piece was wrapped [illegible] square of onion-skin paper on which was written an original verse of [illegible] tation. My own verses were [illegible] whimsical rhymes full of [illegible] advice to a traveler, the [illegible] picked up here and there, were [illegible] as these: "He shall give His [illegible] charge over thee to keep thee [illegible] no flatterer." "Sympathize when [illegible] pathy is needed." My friend still [illegible] occasionally to the timeliness [illegible] package, but it afforded her a [illegible] whit more pleasure than it gave [illegible] There is a certain bond of warm[illegible] edness between the giver and [illegible] ceiver of a trim lunch with [illegible] good will slipped inside the [illegible]

Sixty Thousand Southdowns

BRANDYWINE flock number 977 happens to be Southdown Association number 60000. With the registration of the sixty thousandth Southdown an entirely new form of certificate of entry and transfer is adopted.

The new certificate of registry is much larger than the old one. It is five by eight inches and is of a size more commensurate with the importance of the breed. The security of transfer is combined on the back of the certificate of registration. After May 27, 1929, when the new form was first used, all transfer applications must be made on the back of the new pedigree. The transfer or sale of a pedigreed registered Southdown is not complete until this certificate has been returned to the Southdown Association office and the transfer officially recorded in the records of the Association.

All Southdowns registered before May 27, 1929, and under number 60,000 will be transferred in the usual manner.

Business Increased

Brandywine [illegible] ewe number 60,000 is a Southdown ewe lambed May 20, 1927, sired by McEwan "42-20" association [illegible] 30442 and out of Brandywine ewe "32" association number 38442. Brandywine Meadow Farm, West Chester, Pennsylvania, was the breeder and this two-year-old ewe is now owned by Charles Chesbro, Whitemarsh, Pennsylvania.

Organized in 1882 at Springfield, Illinois, the Association had registered 46,827 animals up to December 1, 1924. Since that date 13,173 animals have been registered. Three thousand three hundred fifty-three applications for registration were accepted, and 1,380 applications for transfer were approved during the last fiscal year. The business of the Association increased 17.85 per cent in 1928 over the preceding year.

Prof. Charles S. Plumb, the prominent sheep authority and writer, of Ohio State University, is president of the Association. He has contributed considerable time and effort to building up the Association since assuming office in 1924.

W. L. Henning, Sect'y.

Livestock Notes

THE feet of dressed poultry offered for importation into the United States from regions in which foot-and-mouth disease or rinderpest exists, must be removed, according to a new regulation, effective August 1, recently issued by the United States Department of Agriculture. The order, veterinary officials of the Bureau of Animal Industry believe, will reduce the possibility of introducing these foreign diseases, since poultry feet are commonly disposed of as garbage. Infected garbage fed to swine was responsible for the last two outbreaks of foot-and-mouth disease in the United States, and Department officials believe the new order should reduce the danger.

• • •

THE value of ensiling potatoes with dry corn fodder in the spring for feeding during the next summer will be tested in an experiment which has just been started at the Colorado Agricultural College Experiment Station. It has been proved advisable to cut some dry fodder in with the potatoes to absorb the excess juice. In the present experiment 57 tons of potatoes and 13 tons of dried corn fodder were cut into the silo for use next fall. A mixture of about one part of fodder to four and one-half parts of potatoes made a mass which packed well in the silo and at the same time absorbed practically all the juice.

The potato silage will be compared with cull potatoes and other feeds in cattle and lamb-fattening experiments next fall.



Note the Strength of this Brace
This drop forged steel angle brace is tremendously strong. There is a brace of this kind at the bottom of each center pillar in a Fisher Body. This is typical of the way Fisher engineers have designed unequaled strength into every Body by Fisher.

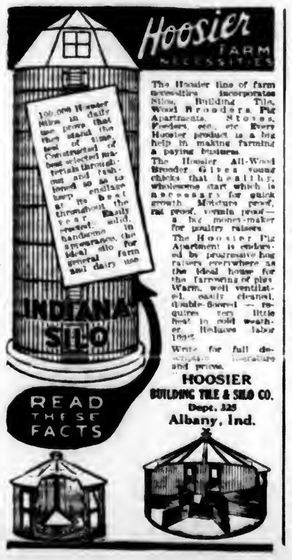
The durability and resiliency of wood—plus the strength of steel—*in every* Fisher Body . . .

STRENGTH and durability of Fisher Bodies have been among the leading factors in the pronounced public preference for "Body by Fisher". ¶ Fisher Bodies are stronger and naturally stand up better because they skillfully combine the advantages of wood-and-steel. No other material combines strength with resiliency to nearly the same degree as wood. Wood, you know, eliminates "drumming" and absorbs road shock. ¶ Fisher therefore, at great additional expense, uses wood-and-steel construction in every Fisher closed body. Thus Fisher is the one manufacturer able to build *superior* wood-and-steel bodies for the lower priced as well as for the higher priced cars and at the same time hold down costs. That is why, outside the Fisher Body group, the body value comparable with that in a Fisher Body car is obtainable only in cars costing several hundred dollars more. ¶ Make sure that your next car is equipped with a strong, durable, wood-and-steel body by selecting it from the Fisher Body group—listed below.

CADILLAC • LASALLE
OAKLAND • OLDSMOBILE
BUICK • VIKING
PONTIAC • CHEVROLET

BODY BY FISHER
GENERAL MOTORS

Body by FISHER



100,000 Hoosier Silos in daily use now that they stand the test of time. Constructed solely best selected materials throughout and designed to last a lifetime. Hoosier Silos are built throughout the entire country. Hoosier Farm Necessities are sold everywhere.

The Hoosier line of farm necessities incorporates Silos, Building Tile, Wood Brooders, Pig Apartments, Stoves, Feeders, etc. Every Hoosier product is a big help in making farming a paying business.

The Hoosier All-Wood Brooder Gives young chicks that healthy, wholesome start which is necessary for quick growth. Mixtures proof, rat proof, vermin proof—a big money-maker for poultry raisers.

The Hoosier Pig Apartment is endorsed by progressive hog raisers everywhere as the ideal home for the farrowing of pigs. Warm, well ventilated, easily cleaned, double-floored — requires very little floor space. Reduces labor 100%.

Write for full descriptive literature and prices.

HOOSIER BUILDING TILE & SILO CO.
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SHEEP

For Sale 100 yearling ewes, 150 grade, 60 ewes, 60 Beefgrade yearlings, 40 best Guernsey-Jersey heifers. Properly mated. Ask us about these. W. Hundley, Boydton, Va.

SWINE

Chester White Pigs R. L. MUNCE. Properly mated. Ask us about these. Canonsburg, Pa.

CHESTER WHITES.—Registered big type Cham. blood, all ages, 13 sows farrowed 151 pigs, priced low, must please. C. E. Cassel, Hershey, Pa.

CHESTER WHITE and BERKSHIRE PIGS, 6 weeks old, $5.25 each, 8 weeks $6. C. LEWIS TAYLOR, Wyalusing, Pa.

Big Show Type Chester Whites. Choice spring boars and gilts. All hogs shipped C. O. D. on approval. S. J. Bowman, Fisherville, Pa.

Large Modern Berkshires. Correct type and fashionable breeding. Dilts & German, Roseville, Ohio

Reg. Berkshires Superior breeding stock. All ages. Both sexes. Cholera immune. WOLF CREEK FARM, R. 2, Slippery Rock, Pa.

BETTER BERKSHIRES.—Boars ready for service, fired gilts, young pigs, prize-winning stock. Near-By Stock Farm, Pottsgrove, Pa.

Registered Spotted Poland-China Hogs for sale at all times. Pairs and trios, not akin. Write. Brookside Farm, Middletown, Va.

CHOICE BIG TYPE O. I. C. Pigs, 10 wks. old, $10.00. Bred from show winners. Papers for reg. istration. E. C. KRANTZ, Dover, Ohio

DUROCS Big Type Reg. Durocs. Priced right. Shipped on approval. Visit us or write your wants. O.C.Snuffey, Rummelstown, Pa.

100 Feeding Pigs Six weeks old, $5.00 each. INDIAN CORN HOG FARM. Dushore, Pa.

POULTRY

Special Fall Prices on high-class breeding Turkeys, Geese, Ducks and Guineas, write your wants and for mating list. Pioneer Stock Farm, Telford, Pa.

HORSES

Shetland Ponies.—Pony, Saddle & Bridle, $75.00. Pony, Buggy & Harness, $100.00. Pony Farm, Cortland, Ohio

—REGISTERED PERCHERON STALLIONS— 2 & 3 years old. Blacks & grays. Farmers' prices. THOS. H. VANSANT, Newark, Del.

CATTLE

HEREFORD BULLS.—Yearling bulls, the pick of our herd. Ready for service and priced to sell. GEO. G. COCHRAN, Dawson, Pa.

BUCK & DOE RUN VALLEY FARMS Hereford Cattle—Poland-China Hogs—Hampshire Sheep—Draft Horses. THE SAINT AROUE COMPANY, Mertoville, Penna.

Angus Cattle at reasonable prices. Write BAYARD BROS., Waynesburg, Pa.

Homestead Farms, Milking Shorthorns, Herd Accredited. Herd sire, Knight's Junior by Glenside Red Knight. C. G. Wagner, Prop., Westford, Pa.

ADVERTISING is the modern intelligencer. It keeps you informed, advises you of new things, suggests new uses for articles you already own, and prepares you today for wise and useful purchases tomorrow.

TIGHT BINDING TEXT CUT OFF

THE YOUNG PEOPLE



George A. Luse



Elizabeth Jones



Gayle Strickler



Mary Brubaker

Why They Were Selected

FOUR outstanding 4-H Club members from Pennsylvania left this week to represent the Keystone State in the Third National 4-H Club Camp at Washington, D. C. These young people have promised to send us the story of their trip so that we, too, may enjoy the Camp. We are glad to congratulate Pennsylvania's representatives, as well as those of other states, on achieving this goal in club work and hope their trip to Washington will be as pleasant as they anticipate.

Mary Brubaker, Lancaster county, age 16, junior in high school, has been in club work four years, completing projects in food selection, meal planning, canning, three years in garden and baby beef clubs. She has earned over $50 each year in garden club work, canning 16 quarts of fruits and vegetables; has participated in club activities at the State Farm Products Show at Harrisburg where she exhibited baby beef and garden products; was president of her club for one year and a leader for three years.

Elizabeth Jones, Bradford county, 17 years of age, is a senior in high school. She has had four years of club work including three in sewing club and one in "My Own Room Club". She is president of her high school class, has the highest scholastic average of her class, served as president in her club two years, secretary one year, and leader three years.

Gayle Strickler, Fayette county, age 16, junior in high school, has had one year of baby beef club work, three years in dairy club work, winning first place on two occasions. He has participated in three county camps, was twice president of his dairy club and at the annual meeting of the Fayette County Agricultural Extension Association he reported in a very effective manner the work done by his dairy club.

George A. Luse, Centre county, 20 years of age, is now a freshman at Pennsylvania State College. He has participated in a lamb feeding club for three years, acting as leader the last two years. During our last State Farm Products Show his county agent was taken sick and he assumed entire responsibility for the members of his club and their exhibits during the period of the show.

PRIZES EVERY WEEK

SOME of our Little Folks have asked for a picture to color each week so we are going to depend on you to supply this request. Every week there will be a fine prize given for the best picture which will be published. Drawings should be made with black or India ink on white, unruled paper.

Then for those who can't draw, there will be a weekly prize for the best story or poem. We're going to keep a special place on the Young People's page for this—so send your contribution along and win a prize. These weekly prizes will be in addition to the other prize- winning features which will be announced from time to time.

Send your contributions to Young People's Editor, Pennsylvania Farmer, 7301 Penn Avenue, Pittsburgh, Pa.

Club Camps for Junior Farmers

MORE than 200 members of 4-H boys' and girls' clubs in the state will attend six club camps this summer, A. L. Baker, state club leader of the Pennsylvania State College, announces.

Lawrence county club members will hold their annual camp at the New Castle Fair the last week in August. Twenty-five are expected to attend. This camp will be open to members of all types of clubs.

Forty members of dairy calf clubs in Mercer county will attend the camp at the Grove City Cattle Show, August 28 to 30.

Fayette county club members will camp at the Dawson Fair, September 17 to 20. Plans have been made to accommodate 30 of the junior farmers.

Twenty-five Mifflin county club members will hold their camp July 29 to August 2. Lycoming county will have a camp of 35 club members dur-

Jefferson, Clearfield and Elk county clubs will join in a camp at McGee's Mills, near Clearfield. The date for this camp has not been set.

Mr. Baker and his associates in the state club office, A. B. Bingham, J. F. Keim and C. P. Lang, will assist the county agents of the counties represented in the supervision and instruction work of the various camps.

"Hocus-Pocus"

THEY call animals "dumb", but I think they are quite the opposite. To prove this I am going to tell you about a black cat, named Hocus-Pocus but called Hokey for short.

A stray cat came to our farm one spring and soon after presented us with a flock of kittens. They were about the sickliest-looking kittens that I have ever seen. Among them was a black one. It was about the best looking of them all although it had lice and was very skinny.

My older sister, who was going to high school then, brought home a friend who is a lover of pets. She took a liking to the cat, gave it about three baths in kerosene and water to kill the lice, and doctored it up in general. Because it was black we called it Hokey. It lived and we have always given my sister's friend the credit of saving its life.

Hokey usually stayed in the house and was the privileged member of our family. At meals she would come and sit beside my chair until I gave her something to eat, if I didn't she would reach up with one of her dainty paws and scratch hard. But, if we had guests for a meal and some one else sat in my usual place, she would not bother them but go and beg at some one else's chair.

When her first kittens were old enough to run around and play, she brought the whole three to the house and after we took them to their nest, she simply turned and, draging them by their necks one at a time, she brought them back to the house. This time we gave them some milk and when one get into the pan she punished him thoroughly.

Her life proved to be short. When she was about four years old she disappeared and we never saw her after that. We thought that she might have been struck by a car when she was out huntnig. The queer part of her whole life was that she had been born on April Fool Day. Mary Jane Barber.

Water Events

EVEN swimming becomes monotonous sometimes so here are a few races to help you wile away the time at the "ole swimmin' hole".

Swimming Boxes

Each contestant is given an ordinary soapbox. At the signal he hes on it and swims to the goal and return, giving the box to the other member of his team who does the same thing.

Balloon Blow

Contestants are given balloons of different colors which they are to blow to the goal and return.

Ankle Race

Race with left hands on left ankles.

Poison Touch

Swimmers throw a large heavily-knotted handkerchief at each other. It, in the meantime, tries to tag some player while the handkerchief is in his possession.

Water Tag

Swimmer who is tagged must keep his left hand on the spot on which he was tagged.

A swimmer can be tagged on the feet only.

The one who is It must keep his right hand on his right ankle.

To become safe a swimmer must tread water; or sing.

NUTS TO CRACK

1. If a well-known animal you behead, Another one you will have instead.
2. Spell brandy in three letters.
3. What word is it of five letters of which tow being removed, only one remains?
4. What is more wonderful than a horse that can count?
5. Which word in the English language contains the greatest number of letters?
6. Which is the easiest to spell—fiddle-de-dee or fiddle-de-dum?
7. What part of London is in France?
8. What is that which is full of holes and yet holds water?
9. When is the most dangerous time to visit the country and why?
10. What table has no legs to stand upon?

Watch for answers next week.



When the Dog Caught a Skunk—First Prize
By La Ferne Clark, Bedford County.

Little Folks Corner

DRESSED in her best black and white furs, Mother Coon started out to find supper for her children.

"Well, good night, children!" she called back over her shoulder. "I'll be home soon and bring something nice if you are good and don't quarrel."

"Good night!" called out the little ones. "Bring us some more of those juicy corn-cobs. And don't let those horrid human folks catch you."

"No fear of that!" chuckled Mother Coon. "They are too stupid to catch me. But they certainly do have delicious things to eat." And she smacked her lips as she trotted down the mountain and through the woods toward the clearing where the Podder family lived.

It was very dark and still as she crept into the wood-shed. She stopped to listen, and her little beady eyes twinkled slyly. There was not a sound from the sleeping house, for it was nearly midnight. Mother Coon sniffed eagerly. There was the pail of scraps but the cover was put on tight—oh, so tight! Mother Coon stole up to the pail and stood on her hind legs; she leaned against it hard to knock it over. Suddenly—click! something caught her leg. Ugh! How it hurt! She tried to pull herself away, but she could not. How her foot ached! Mother Coon knew that she was caught in a trap.

She struggled and kicked and pulled, but it was of no use. She did not dare to cry out, but her strength was going fast. Suddenly she heard a little noise behind her. She turned her head, and there in the doorway stood a little girl, staring at her with big eyes.

"Oh, what are you?" she said. "You aren't a rat or a squirrel, and I don't think you are a woodchuck."

"Oh, how my foot hurts!" whined Mother Coon.

"You keep my father and mother awake every night, and you scatter scraps about," said the little girl,-sternly. "They said they would set a trap for you. But I thought that it might be a fairy,—a naughty fairy,—so I sat up to see."

"I'm only a poor, hungry mother, with two poor, hungry babies," said Mother Coon, pitifully. "I confess that I came to take the lovely food that you keep in that pail, but you don't seem to value it highly. I believe you could spare it as well as not. Ugh! How my foot hurts."

"You poor thing!" said the little girl. "I don't care what they say, I am going to set you free, for I don't believe you will dare to waken my father and mother any more."

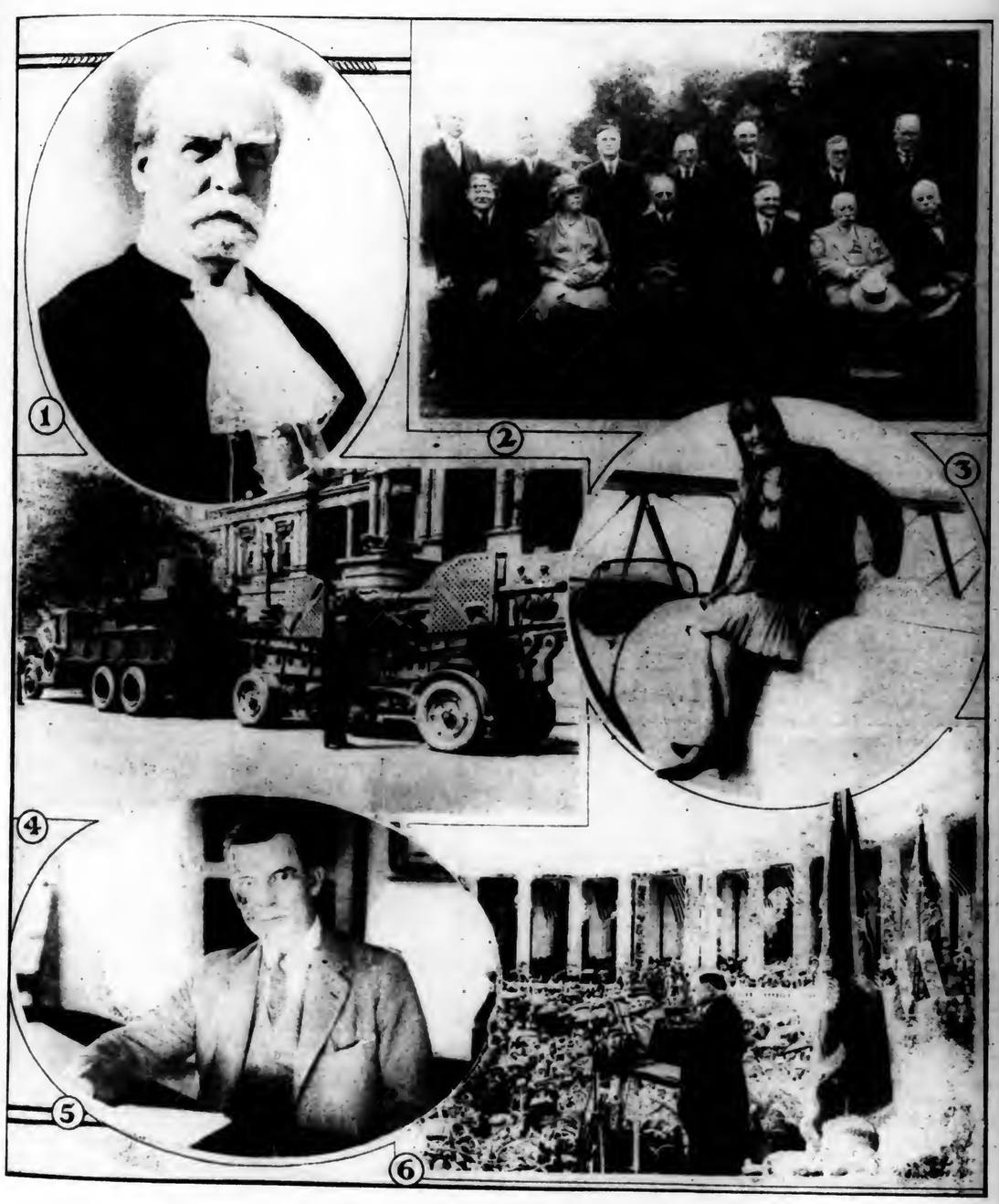
"I'll never come back again if once I get away!" declared Mother Coon. The little girl glanced round to be sure that no one was looking then she carefully opened the trap and set Mother Coon free. "Thank you," said Mother Coon as she limped away.

The little girl looked after her pitifully. "Poor old thing!" she said. "She and her babies must be dreadfully hungry to want those horrid scraps. I am sure we shall never miss them. I know what I am going to do. I'll put a dish of scraps out under the old pine tree every night that it does not rain. And I'll not tell anybody.

Mrs. Coon had good ears. "Oh, I hope it will not rain all summer," she said.

Abbie Farwell Brown.

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1. The latest photo of Charles Evans Hughes, former Chief Justice of the Supreme Court, as he appeared when being installed as Judge in the World Court.

2. Members of the special committee appointed by President Hoover to conduct an investigation of the great subjects of crime and law enforcement met with the Chief Executive and the Attorney General in the Cabinet Room at the White House. Left to right, front row, Roscoe D. Pound, Miss Ada M. Comstock, Attorney General William D Mitchell, President Hoover, George W. Wickersham, chairman, and William S. Kenyon; back, standing, Kenneth R. MacIntosh, Monte Lehmann, Paul J McCormick, William I. Grubb, Frank J. Loesch, Newton D. Baker and Henry W. Anderson.

3. Miss Marvel Crosson of San Diego who piloted her plane to a new world's altitude record for women. In a two-hour flight she reached the height of 24,000 feet. The former mark was 20,270 feet, established by Mrs. Louise McPhetridge Thaden.

4. Secretary of War James W. Good inspects a new three-inch anti-aircraft gun and its moving truck at the War Department in Washington. The truck is almost as interesting as the gun, weighing ten tons and carrying such loads as the light tank shown in it with ease, as well as towing the gun.

5. Mr. Charles Evans Hughes, Jr., son of the former Secretary of State, photographed at his office in the Department of Justice at Washington, where he has been appointed Solicitor General by President Hoover, succeeding Attorney General William D. Mitchell.

6. Close-up of President Herbert Hoover voicing the nation's gratitude for those who have laid down their lives in the service of our country, at Arlington on Memorial Day. On either side of the Chief Executive stand the National Emblem and the President's flag; in the distance may be seen part of the huge throng which attended the ceremonies.

TIGHT BINDING TEXT CUT OFF

BABY CHICKS
FROM HEAVY LAYING FREE RANGE FLOCKS

	25	50	100	500	1,000
S.C.W. & Br. Leg.	$2.50	$4.50	$8.00	$37.50	$70
S.C. Rocks & Reds	3.00	5.50	10.00	47.50	90
S.C.Buff Orpingt'ns	3.00	5.50	10.00	47.50	90
Wh. Wyandottes	3.00	5.50	10.00	47.50	90
Assorted Chicks	2.25	400	7.00	32.50	60

100% prepaid safe delivery guaranteed. Order from this ad or write for circular.
J. M. NACE POULTRY FARM Richfield, Pa. Box 3.

BABY CHICKS

	50	100	500	1,000
White Leghorns	$4.50	$8.00	$37.50	$70.00
B. Rocks	5.00	10.00	47.50	90.00
S. C. R. I. Reds	5.50	10.00	47.50	90.00
Buff Orpingtons	6.00	12.00	57.50	110.00
White Rocks	6.50	12.00	57.50	110.00
Heavy Mixed	4.75	9.00	42.50	80.00

All chicks from free range farm flocks. 100% live delivery guaranteed. Send 20% deposit, balance C. O. D.
MONROE HATCHERY, Box 10, Richfield, Pa.


HERBSTER'S QUALITY
CHICKS
Summer Prices
Can ship C. O. D.
B. Rocks & Reds, $10 per 100
Heavy Mixed, $8.00 per 100
Herbster's Poultry Farm, Bx.171, McClure, Pa.

BROILER—RAISERS
SHIPPING CRATES LOANED FREE
SHIP YOUR LIVE BROILERS and other poultry to New York's Oldest Live Poultry House. Est. 1865. We are bonded commission merchants. Birds fed; returns made daily. Highest prices. Our outlet is unlimited. Inquire about us. Write for quotations, crates, tags, shipping instructions and Holiday Calendar. Folder P-2. KRAKAUR POULTRY CO., Inc., West Washington Market, New York City.

Baby Chicks
From Free Range Selected Flocks

	25	50	100	500	1,000
June and July					
White Leghorns	$2.50	$4.50	$8.00	$37.50	$75
B. Rocks & Reds	2.75	5.50	10.00	47.50	100
Light Mixed	2.25	4.00	7.00	34.00	65
Heavy Mixed	2.50	4.50	8.00	38.00	75

100% Prepaid Safe Delivery Guaranteed.
Fair View Poultry Farm, R. 3, Millerstown, Pa.

ValleyViewChicks

	25	50	100
Tancred Strain Wh. Leghorns,	$2.75	$5.00	$9.00
S. C. W. Leghorns	2.50	4.50	8.00
B. Rocks & R. I. Reds		3.00	5.50	10.00
Heavy Mixed, $8.00;	Light Mixed, $7.00			

500 lots 1/2c less; 1,000 lots 1c less. Free range. 100% live delivery guaranteed. Circular.
VALLEY VIEW POULTRY FARM,
N. J. Ehrenseller, R. 3, McAlisterville, Pa.

BABY CHICKS Tancred Str. Wh. Leghorns, $9 per 100
White Leghorns ..... 8 per 100
Barred Rocks ..... 10 per 100
R. C. Reds ..... 10 per 100
Heavy Mixed ..... 9 per 100
Light Mixed ..... 7 per 100
500 lots 1/2c less—1,000 lots 1c less. 100% live delivery guaranteed. Order from this ad or write for free circular.
C. F. LEISTER, McAlisterville, Pa.

BEST QUALITY CHICKS
(Cash or C. O. D.)

	100	500	1,000
Tancred Str. W. Leghorns	$7.50	$35.00	$70.00
S. C. Brown Leghorns	7.50	35.00	70.00
S. C. Barred Rocks	9.00	42.50	85.00
Light Mixed, $6.00; Heavy Mixed, $8.00 per 100. Order direct, 100% live delivery. P. O. Paid.			
Chester Valley Hatchery, R. 2, McAlisterville, Pa.

WHITE LEGHORNS ..... $7.00 a hundred
Brown Leghorns ..... 7.00 a hundred
Black Minorcas ..... 10.00 a hundred
Mixed chicks, $6.00 a hundred
Mixed chicks, $6.00 & $8.00 for light and heavy.
ECLIPSE HATCHERY, Fort Trevorton, Pa.

Chicks, Barron Eng. Wh. Leghorns 8c
White Leghorns 7½c; Barred Rocks 10c; heavy mixed 5c; Light 7c. Reduced on large orders. 100% guaranteed. "New Circular Free." July and August delivery.
TWIN HATCHERY, McAlisterville, Pa.


S. C. W. Leghorns, $6.00-100. Barred Rocks, $10.00-100. White Rocks and Reds, $11.00-100. Broilers, $8.00-100. Add 2c if less than 100 lots. My chix are all from good culled stock. I pay postage. Special prices on large orders. Circular free.
JACOB NEIMOND, Box 4, McAlisterville, Pa.


ZELLER'S EXTRA QUALITY CHICKS
From Large Type S. C. White Leghorns. Trapnested, production bred matings $9 per 100—$44—500; $85—1000. Also quality Rocks and Reds, 10c books order.
EDGAR A. ZELLER,
2014 Manada St., Harrisburg, Pa.

BARRON and WYCKOFF STRAIN
S. C. White Leghorn chicks for June, 9 cents each; $80.00 per 1000. Prepaid and safe delivery guaranteed. Our 19th year. Circular free. $1 books order.
THE PENN'A HATCHERY, Liverpool, Pa.

JUST GOOD CHICKS
Barred and White Rocks, R. I. Reds...$11.00 per 100
Leghorns and heavy mixed ..... 9.00 per 100
$1.00 per 100 deposit, balance C. O. D. Member IBCA
SUSQUEHANNA HATCHERY
R. Ray Miller, Prop. Millersburg, Pa.

PULLETS GASSONS Large Type S. C. White Leghorn pullets, pedigreed cockerels and baby chicks for sale. Write for catalog and prices.
GASSON'S POULTRY FARMS, Versailles, Ohio

Keep up with the advertisements to keep apace with progress. When answering them say you saw the ad in Pennsylvania Farmer.

Poultry Problems

Coccidiosis

Please let me know what causes coccidiosis in young chicks. I have lost a great many chicks with it. What can I give them to keep them from getting it? I cannot move the house to new ground. Will fresh sweet milk hurt little baby chicks, or is sour milk or clabber better? Sweet milk is more convenient for me to give them.
M. B. G.

COCCIDIOSIS is caused by a minute organism present in the soil where chickens have been running for some time, and also usually present in the droppings of adult birds, whether they appear healthy or not. It usually attacks young chicks from the age of six weeks up.

The best way for you to handle this situation is to raise your chicks in partial confinement, allowing them outside on a screened sun porch with a board, wire or concrete floor so as to keep them away from the infected soil. At the age of about eight weeks the pullets can be transferred to range houses, such as have been described in this department, and allowed to run on ground that has been kept free from chickens or chicken manure for several years. This is the best way to handle the situation.

Sweet milk will not hurt baby chicks, but there is some feeling that alternate feedings of sweet and sour milk may cause trouble, so it is generally recommended to feed milk sour. R. L. S.

Bloody Eggs

I have some pullets which started laying last fall. On the yolks of some of their eggs is blood and occasionally I find a dead pullet. C. S.

BLOODY eggs are caused by the rupture of a blood vessel in the ovary of the hen. This rupture may be the result of the yolk sac splitting at some other part than at the suture line. The suture line may be observed on the membrane which holds the yolk in the ovary. The rupture of a small blood vessel may also cause bloody eggs.

The only way to determine which hens are producing these eggs is by means of the trapnest. When hens are in heavy production, it is not uncommon to find some bloody eggs.

The practical method is to candle the eggs and remove those which are unfit for human consumption. When held before the candler, a bloody egg shows a reddish tint. H. C. K.

Range vs. Confinement

I have a new brooder house 10x12 feet, built as good as can be done. I bought new galvanized steel feed troughs in which to feed mash, earthenware fountains for buttermilk and water. I have a new coal burning brooder stove. What do you think of my equipment? Is it right or not? I am getting R. C. Reds. I intend to feed them a chick feed and sand for grit. Will you please tell me if I should keep sour milk before them all the time, or would it be best to give it to them only once or twice a week? I have very good luck with my chicks, that is with the hens, but would like some pointers as to raising them without letting them out except in a little yard about 12x12 feet.
Mrs. James Umbrell.

IF you have only a limited area of ground and it is impossible for you to move the brooder house during the growing season, I should by all means construct a platform in front of the house and keep the chicks confined throughout the entire growing period. To allow chicks to run over the same ground for several months is liable to end disastrously.

Many farmers throughout Pennsylvania and other nearby states are raising their birds in confinement because the soil is contaminated with intestinal parasites. Some poultrymen raise their chickens on wire floors. This wire is of small mesh so that the chicks cannot fall through it. The droppings are removed once every two or three weeks. This wire mesh is built on frames which may be easily removed at the time of house cleaning.

For the past three years we have raised chickens in confinement on concrete floors. In front of the building is a concrete slab 10x10 feet. The only range which the chickens receive during their entire lives is on this concrete porch.

No green food is fed. However, ten per cent of alfalfa leaf meal is used in the mash mixture. This year we used liquid milk in several grooms of chickens with very good results. These chicks have received no other source of animal protein other than that derived from the liquid buttermilk and as yet they have not received any water. The oldest of these chickens are now 14 weeks and appear perfectly normal and healthy. Milk is a great feed for chickens. You will not go astray in providing an ample supply for your chickens. I hope you will be very successful in the raising of your Rhode Island Reds. H. C. K.

Chicks Stagger

Our baby chicks are seven weeks old. They stagger around, their heads go backward and they die in a day or two. E. H. Contes.

THE ailment you mention seems to be not uncommon in chick flocks, but from what information I can gather not much seems to be known about cause or cure. It has been suggested that low-grade cod-liver oil may be responsible in some cases. I think it would help matters to give plenty of green feed, if your chicks are not on range. You might also try a physic of Epsom salts, say about a quarter of a pound to the hundred chicks at that age in the drinking water. Such a dose would do no harm, and if some sort of intestinal disturbance happened to be the cause of the trouble it would doubtless prove beneficial.
R. L. S.

Mites in Brooder House

About ten days before I got my baby chicks I cleaned my brooder house and found it badly infested with mites. I used a strong lye solution to clean the floor and sprayed thoroughly with coaltar disinfectant. Again in about a week I sprayed it, and supposed I had all mites killed, but after the chicks had been in the house about a week I found more mites on the walls. I then sprayed it with kerosene oil but still find some mites.

Will these mites stay on the chicks during the day and what more can I do to get rid of them? Would commercial nicotine-sulphate help if sprinkled on the floor or would it be too strong for little chicks?

What would you think of putting wall board on the inside walls of the brooder house to make it warmer?
C. V. Pierce.

EVIDENTLY the mites are between the paper and the siding, and I know of no way of getting at them except to take the paper off and spray both sides with kerosene or some special product sold as a mite destroyer. I do not think that the tobacco product sprinkled on the floor would be of any use and it might injure the chicks.

Wall board makes a good lining for a brooder house, provided the sides are tight enough to keep out water.
R. L. S.

Another Big Egg

OF all the eggs I got I never got one to equal one I gathered Sunday. It measured six and one-half by eight inches and weighed six ounces. I have seen in your paper about bigger eggs, but I think this is a good sized egg. Winfield Brown.

GREEN FOREST **HUSKY CHICKS**
English and Tancred Strain

	25	50	100
S.C.W. White Leghorns	$2.50	$4.25	$ 8.00
S.C.W. Barred Plymouth Rocks	2.75	5.25	10.00
Mixed chicks	2.75	3.75	7.00

We guarantee 100% strong chicks on arrival.
GREEN FOREST POULTRY FARM,
J. W. Amig & Son, Star Route, Richfield, Pa.

BABY CHICKS

	25	50	100	500	1,000
Wh., Bf., Buff and Br. Leghorns	$2.75	$5.25	$10.00	$47.50	$ 90.00
Rocks, Reds and Wyandottes	3.50	7.00	13.00	62.50	120.00
Heavy Breeders	2.25	4.00	7.00	32.50	60.00
Light Breeders	2.25	4.00	7.00	32.50	60.00

Twenty-four page catalogue free. 10 years in business. Hogan tested flocks. Postage paid. 100% delivery.
JOHNSON'S HATCHERY, ICKESBURG, PENN'A

HILL SIDE CHICKS Will Ship C. O. D.

	50	100	500	1,000
Special Wyckoff Strain	$ 4.00	$ 7.50	$ 36.00	$ 70.00
Special Tancred Strain	4.00	7.50	36.00	70.00
S. C. W. Leghorns	3.50	6.50	32.50	60.00
Barred Rocks	4.00	7.50	36.00	70.00
Unsex Strain Reds	3.50	6.50	32.50	60.00
Light Mix	3.00	5.50	27.50	50.00
Heavy Mix	3.50	6.50	32.50	60.00

(100% live delivery. Special prices on large lots. Less than a hundred add one cent a chick.)
T. J. ENBERZELLER, Prop., Box 11, McAlisterville, Pa.

ULSH'S Superior CHICKS

	50	100	500
White Wyand.	$5.25	$10.00	$47.50
Wh. & Bfd. Rocks	5.25	10.00	47.50
Heavy Mixed	4.25	8.00	37.50

100% live delivery guaranteed. Postage paid.
JAS. E. ULSH, Beaver Springs, Pa.

BABY CHICKS Order direct from this ad and save time

	25	50	100
Free Range Bred	25	50	100
White & Brown Leghorns	$2.75	$4.25	$8.00
Anconas & Wh. Leghorns	2.50	4.25	8.00
White and Barred Rocks	2.75	5.25	10.00
Colors, Wyan. & R. I. Reds	2.75	5.25	10.00
Heavy Mixed Broilers	2.50	4.75	9.00
Light Mixed Broilers	2.00	3.50	6.50

Full count and quality guaranteed. Catalog free.
For Greater Profit Utah Poultry Farm & Hatchery
Hatchery Chicks Box F, Port Trevorton, Penn'a

STOP! LOOK! and take notice to the special low prices on Cleveland's Quality Chicks for June Delivery.

	25	50	100
Tancred strain White Leghorns	$2.50	$4.50	$ 8.00
Evelay Strain Brown Leghorns	2.50	4.50	8.00
Barred Rocks and R. C. Reds	2.50	4.50	8.00
Light mixed	2.00	3.50	6.00
Heavy mixed	2.50	4.50	8.00

100% live delivery guaranteed, parcel post prepaid. Special prices on 500 and 1000 lots.
COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

PENN'A CHICKS
Have vim and vigor—hatched by men with 18 years experience. Prepaid on 100 per cent live delivery guarantee. S. C. White and Brown Leghorns, 8c each; Rocks, 10c; Reds and Minorcas, 12c; Heavy mixed, 7c; Light breeds, 6c. Discount per 1,000. Circular free.
THE PENN'A. HATCHERY, Liverpool, Pa.

Quality Chicks at Low Prices

Variety	100	500	1,000
United Strain Leghorns	$7.00	$32.50	$60.00
Barron or Wyckoff Leghorns	8.00	37.50	70.00
Special Leghorn Wyckoff only	9.00	42.50	80.00
Barred Rocks	9.00	42.50	80.00
Mixed chicks	7.00	34.00	65.00

L. C. STRAWSER, McAlisterville, Pa.

PENNA STRAIN WHITE LEGHORN **CHICKS**
that breeders are large birds; long, deep, rectangular bodies. Selected for size, vigor and egg production.
$8.00, per 100; $37.50, 500; $70, 1,000
JUNIATA POULTRY FARM, Box P, Richfield, Pa.

Chicks 7c Up Leg's Large Type Barron Strain

	25	50	100	500	1,000
S. C. W. Leghorns, 3 yr. old breeders,	$2.00	$3.50	$6.50	$30.00	$ 55.00
S. C. W. Leghorns, 1 yr. old breeders,	1.75	3.00	5.50	25.00	45.00
Barred Rocks	2.00	3.50	6.50	30.00	55.00
Assorted	1.50	2.50	4.50	20.00	35.00

Assorted ..... $7.00 and $8.00 per 100
Prepaid live arrival and satisfaction guar'd. Catalog.
TURKEY RIDGE HATCHERY, Gilbertsville, Pa.

Klines' Barred Rocks
Healthy stock. Penna. State Cert. Strong chicks guar. Prepaid del. C.O.D. $10.00-100; $95.00-1,000. Write or wire.
S. W. KLINE, Box 80, Middleport, Pa.

NEWTON'S Compound Heaves, Coughs, Colds, Worms, Shorten Two cans guaranteed to relieve or money back. 75 per can. Dealers or by mail. The Newton Remedy Co. Toledo, Ohio
For horses, cattle, hogs

Advertisements
are short-cuts to finding out truths. The truths about everything you want to buy. The names in advertisements are names of solid reputation. The labels in advertisements are symbols of satisfaction. It pays to read the advertisements, for then you know what is good. The products they tell you about are being bought, tested constantly. The fact that they're still being advertised is alone proof of their worth.


Just Paint it on the Roosts!
—Before the chickens perch. Only a small paint brush and a can of "Black Leaf 40" are needed. While chickens roost, fumes are slowly released that penetrate the feathers; killing lice. Eliminates unnecessary handling of birds. Ask your dealer or write us.
Tobacco By-Products & Chemical Corp., Inc., Louisville, Ky.
Black Leaf 40"
Kills Poultry Lice

CHERRY HILL CHICKS

S.C.W. Leghorns—Wyckoff Strain	$ 8.00
S.C. Everlay Brown Leghorns	8.00
Barred Rocks and R. I. Reds	10.00
Heavy Mixed	9.00
Light Mixed	7.00

We pay for chick in full if less in 1 week. Per less than 100 chicks add 2c per chick. 100% live arrival guaranteed. Parcel post prepaid. Bank references. Order direct from this ad, or write for free circular.
CHERRY HILL POULTRY FARM
Wm. Yost, Prop., Box P, McAlisterville, Pa.

CHIX from large breeders
SUMMER PRICES

	50	100	1,000
Farm Strain W. Leg.	$4.50	$8.00	$70
Barred Brown Leg.	4.50	8.00	90
Brown's Barred Rocks	5.50	10.00	90
Black Minorcas	6.50	12.00	110
Buff R. I. Reds	5.50	10.00	90
Heavy Mixed	4.50	8.00	70
Light Mixed	4.00	7.00	60

Our breeders are selected for egg type and size and production. The kind that lay well and pay for investment. It is free. Tells all about our strain and methods.
JUNIATA POULTRY FARM
CHIX Box P, Richfield, Pa.

Reduced Chick Prices
In Effect June to October

	25	50	100
Large Type Wh. Leghorns	$2.50	$4.50	$ 8.00
Rock, Reds, Minorcas	3.00	5.50	10.00
Wyandottes, Orpingtons	3.00	5.50	10.00
Heavy Mixed	2.50	4.50	8.00

Hatchery Chicks. Assorted ..... $7.00 per 100
Catalog Free.
Lantz Hatchery, Tiffin, Ohio

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S.C White Leghorns	$2.50	$4.50	$8.00	$37.50	$70.00
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Rhode Island Reds	3.00	5.50	10.00	47.50	90
Silver Lac. Wyandottes	3.00	5.50	10.00	47.50	90
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High Egg Producing Bred, Healthy, Vigorous Large size Tancred-Barron English S. C. White Leghorns. 278-314 egg line matings. Tancred males; chicks are extra hardy and vigorous. These quality type chicks shipped prepaid and prepaid. 100% live arrival guaranteed any week in June at $9 per 100; $20 per 200; $45 per 500; $85 per 1000. White Rocks, Barred Rocks, $10 per 100. Circular free. Catalog free.
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$10.00 per 100, $95 per 1,000. Heavy mixed, $8.00 per 100. Prompt service, 100% live delivery guaranteed.
CHAS. F. EWING, R. 1, McClure, Pa.

Chicks from Blood-Tested Stock
Pennsylvania Supervised Flocks.
Shipped C. O. D. Free Circular.
Sunnybrook Poultry Farm, New Berlin, Pa.

The Turkey Market

JIM PERKINS and his wife worked hard to make things go on a Minnesota farm. They raised a few turkeys one year and made out so well that they increased their flock. The next season they had a fine flock and they figured that it ought to pay off the taxes.

When marketing time came they received letters from poultry dealers in various sections of the country, but one dealer who wrote told them of the fine prices he was getting and they saw that they were far higher than those that any other dealer was quoting. He advised them to ship soon, before receipts became heavy. They figured up how much they would get with express and commission charges deducted and they were happy, as it would more than pay their taxes. They dressed the birds carefully and packed them in barrels according to the directions that the state college had furnished and shipped them to the commission man in the distant city.

Disappointing Returns

A week went by and they received a letter with a check from the dealer, but the price was ten cents a pound below that which he had quoted in his first letter. In addition he had billed 50 pounds of the turkeys as poor and returned 20 under the price he had mentioned for this lot. He went on to explain that the turkeys arrived in poor condition and that the market was oversupplied, but that he thought he could do better with another lot. Jim and his wife talked things over and decided to send one more shipment. In due time another letter arrived, but the price was five cents lower than the first time, and the returns were far lower than if they had sold the birds at home, or in the neighboring town.

Jim was disappointed for he had shipped his turkeys over 1,000 miles to a man he did not know on the prospect of high prices, when he could have sold them to a dealer he knew for more money in the next town. Finally he decided to write to his farm paper and see if they could do anything about it. This paper got in touch with the Department of Agriculture in the city in which the dealer was located and asked them to look up the case. They found that the dealer had been doing business for less than a year and that credit agencies gave him no moral or financial rating.

Both Might Be Right

There was no conclusive evidence that the dealer was dishonest, he had no records or books. He claimed that the turkeys were poor on arrival, while Jim claimed that they were fancy when they left the farm. Both might be right, but no one could prove it. The dealer was in the wrong in that he had overquoted the market in his letter soliciting shipments, but he claimed that he had a special trade that would pay a premium for fancy turkeys. There were a number of things which indicated that the dealer had shown poor business ethics but not enough to convict him of dishonesty.

In that market were dozens of men of known reliability doing a strictly honest business. The farm paper would have supplied Jim with a list of such dealers if he had asked for it. His bank could have looked up the financial rating of the dealer before he shipped to him. His county agent or his State Department of Agriculture would have been glad to furnish him with the names of reliable men, but he waited until it was too late.

There are many more cases in which the lure of high prices takes the growers' profits. Oftentimes the complaints are not justified, the quality of poultry or nearly any other agricultural commodity is likely to change greatly in transit. There are, however, many more honest dealers than crooked ones, but they do not hold out alluring promises of high prices and there are many ways to learn about them before it is too late. W. R. W.

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ALL PURE BRED
SIEB'S "OVERSIZE" CHICKS are from PURE-BRED Flocks of THE WORLD'S FINEST BLOOD LINES. They are a new Sieb Development—an advanced step in scientific breeding to produce chicks that grow larger, stronger, mature quicker and lay more and larger eggs. All one quality only THE BEST.
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WHY PAY MORE?

Prices Prepaid	25	50	100	500	1,000
Wh., Br., Buff Leghorns	$2.75	$5.25	$10.00	$47.50	$ 90.00
Barred & White Rocks	3.00	5.75	11.00	52.50	100.00
S. C. R. I. Reds & Wh. Wyandottes	3.00	5.75	11.00	52.50	100.00
R. C. R. I. Reds & Buff Rocks	3.25	6.25	12.00	57.50	110.00
S. C. Wh. Wyan. Wh. & Buff Orps.	3.25	6.25	12.00	57.50	110.00
Wh. & Black Minorcas	3.25	6.25	12.00	57.50	110.00
Anconas & Wh. Langshans	2.75	5.25	10.00	47.50	90.00
Heavy & Light Assorted	2.50	4.75	9.00	42.50	80.00
Light Assorted	2.25	4.25	8.00	37.50	70.00

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This Superb Mating consists of 250 Yearling hens, imported from TOM BARRON of England. The hens weigh not less than 4½ pounds and up to 8 pounds, and produce better than 250 eggs per year per hen.
Big Healthy Chicks from the World's Best Strains
11 varieties. Matings sired by pure-bred Males from the World's Finest Trapnested Egg Strains. Dams of high production, 250 to 302 egg lines. Parks's Barred Rocks, Pedigreed, Sheppard's, Dustin, Page and others of similar fame breeding. 1 Guarantee Satisfaction and give you personal service. Prices reasonable. 10,000 Live Delivery Guaranteed. Ref.: Commercial Bank, Penn or Bradstreet.

Prices Effective June 17 through July and August.	50	100	500	1000
S. C. White, Brown, Buff and Black Leghorns; Anconas	$4.50	$ 8.50	$40.00	$ 78.00
Barred and White Rocks S. and R. C. Reds; Black Minorcas	5.50	10.50	50.00	98.00
White Wyandottes Buff Orpingtons Buff Minorcas	6.00	12.00	57.50	115.00
Imported Barron Leghorns White Minorcas; Park's Rocks	7.00	13.00	62.50	120.00
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100% Live Delivery Guaranteed.

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S. C. Blk Minorcas Wh. and Sil. Wyandottes, R. I. Whites	4.00	7.50	14	67.50	130
R. C. Anconas and Wyandottes, S. C. Wh. and Br. Minorcas, Blk. Langshans	5.00	8.50	16	80.00	155
Silver Spangled Hamburgs, Partridge Rocks, White Andalusians, Col. Rocks	5.00	9.50	18	85.00	165
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Special pen mated and extra high bred chicks at slightly higher prices. Ship-ment made any time you wish.

	25	50	100	500	1000
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Bd. & Wh. Rocks, S.C.&R.C.R.I. Reds, Bl. Min.,	2.50	5.00	10.00	48.00	95
White Wyandottes, Buff Orpingtons	3.00	6.00	12.00	57.50	110
Jersey Black Giants	4.50	8.50	16.00	77.50	150
Assorted Heavy Mixed Chicks	2.25	4.50	8.50	40.00	80
Light Mixed	2.00	4.00	7.00	34.00	65

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FOR YEARS WE HAVE HATCHED AND SOLD **SATISFACTORY CHICKS**
LOW POSTPAID PRICES—100% Live Delivery Guaranteed.

	25	50	100	500	1,000
White, Buff and Black Leghorns	$2.00	$ 3.50	$ 6.50	$30.00	$ 58
Anconas, Thompson-Ferris Strain, Brown Leghorns	3.25	5.00	9.50	46.00	90
Barred Rocks	3.50	6.00	11	52.50	100
Buff Rocs, White Wyandottes, Buff Minorcas	4.00	6.50	12.50	60.00	115
Extra Quality White Wyandottes, Reds; Hvy. Buff Orpingtons	4.25	7.00	13.00	62.50	118
Wyckoff White Leghorns, White Minorcas	4.25	7.00	13.00	62.50	118
Heavy Mixed, $9; Light Mixed, $7; Black Giants, $20; Lt. Brahmas, $20; Pekin Ducklings, 25c ea.					

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FROM JUNE 15 ON
Wh., Br., Buff Leg., S. C. Anc. & Buff Minc., per Wh. & Br. Rox, 100: Rocks, 100: W. Wyan & Br. Orpg., 100: Reds, 100: H. mix., 8c; L. mix., 6c. 1/2 cent

Garden and Truck Crops

By GILBERT S. WATTS

WHEN one of the girls who works on the roadside market reported this afternoon she was instructed to make the very finest possibly display from the stock on hand: Scarlet Globe radishes, Grand Rapids lettuce, young onions, rhubarb and spinach. I went to the field and on my way back an hour later heard the characteristic shriek of suddenly applied brakes and complaining tires. As I stepped through a screen of trees I saw a man leave his car a little distance beyond the market and start walking back. Although our blackboard had missed his view, or had failed to interest him, the massed display of red and various shades of green was compelling. The forty-five cents which he spent would not have been secured without first-class display.

• • •

GOOD displays are not difficult to make and cost little, because they are constructed from the material that is to be sold. Although we lay great emphasis on the matter of making and maintaining attractive displays, I wonder sometimes whether we put as much effort into this matter as would be profitable. Although the example of the man who stopped so violently may be an extreme case, displays continually are winning customers or increasing purchases of regular customers. Many people may pass a particular market a number of times before they will stop. Possibly a single display will not stop them but consistently first-class offerings are practically certain to secure attention. The same principles apply in the retail market house or curb market. Displays do make sales—or they don't!

• • •

THE first letter of the season asking for information on the control of the Mexican bean beetle has arrived. I understand the formulae and materials recommended by the Pennsylvania Department of Agriculture in Bulletin No. 447 are proving satisfactory, although I believe burning of foliage has occurred in very rare instances. Although these formulae appeared in this column last year it may not be out of place to reprint them with the bean beetle season immediately upon us.

"For sprays use magnesium arsenate, two pounds to 100 gallons of water; or calcium arsenate, one and one-half pounds and three pounds of lime to 100 gallons of water. For dusts use one pound magnesium arsenate and five pounds hydrated lime or one pound calcium arsenate and nine pounds hydrated lime.

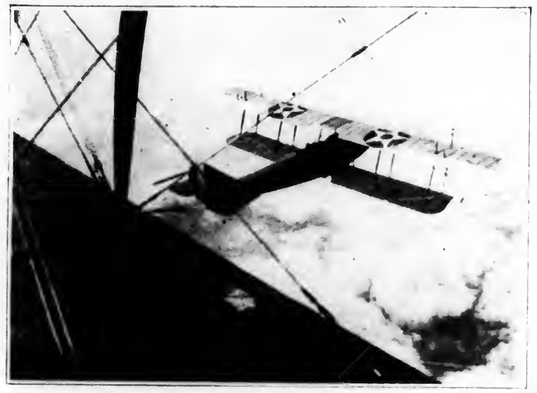
"Direct all sprays and dusts toward the under side of the bean foliage.

"Green beans intended for food, gathered from sprayed or dusted plants, should be washed sufficiently to remove all spray residue; usually two thorough rinsings in clear water should be enough."

• • •

A NUMBER of years ago I remember being on the farm of a New English gardner who first composted all manure that was applied to his land. This operation was carried through with great thoroughness to destroy all weed seeds by even heating and rotting. Unless one is applying manure of known origin this grower's plan is safest.

Last winter I applied, on perhaps a tenth of an acre, one load of manure that came onto the farm from an outside source. Now in weeding and hoeing the labor cost is several times greater on this small plot than it is on adjoining areas. Before the garden seeds were up this one strip was as green as a lawn. Even though we would have had less material to apply in the end it would have paid well to have composted that manure.



A Master Farmer up in the air. Joe Ziesenheim tells on this page about this picture from his war time collection. How high? Well, judge for yourself; the faint white line in the lower right corner is a concrete highway.

Quality Crops for Canning

By D. M. JAMES.

THE production of fruits and vegetables for canning purposes furnishes a large cash income to thousands of Pennsylvania farmers. It is estimated that this annual income amounts to approximately $8,000,000 and that the finished canned goods have a value of over $35,000,000. The bulk of the vegetable production for canning is located in Adams, Chester, Erie, Franklin, Lancaster and York counties, while the canned fruit industry is located principally in Adams and Erie counties.

Unfortunately, the canning industry in Pennsylvania as in other states has been hampered by the over-production of low quality canned goods. Too much stress has been made on quantity production rather than on quality production. Many of the Pennsylvania canneries are small units which are unable to compete successfully with large volume production, so they must compete with quality production in order to survive.

The canners' problems are also the growers' problems, so the Pennsylvania Bureau of Markets in 1927 made tests at three canneries to determine the grades of tomatoes delivered. These tomatoes were sorted according to the U. S. Standards for cannery tomatoes. It was found that slightly over 50 per cent of the tomatoes were of U. S. No. 1 quality, from which a fancy grade of canned goods could be produced. Nearly 10 per cent of the tomatoes were of such inferior quality because of immaturity and molds or decay that they were unfit for use and the balance, nearly 40 per cent, were of U. S. No. 2 quality, from which only a medium grade of canned goods could be produced.

Grades and Prices

The results of the grading work during 1927 paved the way for the application of graded purchases at three tomato canneries in 1928. These plants received 452 tons of tomatoes during the season, each load returning to the grower a price determined by the percentage of No. 1, No. 2 and cull tomatoes which made up the load. The best quality loads paid the growers at the rate of $9 more per ton than the poorest quality loads, and the average price received for all the tomatoes was slightly higher than the prevailing flat rate price.

It is not surprising that farmers over the state have been dissatisfied with the "flat rate" system of purchasing canning crops, used since time immemorial by Pennsylvania canneries. There has been no incentive for farmers to improve the quality of their products. To put added costs into improved methods of production and then to receive no more for high quality than for poor quality does not offer the farmer any encouragement to improve quality. However, when the farmer receives 90 to 100 per cent more per ton for high quality than for poor quality the production of quality produce becomes a sound business practice.

Will Increase

The results of the cannery grading work in Pennsylvania and in other states where it has been in operation indicate that this method of selling canning crops to manufacturers will increase rapidly. The 1929 tomato acreage which will be sold according to the U. S. grade in Pennsylvania is expected to be from three to four times the 1928 acreage that was graded.

The apple canners in the commercial fruit section of the state are also making plans to purchase the 1929 crop on the basis of the newly adopted U. S. standards for cannery apples, following the preliminary grading work which was carried on at apple canneries in 1928, when approximately 2,284,000 pounds of apples were classified.

Grapes delivered to manufacturers of grape juice were also graded during 1928, so that the producer of high quality received a greater return for his grapes than the producer of poor quality. During the harvesting season approximately 5,653,000 pounds of grapes were inspected.

These successful applications of standards as the basis for purchasing cannery products indicate that Pennsylvania producers of high quality canning crops are in line for greater profits than they could ever secure under the old "flat rate" system of selling to canneries. The manufacture of better quality Pennsylvania canned goods is likewise resulting, which elevates the industry to a higher level and benefits Pennsylvania growers, canners and consumers alike.



A Modern Pennsylvania Cannery

From a Flying MasterFarmer

J. R., otherwise "Joe" Ziesenheim of Lebanon county, Pa., one of the Master Farmers of 1927, was an aviation instructor at one of the Texas flying fields during the World War. One day we borrowed this one from his collection of pictures of the various "ships" he flew. Later we asked him to tell us about this picture. He wrote:

"This picture is one of a small number which I accumulated during World War days and illustrates the relative positions of two airplanes while flying in a bombing formation. The idea of such a formation is that each plane is in a position to protect the ship ahead, while the rear of the formation is protected by a detail of fast pursuit planes. From the tail of the leading ship can be seen the streamer which designated the leader.

"The picture gives a fairly good idea of a cloud formation and in the lower right-hand corner can be seen a white line which is a road visible through a hole in the clouds. The other lines are brace wires of the ship from which the picture was taken.

"While it was contrary to regulations to take photographs during war days, a number of the pilots had vest-pocket cameras that could be easily concealed and by exchanging photos, it was possible to obtain quite a collection.

"Of course these ships are obsolete today. The modern plane is as much of an improvement over the planes of war days as is the modern auto over its original ancestor. The flying efficiency of planes has been increased fully a third while motor performance has been improved to an even more remarkable degree.

"I am confident that the day is near when airplanes will play an important part in the affairs of our every day lives, and that the farmer who now merely stops to view the passing ship will be served by this newest means of transportation."

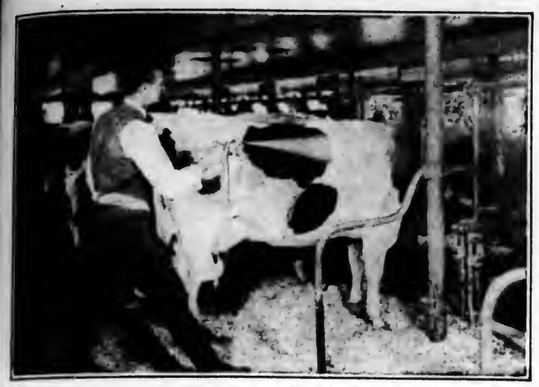
Fertilizer for Strawberries

I'm a strawberry grower. It has been wet so long I didn't set a new patch of strawberries, so will have to take care of the present one. It isn't so weedy but has some tick grass. I intend to clean it up as soon as picking is over and cultivate the foot path. If I apply sulphate or nitrate how will I apply it? Wouldn't bone meal be better? Would you advise a light coating of manure in August, then a heavy coating in December?

George W. MacLellan.

IN reply to your recent inquiry I am inclined to believe that sulphate of ammonia or nitrate of soda would produce a greater increase in your strawberries than bone meal.

It has been my custom to screen and then broadcast the fine material with a full sweep of the arm or from a broadcast fertilizer distributor from which two loops of inch rope are dragged to brush the fertilizer from the leaves. It is very important that the leaves be absolutely dry when this is done. Manure to top-dress strawberries usually brings weeds. G. S. W.



Mr. Fred Gauntt, Herdsman of the New Jersey Agricultural Experiment Station, Spraying a World's Champion, Rutgers Colantha Segis Grace H. F. H. B.

Fly Time

THAT flies help to make life miserable for cattle in the summer time is a familiar fact to every farmer. Probably many people have tried to estimate the amount of power which could be developed if a machine could be attached to the cow's horns or her tail and her fly fighting energy transformed into useful work. Certainly it is generally believed that milk production is seriously affected by fly attack since the cow is not only wasting energy, but is not feeding as she should.

Every one has seen big flies and little flies, and flies of different colors. Yet it is surprising to learn how many different kinds really exist. In the state of New Jersey alone 155 different kinds of insects belonging to the fly family which bite man and animals have been collected. This number includes 38 kinds of mosquitoes and 75 kinds of horse flies. Sometimes a single animal will have half a dozen different kinds of flies at the same time. All these different breeds of flies have their special likes and dislikes, habits, instincts and ways. The investigator who tried to learn at once how to control them all would find the problem too complicated for the human mind to grasp.

Fortunately all these species are not important. In studying the flies which bite cattle it is found that nearly all the trouble comes from two species, and most of it comes from a single species called the horn fly. Probably 80 per cent of all the flies on cows are horn flies. Next in importance to the horn fly comes an insect called the biting house fly or the biting stable fly. This fly is bad in some localities and during some seasons, but is not so generally found in great numbers as the horn fly. Horse flies of different kinds attack cattle more or less, but are not generally numerous enough to cause much damage.

The horn fly is variously called "buffalo fly", "Texas fly", "cow fly", etc. It rarely attacks anything except cattle. It must be an insect which has lived on cattle since the year one, as it certainly knows its way around a cow. It is about half the size of a house fly, dark colored, and feeds in large numbers on the animals' flanks, always with the head down. When not feeding it has the clever habit of perching on the cows' horns, where it is safe from disturbance. Hundreds of these little pests are often seen in a solid mass around the base of the horns. When it rains the horn fly gets under the cow's belly to escape the wet, and when the sun is hot he moves over on the shady side.

Breeding takes place in cow manure. When fresh manure is dropped the female fly leaves her cow for a few seconds to lay her eggs. The young maggots soon hatch and grow rapidly. When they have reached their full size they go into a resting stage in which they are not active and look something like a seed. From this seed-like body the fly emerges about ten days to two weeks after the egg was laid. When the flies first come out their wings and bodies are soft, but these harden very quickly and they fly to the nearest cow and proceed to make themselves at home. They are full grown and never get any bigger.

Flies never grow except in the maggot stage, as the outside of their bodies is hard and cannot stretch. The little flies we see are not young flies, any more than ponies are young horses. They are simply a species which is small by nature, like the little vinegar fly. It will be seen that the cow is home sweet home to the horn fly.

Experiments in New Jersey last year showed that horn flies could be completely controlled without injury to the cow or the milk if an effective, non-poisonous repellent were used. It was found that cows had to be sprayed lightly all over once or twice a day and that it took about half a minute to spray each animal if the right type of sprayer were used. The small hand sprayers were much too slow, but a larger continuous-pressure hand sprayer was secured and found to be very easy to use, rapid and effective.

Next in importance to the horn fly is the kind known as the biting house fly or biting stable fly. This insect looks very much like the house fly and is about the same size. The biting stable fly, however, is a little lighter in color and has a sharp beak like a mosquito which can be seen sticking out from underneath the head when the fly is resting. It attacks all kinds of animals especially on the legs. It is usually this fly which causes animals to stamp and kick in the stable.

The biting house fly does not make its home on the animal like the horn fly. It takes blood several times a day and flies to a bush or a convenient perch in the stable to digest its meal. Eggs are laid and maggots grow in all kinds of rotting material, including manure, straw, hay, etc. Large numbers breed in old straw stacks. It is always numerous around the marshes in South Jersey and becomes numerous in other sections when large quantities of wet and fermenting straw or hay are present. When these flies are numerous they rest on weeds and bushes along lanes and on timbers in the stable. When cows are brought in for milking the flies are attracted from bushes along the lane and the cows may enter the stable surrounded by a swarm. The cows are then attacked by the hungry flies which have been waiting in the stable. As a result the cattle are difficult to milk—kicking, stamping and switching. It was found possible to kill all these flies by spraying the cows before milking. For this purpose it is necessary to use a spray which is non-poisonous and which does not taint milk. Otherwise spraying before milking would involve the danger of introducing poison and bad taste or odors in the milk. Warren Moore.

Wise enough to use a Cattle Spray?

Here's the One that's Guaranteed to Keep Flies Away!

Klip isn't a cheap spray that maybe works and maybe doesn't. It is the only cattle spray that is guaranteed to keep cows free of flies while milking, and for long periods in the pasture. If you're wise enough to spray your cows, because you believe flies cut down milk supply,* be wise enough to insist on Klip.

For five years three state entomologists and a state Agricultural Experimental Station worked developing Klip. This new cattle spray is made by the makers of Flit, the world's greatest household insecticide. Klip kills every fly it hits. It is the only cow spray which in agricultural experimental station tests gave complete protection against cow flies (horn flies) in stable and pasture.

It can't taint milk, can't stain, and is absolutely harmless to cattle, even if licked. Use it on cows, horses and mules.

On sale at Hardware, Feed, and Farm Supply Dealers in one gallon cans ($2.50) and five gallon cans ($11.25). If your dealer hasn't got his supply yet, order direct from us. Be sure to send us your dealer's name when ordering. Address Stanco, Inc., 9 Park Avenue, New York City.

"The fly is very costly both in milk and flesh." Dairyman Jared Van Wagenen, Jr., in his book, "The Cow," published by Macmillan Co. Page 92.

FREE
Proof that Klip Works Best

If your dealer hasn't got Klip yet, fill in and send us the coupon and we will send you absolutely free (with no strings on it) a pint of Klip—enough to keep one cow happy for five days. You can't lose. Make this test yourself. If you're not using a cattle spray, this is the way to find out how much easier it is to milk a flyless cow and how much more milk a quiet cow delivers. If you are using a spray, this will prove to you the superiority of Klip over anything on the market. This offer is introductory only and will soon be withdrawn.

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NO FLIES ON US
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I'm willing to be shown. You can send me a pint of Klip, FREE, and I'll try it.
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If you need a silo You Need a UNADILLA

....the strongest, safest, most efficient silo on the market.

Because of its perfect, air-tight, water-tight and frost repelling construction, the Unadilla preserves every pound of green corn or other silage put into it. The valuable juices are retained and there is never any risk of mouldy silage.

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Self-Feeding, Non-Clogging, Ball-Bearing, Gears Run in Oil.



Spring-tension rollers, nearness of rollers to knives, improved fan blade attachment and gears running in oil make the GEHL the world's lightest running and cleanest cutting silo filler.

Wet leaves cannot wind up on lower roller. Improved shear cut insures clean cutting.

A World's Record

The GEHL will cut and throw green corn 45 feet high at only 500 R. P. M., saving power costs, yet filling the highest silo rapidly. Electric power costs as low as $1.75 per silo. Gasoline power cut ONE-HALF. Don't buy until you have our catalog and prices. Write today.

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Transportation and full time feedman without cost to buyers. Fifth County in U. S. to be accredited. Can generally supply buyers with anything in pure-bred or grade stock that may be in need of.

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Holstein Bulls for sale, from an accredited herd, from calves to serviceable age, from K. P. O. P. 52, the 1,100-lb. butter and 4% bull. Also females.
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One Fine Registered GUERNSEY BULL CALF
born June 1, from good stock. Reasonable.
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TWO RICHLY BRED, thrifty, registered Jersey bull calves, 2 months old. Accredited herd.
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Jerseys One very fine cow, six years old. Also some very fine heifer and bull calves.
ANSELM B. KIRSCH,
Highland Stock Farm, Nicktown, Pa.

TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

THE lamb market went off further this week, declines at the maximum reaching near a dollar as compared to a week ago. Top natives (springers) sold at $16.50 early in the week, but closed at $15.75. Average price for the week was $15.90 against $16.20 last week. Yearlings (last season's lambs) topped at $12.25, but last at the close was $12, these prices comparing with a top of $12.50 last week.

All figures available of late have been against the lamb market, and there is beginning to be evidence that production has been expanded too far. During May the fifteen leading markets of the country sent 210,329 sheep and lambs to the country for feeding, this being a substantial increase over last May. Every month this year has shown an increase over the corresponding month last year, and the five months' total for fifteen markets is 820,972 feeders this year against 635,209 last year, a gain of nearly 31 per cent.

Cattle Working Higher

The cattle market continues to edge higher, receipts being light and demand good. The price level is near a half dollar higher than at this time last year. The big rise in last summer's market started early in July.

A new top on steers was made this week at $15.40, that price being paid for both heavies and lights, and being highest since January. Heifers sold up to $15.10, highest of the year. Average price of steers jumped to $14.30, highest of the year, and comparing with $13.95 last week. This week near 2,000 head of steers sold at $15 or better, against only about 600 last week when the top was $15.25.

Receipts this week were 39,000, against 46,000 last week and 50,000 the same week last year. So far this year twenty markets have received 4,550,000 cattle, against 4,959,000 at the same time last year and 5,342,000 two years ago.

The fifteen leading stocker and feeder markets have sent 953,055 cattle to the country during the first five months of this year against 1,049,656 during the same period last year, a decrease of nine per cent. Offerings of cattle suitable to go back to the country are very scarce as they have been for some time.

Strength in Hogs

The hog market worked higher early this week and dropped off at the close, leaving prices about steady with a week ago. Average price was $10.85, comparing with $10.65 last week and $9.75 a year ago.

Receipts this week at 140,500 compared with a five-year average of 148,100 for the week. Weight is strong at 244 lbs., indicating heavy feeding of cheap corn, especially so since saws are not yet coming in numbers usual at this season.

Statistically, the position of the hog market seems to be improving every day. According to the government report just issued pork in store in this country June 1st totaled 871 million pounds, against 924 million pounds May 1. Thus it is seen that disappearance of pork during the month of May was large. The June 1 supply was under that of June 1 a year ago, but about 87 million pounds larger than the average for the past five years. Five times in the last ten years, however, the June 1 supply has been larger. Pork is not held in sufficient volume to burden the market, considering the way hog receipts are now running.

Grain Situation

The grain market saw the usual daily fluctuations this week, but with only slight price changes at the close compared with a week ago. The trade is sensitive to legislative action, and there is a decided disinclination to sell short in the belief that in some way prices will be affected by government action. Otherwise the feeling is on the bear side, particularly in view of the government report estimating a winter wheat crop of 622,148,000 bushels, against a five-year average of 549,000,000 bushels. Condition was reported three points higher than last year and a little higher than the ten-year average. The rye estimate was 43,634,000 bushels, 2,000,000 above last year.

Corn is two to three weeks late in the principal states. Stand good, some weedy, moisture abundant, sunshine needed. Oats looks thrifty, the cool, damp weather being in their favor.

Horse Trade

Horse trade is slow and weak. Something under 300 head were offered here this week, and prices were largely $10 to $15 below recent levels, which means that for ordinary stock they are very low. Bulk of sales range from $75 to $150, but it takes a good worker of some weight to fetch $160.

Watson.

Chicago, June 15, 1929.

WEEKLY WOOL MARKET REVIEW

Boston, June 15.—The wool market has shown no essential change during the last week, says the U. S. Department of Agriculture. Business [illegible] there were [illegible] steady. [illegible] taken place on the floor which [illegible] The scouring of 56s and 48s 50s wools [illegible] deliveries was contained somewhat [illegible] number of houses had sold ahead and [illegible] these quantities that expected [illegible] to grade from purchases [illegible] the country to date.

Produce Market Review

FAVORABLE drying conditions in the southern part of producing sections resulted in increased supplies of onions and somewhat lower prices at both consuming and shipping point markets. Shipments of old potatoes were also heavy for this season of the year and this had a material effect on the markets for new stock last week.

Prices of the best Irish Cobblers at Pocomoke City and other shipping points on the Eastern Shore of Virginia toward the end of the week ranged from $3.50 to $3.75 per barrel, c. o. b. With Philadelphia and New York dealers having difficulty to move this stock at $4 and with considerable of it selling for $3.75 it is natural that the demand at the shipping points would be slow. The Norfolk section of Virginia is holding up digging in an effort to stabilize the market.

Receipts of strawberries in Philadelphia fell off during the week with dry weather cutting the crop severely. Pennsylvania assumed a more important place, as more than half of the berries arriving were from this state. The quality of the Pennsylvania berries was good although they were rather small, showing the need of rain. The windup of the picking season in New Jersey and Delaware along with the unfavorable growing weather caused many berries to be poor and sell at low prices. On the other hand the scarcity of really fancy berries brought some very fancy prices. Pennsylvania berries sold at $3.50@5.25 per 32-quart crate late in the week. Fancy berries brought $5.50@8 and there were extra fancy berries well packed and graded that sold at $8.50@11.

Receipts of sour cherries from Pennsylvania, New Jersey and Delaware were heavier but the quality did not hold up well. There was a fairly active demand and prices ranged from $5 to $6 per 32-quart crate. A considerable number of cherries were packed in ¼ baskets or ½ bushel baskets lined with paper. They were sold by weight and averaged around $2@2.75 per pound. All cherries picked to be marketed on a city market should be packed with the stems on or they are to bring satisfactory prices. Cherries without stems crush out and [illegible] sell.

Nearby raspberries were in fair supply and sold at rather high prices. The price ranged from 12 to 20c per pint. Quality at the commencement of the new prices was the fact that many of the fruits were soft and did not carry considerably from the time the basket.

The egg market in Philadelphia was irregular during the week and there was a tendency toward a wider spread in prices. This was due to the irregular quality of the nearby receipts. Buyers were critical and discriminated against the nearby eggs for their lack of uniformity. The volume of nearby eggs arriving is holding its own, but with the hot weather some lots are showing heat damage.

Nearby fancy white and brown eggs sold readily in New York during the past week, while mediums and undergrades sold slowly at a wide range of prices. Irsay and other nearby white eggs ranged from 30c to 36 per dozen. Brown ranged from 30 to 36c per dozen. Mixed colors sold at 30@36 cents.

The New York live poultry market was somewhat weaker. Despite the light receipt of fowls the demand was slow and prices were generally lower than last week. Broilers were in fairly liberal supply and there was a good demand. The quality showed a wide variation and only fancy heavy full feathered birds brought top quotations. Leghorn fowl were quoted at 25@27c and colored fowl at 27@28c. Rock broilers brought 38@43c. Reds 33@43c, and Leghorns 25@33c.

Dressed poultry was in light supply from both nearby and western sections. The market was steady and there was a good demand for broilers. Fowls sold at 30@40c, depending on weight and quality while broilers brought 35@52c.

Butter markets in the East were steady with slight advances toward the close of the week. These advances were chiefly on higher scoring lots. Many receivers sent their fancy butter to storage rather than accept the slight profits or in some cases small losses which would result from sales on the spot market. This resulted in rather light offerings of fancy butter for immediate sale.

The cold storage holdings released by the Department of Agriculture for June first showed 28,428,000 pounds of butter in storage, compared with 17,992,000 pounds June 1, 1928, and a five-year average of 21,460,000 pounds.

W. R. W.

LIVESTOCK

PITTSBURGH

Cattle

MONDAY'S cattle market was not a big affair, with only 27 loads on sale. No choice heavy steers were offered and quotations on them are mere estimates. Good to choice light and handy-weight steers were stronger than last week but the lower grades of light and handy steers showed little change. One carload of well-finished yearlings brought $14.75, others nearly as good $14.50. Good 1,150-pound steers also brought $14.50. A few plain weighty steers went at $13.75@14. Fair butcher steers brought $13.50@13.75, ordinary light kind around $13 and some grassy dairy-bred steers on down to $11.75@12, these looking dearer than better kinds. Nothing suitable for shipment to the country was offered. Heifers were scarce and about steady. Good fat cows were unchanged, so were canners, but the grassy, medium kind looked cheaper. Bulls were strong, with as few as $11@11.25 and one prime animal $12.50. Bulk of good butcher bulls brought $10.50@10.75.

Choice grain-fed steers, 1,200 lbs. or over	$14 50@14 75
Good to choice	14 25@14 50
Fair to good, do.	13 75@14 25
Plain heavy steers	13 25@13 75
Choice handyweight steers	14 50@14 75
Good butcher steers, 1,000 to 1,150 lbs.	14 00@14 25
Fair to good, do.	13 50@14 00
Ordinary to fair, do.	13 00@13 50
Common, do.	12 25@12 75
Good light butcher steers	13 75@14 00
Fair to good light steers	13 25@13 75
Common to medium, do.	12 50@13 25
Inferior light steers	10 00@12 00
Feeders	Nominal
Stockers	Nominal
Choice heavy bulls	10 50@11 00
Choice handy butcher bulls	10 75@11 25
Good handy bulls	10 25@10 75
Fair to good bulls	9 50@10 25
Common to fair bulls	9 00@ 9 50
Inferior bulls	8 00@ 8 50
Choice fat heifers	13 25@13 50
Good to choice heifers	12 50@13 25
Fair to good heifers	10 50@12 00
Common to fair heifers	9 00@10 00
Choice fat cows	10 50@11 00
Good to choice fat cows	10 00@10 50
Fair to good cows	9 00@10 00
Canners and cutters	5 50@ 7 00
Fresh cows, calf at side	50 00@150 00
Common to fair cows	7 00@ 8 50

Hogs

Monday's supply was about 30 double-deck carloads. The receipts included few extreme weights, not many hogs of 300 pounds or over and only a few tops. The market was active and about a dime higher on thanat last week's close. Sorted handy-weights brought $11.85 largely, with the best of the light Yorkers up to the same figure, though few went above $11.75. Mixed lots sold according to the weight in the mixture, from $11.60 for the heavier to $11.80 for those approaching handy weights. Pigs and light hogs are showing grass, but they are also scarce and sell well considering their low dressing percentages. Sows are not so much in demand as they were a month back and were rather dull at $9.75 for good ones.

Heavy wts., 250 lbs. or over	$11 25@11 60
Heavy mixed	11 60@11 80
Medium wts., 180-200 lbs.	11 80@11 85
Heavy Yorkers, 165-180 lbs.	11 80@11 85
Light Yorkers, 125-150 lbs.	11 60@11 85
Pigs, 90-100 lbs.	11 50@11 75
Roughs	9 50@ 9 75
Stags	6 00@ 8 00

Sheep and Lambs

Monday's supply was quite light, only six carloads. Very few sheep were offered but good weights sold on a $7.75 basis. Handy ewes were quotable at around $6.50 heavy and $6 and downward. Good handy weight yearlings were scarce, if offered they might bring $13 per cwt., or more. At that None of the fine quality was offered, and inferior yearlings were not wanted at more than sheep prices. Spring lambs at the right kind brought $15.75@16 sorted, some going at $15@15.25 straight. Culls bought $12@14 mainly $13@14.

Calves

Monday's supply was 1,250 head. Good [illegible] were about steady at $16 per cwt. Several cut brought $12@14 handy [illegible] grades $7@11.

LANCASTER

Lancaster, June 15. Receipts totalled [illegible] cattle, 30 calves, 161 hogs and [illegible] sheep. Cattle were slow and [illegible] Top steers brought $14 and the bulk of sales [illegible] Calves were firm with [illegible] Hogs were dull [illegible] steady on the basis of $12@12.50 for light and medium weights and $11@12.50 for sows.

CHICAGO

Chicago, June 17. Eighteen thousand head of cattle were on sale. Best kinds and steady to 25c lower. Top steers brought $15.40.

Forty-five thousand hogs were offered. The market was from 5@10c higher with top at $11.20.

About ten thousand sheep and lambs made up the supply. Market a quarter higher. Best native lambs sold at $13.

Miscellaneous Produce

Philadelphia

Eggs.—Firsts, 33c; seconds, 29@30c.

Butter.—Creamery, tubs, 92 score, 40@41c; 90 score, 42c.

Poultry.—Fowls, 26@33c; broilers, 24@44c; old roosters, 12@23c; pigeons, per pr., 35@40c.

Apples.—U. S. No. 1, per bu., nearby Romes, Winesaps, $1.50@2.75.

Strawberries.—Various varieties, 24-qt. crate, $1.50@6.

Asparagus.—Pa. & N. J., doz. bunch crates, 60c@$3.50.

Beans.—Lima, Fla., ¾ bu. hmps., $3@3.50; S. C. bu. hmps., 50c@1.75; N. C. green bu., $1.50@2.75.

Cabbage.—E. Va., and Md., bu., bag, $1.25., Pa., bu., $1.

Cucumbers.—S. C. bu. hmps., 25@35c.

Onions.—Texas crates, yellow U. S. No. 1, $1.40@1.50; yellow boilers, 75c@$1.

Potatoes.—Me. Green Mts., 120 lbs., $6@6.75; new stock, per bbl., Spaulding Rose, U. S. No. 1, $4.50; Va. & N. C. Cobblers, bbl., $3.50@4.

Sweet potatoes.—N. J., bu., yellow, $2@2.75; Md., Del., bu. yams, $1.50@1.75.

Tomatoes.—Tex. lugs, $2.50@3.25; Mo. 4s, $1@1.25.

Radishes.—Nearby, bu., 50c@$1.

Rhubarb.—Nearby bunches, 25@30c.

Cauliflower.—Calif. crates, $2.25@2.50.

Kale.—Nearby bus., 25@40c.

Peas.—Va., bu. hmps., 65c@$1; N. J. bu. hmps., 75c@$1.25; Md., bu. hmps., $1@$1.

Lancaster

Butter.—Country butter, 52@55c; creamery, 50@55c.

Poultry.—Chickens, dressed, $1.20@$3 each; springers, 60c@$1.25 each; ducks, $1.50@2.50 each; squabs, 25@50c each.

Eggs.—Fresh eggs, 33@35c.

Vegetables.—Asparagus, 10@15c per bunch; beets, 10@15c per bunch; celery, 15@25c each; string beans, 20@25c per ½ pk.; beans, Lima, 35c per qt.; box cabbage, 10@25c per head; carrots, 10@15c per bunch; cauliflower, 20@35c per head; cucumbers, 15@25c per bunch; cucumbers, 5@10c each; spinach, 12@15c per ½ pk.; tomatoes, 5@6c per bunch; peppers, 5@10c each; endive, 10@15c per head; lettuce, 10@20c per head; radishes, 5@10c per bunch; mushrooms, 25@50c per pt. box; peas, 20@25c per ½ pk.; green onions, 5@10c per bunch; corn, 45@50c per doz.

Potatoes.—Old, per bu., 65@75c; per 20@25c per ½ pk.

Sweet potatoes.—25@30c per ½ pk.

Strawberries.—10@20c qt. box.

Cantaloupes.—12@20c each.

Watermelons.—50@75c each.

Cherries.—15@25c qt. box.

SEEDS AND NURSERIES

BEST SPECIAL TO MARKET GARDENERS for the rest on our treated, free disease, new soil [illegible] which insure you greater crop [illegible] at harvest, now ready for your late crop. [illegible] Bullhead. Wakefield and flat varieties, [illegible] $1.25; 1,000, $4.75. Tomato, [illegible] Stone, Greater Baltimore, same price [illegible] Charges collect $4.00 thousand. Sweet potato, [illegible] Magiobe tomato. Prize-head, [illegible] sweet, 300, $1.25; 500, $1.75; 1,000 $2.75 [illegible] special price on quantities. Thousands [illegible] customers insure satisfactm. Re-[illegible] Plant Co., Franklin, Va.

5 MILLION outdoor grown Vegetable Plants—[illegible] Copenhagen Market, Bullhead, Wakefield, [illegible] 300, $1.00; 500, $1.25, 1,000, $2.00 [illegible] $10.00 expressed. Tomato Plants: [illegible] Baltimore, Stone and Matchless, [illegible] 300, $1.50; 500, $2.00; 1,000, $3.00 [illegible] $15.00 expressed. Sweet Potato Plants: [illegible] $1.25; 500 $2.00; 1,000, $3.00; 10,000, $20.00 expressed. Shipping [illegible] million daily. Day and Night service. [illegible] must please you or money cheerfully refunded. J. F. Council Company, Franklin, Va.

100 ACRES CAULIFLOWER Plants, [illegible] Danish Seed, Chemically treated, [illegible] delivery or money refunded. Golden Acre, [illegible] Copenhagen, Surehead, Succession, [illegible] Flat Dutch, Wakefield, Flatdutch, Bullhead, Red, Pointed, [illegible] Bullhead, Red, Pointed Cabbage, 500 $1.25; 1,000, $2.00. Collard, [illegible] $2.50 thousand. Cauliflower 50 40c; thousand $2.00, $2.00; 1,000, $3.50. Transplanted Tomato, Celery, 35c; 100, $1.00. Yellow Yams; [illegible] Copenhagen, 25c. Nancy Hall, Porto Rico, Port [illegible] Dept. PF, North Lima, Ohio.

MILLIONS VEGETABLE PLANTS—Cabbage, [illegible] Wakefield, Flatdutch, Danish Ballhead, Succession, 300, $1.00; 500, $1.25, 1,000, $2.00 postpaid. Express $1.25 per 1,000. Tomato [illegible] Baltimore, Stone, Matchless, same price [illegible] cabbage. Nancy Hall and Yellow Yam sweet potato plants and Ruby King pepper plants, [illegible] 300, $1.00; 500, $1.50; 1,000, $2.50 postpaid. We guarantee satisfaction 10 years or money refunded. Prompt shipments. Mess Packed. Cedar Hill Plant Co., Franklin, Va.

MILLIONS OF FIELD-GROWN VEGETABLE Plants. Cabbage, Copenhagen, Danish Ballhead, [illegible] and Late Dutch, Charleston and Jersey, Wakefield Tomatoes, Baltimore, Stone and [illegible] Egyptian Beets, 100 35c; 300, 75c; 500, $1.25; 1,000, $1.95 postpaid. Ruby King Pepper, Porto Rico and Nancy Hall Potato Plants, 100, 35c; 300, 75c; 500, $1.25; 1,000, $2.00 postpaid. Cabbage and tomatoes, $1.25 per thousand. Safe arrival guaranteed. [illegible] C. Landon & Sons, Franklin, Va.

MILLIONS FIELD-GROWN VEGETABLE plants. Cabbage, Jersey and Charleston Wakefield, Flat Dutch, Bullhead, Copenhagen Market, [illegible] Succession, Stone, Matchless, Tomato, Egyptian Beets, 100, 35c; 300, 75c; 500, $1.20; 1,000, $1.85. Potatoes, Porto Rico and Nancy Hall, Ruby King Pepper, 100, 35c; 300, 75c; 500, $1.25; 1,000, $2.00; 1,000, $3.50. All prepaid Cabbage, Tomatoes and Beets, $1.00 per thousand. Express Collect. Immediate shipment guaranteed. Bolgiano Plant Farms, Franklin, Va.

PLANTS POSTPAID.—All varieties: Beet, Cauliflower, Mangel, Lettuce, 3 doz., 25c; 100, 50c; 300, $1.25; 1,000, $3.50. Cabbage, 3 doz., 25c; 100, 50c; 300, $1.00; 1,000, $2.00. Sweet Potato, Asters, 3 doz., 25c; 100, 65c. Celery, Tomato, Eggplant, 3 doz., 25c; 100, 75c; 300, $1.50; 1,000, $3.00. Egg Plant, Onions, Cucumber, Early and Shasta Daisies, Pansies, Dianthus, Snapdragon, Salvia, Verbena, doz. 50c; 3 doz., $1.25; 100, $2.00. Bohrer's Plant Farm, Smoketown, Va.

MILLION CABBAGE PLANTS. Copenhagen, Wakefield, Danish Ballhead, Flatdutch, 300, $1.00; $1.25; 1,000, $2.00 postpaid. Express collect, $1.00, 1,000. Tomato plants, Matchless, same price. Potato plants, Nancy Hall, and Ruby King Pepper, 300, $1.50; 500, $2.00; 1,000, $3.00. Satisfaction Guaranteed. Carefully packed. Prompt shipment. Service Plant Company, Franklin, Va.

CABBAGE PLANTS.—Millions, June, July delivery. Golden Acre, Copenhagen, Wakefield, Flatdutch, Bullhead. Prepaid, 200, 60c; 500, $1.25; 1,000, $2.00. Express, 5,000, $7.50; 10,000 $12.50. Collard, Cauliflower, prepaid 100, 60c; 200, $1.00; 500, $2.00; 1,000, $3.50. Buy near home grown, culturally assorted, guaranteed plants. Large and largest northern grower. W. J. Lyon, R. 2, Massillon, Ohio

PLANTS that are free of disease, quality means [illegible] crop yield or harvest. Copenhagen, Danish Ballhead, Wakefields, Flat varieties, cabbage, Baltimore, Stone, Matchless, tomato, Prize-head, sweet, 300, $1.00; 500, $1.25; 1,000, $1.75 and Collard prepaid, 1,000, $2.25; 10,000, $18.00 [illegible] potato, sweet pepper 300, 75c; 500, $1.75; 1,000, $3.00 delivered. Good order delivery guaranteed. Maple Grove Plant Farms, Franklin, Va.

SPECIAL FOR 30 DAYS—50 Acres Fine Cabbage Plants—Copenhagen, Bullhead, Flatdutch, Wakefield, Tomato Plants, Stone, Baltimore, Rearfoot, all at $1.00 thousand; 5,000, $4.75; 10,000, $8.50. Sweet Potato and Pepper Plants, $1.00 thousand. Prompt shipments, absolute satisfaction guaranteed or money cheerfully refunded. Old Dominion Plant Company, Franklin, Va.

CABBAGE PLANTS.—Copenhagen, Danish, Bullhead, Wakefield and Flats, 200, 50c; 500, $1.00; 1,000, $1.50 postpaid; 5,000, $5.00; 10,000, $9.00 [illegible] Tomato, Collard, Onions, same price. Celery, 100, 50c; 300, $2.00; 1,000, $3.75 postpaid. Ormand Grubbs, Courtland, Va.

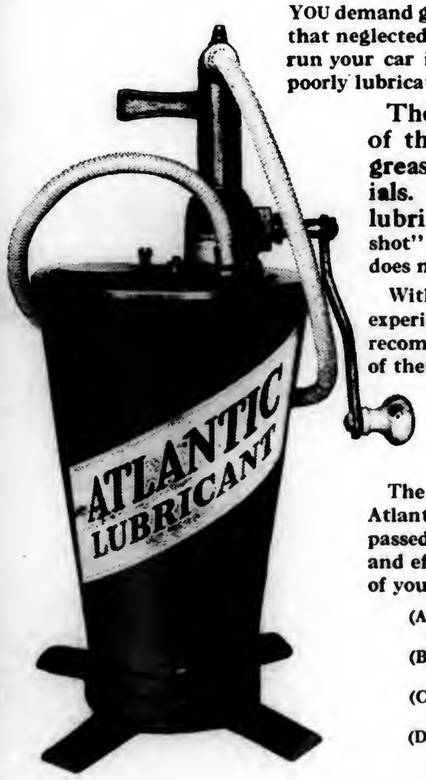
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CABBAGE PLANTS—Copenhagen, Danish Ballhead, Wakefield and Flats

Here is the lubrication you should use for

TRANSMISSION, DIFFERENTIAL and CHASSIS



YOU demand good oil for your motor. But, do you know that neglected transmission and differential gears can run your car into an early repair bill as quickly as a poorly lubricated and neglected motor?

The manufacturers of more than 98% of the cars sold today specify *oil*, not grease, for transmissions and differentials. And 64% are equipped for *oil* lubrication of chassis (exclusive of "one-shot" systems, to which this advertisement does not apply).

With sixty years of specialized lubrication experience, The Atlantic Refining Company recommends these as the very finest lubricants of their kind made:

Atlantic 600 Transmission Oil
Atlantic Gear Case Oil
Atlantic Worm Gear Oil

The high-quality base and the distinctive Atlantic refining processes make them unsurpassed for preventing wear and insuring quiet and efficient operation of the vital driving parts of your car.

(A) Their adhesive qualities assure abundant lubricant on gears at all times.

(B) They hold together, insuring a perfect, noise-killing cushion between gear teeth.

(C) Their unique fluidity reduces gear "drag" to a minimum.

(D) They contain no soap mixture to clog shackle bolts or oil lines. . . . They are *all* lubricant—easy to apply—assuring a lubricating film not possible with light oil-soap greases.

Have your transmission and differential drained—now, before your heavy midsummer driving begins—and refill with one of these remarkable wear-proof, repair-saving oils. Atlantic Service Stations and dealers know which to use, and where, on your car.

ATLANTIC

600 TRANSMISSION OIL
GEAR CASE OIL
WORM GEAR OIL

. . . And for your motor there's nothing in the wide world like ATLANTIC *Paraffine Base* MOTOR OIL

"SAFETY FIRST"



"Come away! That's no place for a little bug like you! Can't you see those vines are sprayed with Pyrox?"

PYROX, the scientifically prepared triple-duty plant spray KILLS BUGS, prevents the development of blight and disease, and stimulates plant growth. Users report $25, $35, and $50 EXTRA PROFIT per acre from potatoes and other vegetables sprayed with PYROX. So quick, and easy to use—and sticks. All sizes from 1 lb. jars to barrels. Now priced lower in 30 years' successful use. Write us or ask your dealer for new Spray Guide—free. Bowker Chemical Company, 419 Fourth Avenue, New York.

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Frick Threshers
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Because, in a Frick Thresher more perfect separation is obtained by a cone beater which distributes the straw in a thin film, evenly the full width of the separator, and prevents backstraining and wrapping of cylinder when operating at speeds recommended by us.

Frick Threshers are equipped with Gravity Cleaner, simple in construction, adjustable while machine is running and gives less trouble than sieves.

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Remove Soft Swelling

with Absorbine. It is remarkably effective but does not blister or remove the hair. You can work the horse at the same time. $2.50 at druggists, or postpaid. Write for horse book 4-B free.

A user writes: "Had one horse with soft ring on both hind legs. One bottle Absorbine cleaned them off. Same as going sound and well."

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To advertise our business, make new friends and get new bargain catalog of Klein watches, we will send H.W. Special watch by mail postpaid for $1.85 (satisfaction guaranteed). 8mm wind and stem set, nickel case, dial, a perfect timekeeper and full 5 year guarantee. Send this advertisement to us with $1.85 and watch will be sent to you by mail postpaid, or send $1.00 and watch will be sent C.O.D. for balance plus postage. Guaranteed by

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PENNSYLVANIA FARMER

Published Weekly — Established 1877

Consolidated with PENNSYLVANIA STOCKMAN and FARMER

June 29, 1929



McPherson's Barn on the Gettysburg Battlefield

Philadelphia ***Pittsburgh*** ***Harrisburg***

TIGHT BINDING TEXT CUT OFF



FLY-TOX

The Scientific Insecticide Developed at Mellon Institute of Industrial Research by Rex Research Fellowship . . .

FLIES reek with bacteria. They are the filthiest insects known. They taint everything they touch. Authorities say 40,000 deaths each year are caused by fly contamination. Flies must be killed. FLY-TOX kills flies. Easy to use. Harmless to people. Every bottle guaranteed.



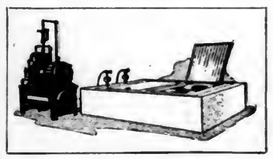
FLY-TOX has a delightful, purifying, perfume-like fragrance. Dealers near you sell FLY-TOX. Insist on the genuine—in bottles with the blue label.

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ANIMAL SPRAY

Repels and kills flies, mosquitoes, fleas and lice . . . won't irritate the skin . . . keeps hair nice and glossy . . . will not clog sprayer. Protect livestock against insect torment . . . use STOCKAID, the scientific animal spray.



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Hand-operated or automatic plants, with either electric or gas-engine drive; all types, using cold water tank or brine system, with or without tubular milk cooler, as desired; makes ice when required.

Write Frick Company



The Thresher
You can afford to buy

Complete with all latest improvements for Grain or Beans. Send coupon below for new catalog.

DOYLESTOWN AGRICULTURAL CO., DOYLESTOWN, PA.

Name..... R. F. D..... City..... State.....

My tractor or engine is..... H. P. ..... If you have a thresher State size & make.....

IN THE PENNSYLVANIA FARMER ARE NAMES—names of advertised products. Time and again you see them. They are like old friends—to be trusted. Their names mean economy, full value and integrity. Tell the manufacturer you saw their ad in Pennsylvania Farmer.

Farm Facts and Fancies

By ALVA AGEE

THE past five years have brought the matter of better pastures to the front as never before. Good practical farmers always have been interested, and so have some scientists, but it is within recent years that attention has been centered so much on the right ways of getting satisfactory soils for grazing.

The results of some station tests have been coming along, fertilizer people are interested in the matter, and farmers feel the need of getting more feed for livestock without the expense of planting and harvesting. Then, too, there is an immense acreage that cannot be cultivated, and a great deal that could not be cultivated with profit and any chance of income from it is interesting.

All of us know the appearance of well-being found in the bluegrass sections of Tennessee, Kentucky, Virginia, southwestern Pennsylvania, and in other areas, and these stations and extension projects dealing with pastures concern a great mass of land owners. The improvement of much so-called grazing land is out of the question now. There are too many weeds and too little fertility, and its condition is the price we pay for preferring dogs to sheep, and it is a long price. Safety for sheep would bring a big change in eastern agriculture.

These Experiments

I am not taking space to write about methods of soil improvement when the men conducting these tests know far more about the subject than I do, but to mention one factor that interests me much. We do know from experience that dressings of fertilizer on thin soils make them heavier, as a rule, but time and again I have been disappointed with the amount of good resulting when the fertilizer was left on the surface.

It now seems probable that the greater part of the benefit came from the nitrogen, and the poorest results were where phosphorus was most needed. That is pure guess-work in trying to account for unevenness in results, but station tests make it clear enough that phosphorus needs to be put down into the ground, and some stations say that it is essential that it be disked into the sod land. Bluegrass stands this sort of treatment in early spring. That is the best time to work the fertilizer down into the soil and to reseed and cover the seed.

We know that phosphorus is the chief need of a worn pasture, and we are learning that all kinds of crops need it. To have the phosphorus down where roots should be. Rightly applied fertilizers and lime, some reseeding and a couzzle for every dog would give the East a new agriculture.

Sods and Soil Building

Mr. Lighty reminds me that "it is sow and out of season" I talked the value of soils in soil improvement years ago, and he is afraid that I have lost of the old text.

There are fundamental truths every bit of knowledge that we have to keep on hands on. Nature has her own ways of doing things, and we get satest when we travel with her. Much work has been done with very little and from man, and our soils owe where represent the result of her work in growing stuff to be mixed for with the mineral matter that was the foundation of it all. The process is pretty slow, but she had all the time going. We hasten matters wonderfully, but the right process remains the same. The roots of the plants work on the intractable material, adding to its available percentage, the tops help when they decay, and just as important the freezing up of the mineral matter by the plant roots that leave paths for access of air and water.

When we can get a heavy sod established, we have the problem of making land better pretty well solved. That is the reason we get double value of manure when it goes on a sod. It adds organic matter and at the same time makes grass and clover grow. Organic matter. Most land needs more fertility and at the same time better physical condition. Nature uses weeds, bushes and grass sods for that purpose. The man who gets land into such condition that it can grow a heavy sod during the crop rotation, and then let it do it, gets a sure living from the farm even if he rightly may wish for it were a better living. That condition is worth a lot, and it is a certainty because it is the road for soil improvement that nature provided us.

Garden and Truck Crops

By GILBERT S. WATTS

THERE is no need to let worms destroy the cabbage crop or reduce market value if treatment is begun when the young worms are first discovered. Moreover, danger from poisoning is negligible if control measures are undertaken early, as the cabbage head grows from the inside. A common formula is two pounds of arsenate of lead powder to 50 gallons of water or one part of arsenate of lead powder with four parts of air-slaked lime. It is advisable to apply the spray on a day when it will dry fast quickly and the dust early in the morning when the dew is on the plants.

• • •

IT is no secret that New Zealand spinach is none too popular. Yet it is possible to develop a trade for it, especially on small markets if care is taken to put out a quality product. And quality is dependent on furnishing fertility and moisture for rapid growth and on breaking not cutting only the tender tips for sale.

• • •

NEW ZEALAND spinach seed is notoriously slow to germinate and makes a small inconspicuous plant that is hard to see in weedy ground. This year we solved the problem by mixing a portion of wrinkled peas with the New Zealand spinach seed. Both kinds of seeds being of about the same size no difficulty was experienced in drilling. The peas came up promptly and made cultivation possible before the New Zealand spinach was above ground.

• • •

A PHOTOGRAPH in one of the vegetable growers' trade papers shows rubber bands used to tie the flower. The proposition looks good. Although bands will likely cost more than twine or raffia a considerable saving in labor should follow. Especially regular tying and cutting, even to the point of daily attention, is necessary to secure maximum quality and avoid loss in handling early cauliflower during the hot days of late June and July.

• • •

OUR new strawberry patch is being picked for the first time, outyielding ten to one the patch that is being fruited for the second time. This vast difference can be accounted very largely to the fact that the new patch bloomed a week earlier and was not hit by three hard frosts that the old patch escaped. During the last two years the plantations that were set during their second crops have produced one fair crop, one exceptional and two extremely unsatisfactory ones. Next spring we shall have no old patches.

Orchard Windfalls

By. S. W. FLETCHER

THE rather general crop failure this year of Winesap, Stayman, Black Twig and Delicious, from Virginia to New York, seems to indicate that the difficulty could not all be due to poor pollination, since these varieties had favorable weather for pollination in several districts. The crop failure is a varietal response to weather conditions, it is true, but not necessarily spring weather. The conditions under which the tree goes into the winter, especially the degree of maturity of the tissue, have much to do with the ability of the blossoms to set the following spring.



Last year there was general complaint about Baldwin in the same way. Cultural practices that favor early maturity of wood, such as cover cropping, may help the situation, but cannot entirely remove the weather hazard. Stayman was on the way to becoming the dominant variety of the state, but the past few seasons have shown its weaknesses. There are mutterings of discontent among fruit growers, another year or two of fickle behavior will give this high-quality variety a severe set-back. Meanwhile the Reine, though not as high in quality, is gaining favor as one of our most dependable sorts.

Orchard Location

Shall we plant more apples and peaches? The answer is to be found in the record of such orchards as that of Alfred Cherry, of Blair county. He has just pulled out a 33-year-old peach orchard. When it was 20 years old this five-acre orchard bore 3,000 bushels of peaches. One 41-year-old peach tree on this farm is still bearing well.

There has not been a complete crop failure in 35 years; very seldom has there been less than 50 per cent of a crop. Regularity of crops is the most important factor in securing a low cost of production, which is prerequisite to profitable fruit growing. The so-called "marginal" orchards are mostly those that miss a crop frequently; inevitably these will be crowded out. There is room for a reasonable amount of new planting in Pennsylvania, but only on locations that insure cropping regularity and on soil that is suitable; there are hundreds of such locations, in limited area, scattered over the state. There is no room for more orchard planting on doubtful sites or on poor soils.

Mr. Cherry will have to fence his farm, however, if he plants more orchard. All resets of the past ten years have been ruined by deer, herds of which graze in the orchard like cattle. The nipping back of young shoots is bad enough, but the greatest damage is caused by the bucks rubbing their horns on the trees. He has found partial relief by driving three stout stakes around each tree. Should he be required to spend several thousand dollars to fence out the state's deer? This is what it would cost, even though the state supplies the fencing. There is no fairness in that.

Score a Point Against Dusting

We have had a duster at Alder Run Orchard for seven years. On the whole it has been satisfactory. The peaches are dusted exclusively, save for the winter spray. The apples are sprayed just as far as possible, but the duster is called in for emergency use when bad weather delays the spraying to the damage point. We have used it twice this year, but not over the entire orchard. The chief difficulty, this season, however, has been in finding a time when the air has been still enough to put on the dust. There has been a breeze practically all the time, night and day. Possibly this accounts for the 60 per cent crop of apples that is on the trees (at this particular moment), but it certainly is an exasperation in dusting and spraying. A reasonably effective job of spraying can be done when there is enough air in motion to make dusting impracticable. We shall continue to use both.

The MARKET PLACE

By W. R. WHITACRE

A TRUCKLOAD of 108 crates of Pennsylvania berries arrived in Philadelphia a few days ago and sold for considerably less than it would if the grower had been familiar with the market. The truck arrived at about 5:30 a. m., daylight saving time and while this seems early to most people it is really too late to catch the best buyers. The Dock and Callowhill Street markets open around midnight and the majority of large sales are made before four a. m. This means that to catch the best trade the load should be unloaded on the market before three a. m., daylight saving time, which is two a. m. standard time.

The other reason that these berries did not sell as high as they might have was because the quarts or cups were not full. They had probably been about level full when they left the farm, but the jarring on the road had caused them to settle considerably. The grower was under the impression that the berries would be badly crushed by the separators if the packages were fuller and while this does cause some crushing it is preferred to a slack pack. The crates were packed uniformly and the berries were good. I believe if the grower had known how to pack to best advantage he would have received at least one dollar more for each crate. At present Pennsylvania berries are topping the market and while they do not usually run as large as some of the berries from other sections they have a noticeably better flavor.

• • •

NEW JERSEY peach growers are optimistic this year. Their competitors in the South have a far lighter crop than last year and the crop in the state appears to be coming along well. Most peach sections in the state expect to ship more heavily. Last year the peach crop in many sections of the state was a complete failure.

Apple growers are not as enthusiastic about prospects in New Jersey as the peach men. The unfavorable rainy weather during the season of pollination is believed to have cut down the crop. Growers are awaiting the June drop as things are rather indefinite until after that has occurred. It looks as though the crop will be rather spotty as some sections report poor prospects and others good.

• • •

GROWERS who still have apples to market should be encouraged by the June 1 report of cold storage holdings, since they are far below last year and the five-year average. Some very high prices have been paid for good apples lately and the report may be responsible for further gains.

The holdings of apples in bushel baskets totaled 210,000 bushels, as compared with 222,000 on June 1, 1928, and with a five-year average of 128,000. Holdings in barrels were estimated at 107,000 barrels, compared with 121,000 on the same date last year and with the five-year average of 233,000 barrels. Holdings in boxes totaled 633,000 boxes as against 1,223,000 a year ago and a five-year average of 933,000.



GOULDS INTRODUCES NEW PUMP

Fresh Water Junior To Sell for $79.50

Operating Cost Only Few Cents a Month—Pennsylvania Distributors Announced

FOR homemakers, seeking an adequate supply of running water, Goulds Pumps, Inc. has produced the "Fresh Water" Junior. It sells for $79.50 and is one of a complete line of pumps for home and farm use. It marks the first time that the quality, workmanship and sturdy construction, long familiarly associated with Goulds, has been made available at such low cost.



Figure W41
The Fresh Water Junior

Briefly, the "Fresh Water" Junior is a sturdy compact outfit, produced to meet the demand for a better-than-ordinary low-priced system—one that would give long life and be free from mechanical trouble. It is powered by a ¼ H. P. 60-cycle AC motor and has a capacity of 210 gallons an hour. It effectively serves every home requirement, drawing water from shallow wells and cisterns. Where, however, the total suction lift exceeds 22 feet, it is advisable to use Goulds deep well outfit. As Goulds manufactures pumps for every purpose, there is a Goulds pump to serve the needs of every home.

Goulds Makes Pumps for Every Purpose

The Goulds line also includes the Goulds Autowater outfits X-210 and W-210—both shallow well pumps.

The first is a complete unit, assembled and ready for immediate connection to house piping and electric wiring. It will operate on current supplied either from central station or farm lighting plant. The tank is of steel, galvanized inside and out, and has a capacity of 32 gallons. It will supply enough running water for the requirements of the average household.



Figure 3012 for Milk Cooling Systems



Figure 1724—"Deep Well" Outfit—Automatic Oiling

The Goulds W-210 is an electrically-driven outfit for installation where a larger storage tank is desired than that furnished with Goulds X-210. It will supply the equivalent of city water service.

Goulds likewise manufactures cellar drainers, diaphragm, rotary and centrifugal pumps, condensation outfits and piston and plunger pumps of all types for industrial, farm, dairy and home requirements—thus assuring "a pump for every purpose."

Where Goulds Pumps are Obtainable

The complete line of Goulds Pumps is now available through the following distributors or their dealers:

Lang Engineering Company
324 Walnut St., Reading, Pa.

Wm. H. Taylor & Co.
250-56 Hamilton St., Allentown, Pa.

Henry R. Herr
Ann and Fulton Sts., Lancaster, Pa.

Chatard & Norris
218 Water St., Baltimore, Md.

Goulds Pumps, Inc.
111 North Third St., Philadelphia, Pa.

Goulds Pumps, Inc.
636 H. W. Oliver Bldg., Pittsburgh, Pa.

For those interested in information on specific pumping problems, Goulds Pumps, Inc. has a wealth of information that is available at any of the above distributors or their dealer in your neighborhood. Let them help you solve any of your pumping problems.

Running Water for Every American Home—Lengthens Life, Shortens Work, Makes the Whole Family Happier

GOULDS PUMPS

SENECA FALLS, NEW YORK

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ATLANTIC CITY, N.J.



This Year You Will See The New Seaside Hotel---

To meet the requirements of visitors to Atlantic City, we offer a new and greater Hotel, not merely in size, but in luxuriousness of conservative appointments, contributing to the convenience, comfort and pleasure of our guests.

We shall be glad to answer your inquiries and have literature and rates upon request.

NEW in construction and furnishings
OLD in hospitable tradition

COOK'S SONS CORPORATION

"FRIEND" POTATO SPRAYERS



combine Speed, Power and Reliability—three deciding factors in your choice of a Sprayer. Write today for complete information about the "Friend" line.

"FRIEND" MFG. CO., 133 East Ave., Gasport, N. Y.

Bonus for Live Rats



25c plus your money back, if Tempto Rat Killer fails to get them all. ONLY KIND not a squill or other poison. Harmless to anything but Rats and Mice. Pests die outside. Proved by thousands.

Send no money—just your name to Imperial Labr., 1602 Coca Cola Bldg., Kansas City, Mo., for a large $2.00 Farm Size pkg., (makes 200 baits)—for only one dollar, on 15-Days' Trial. If there is a live one left, the dollar you paid the postman (with postage) will be cheerfully refunded, plus 25c for your trouble. You risk nothing, so write today.

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SAVE MONEY! Get your Roofing direct from the Factory and keep in your own pocket the profits the dealer would get. All kinds and styles. Galvanized, Corrugated, Shingles and Asphalt Roofing. Freight paid. Easy to nail on. Write TODAY for Free Samples and freight paid prices. FREE SAMPLES.

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"MARUGG'S SPECIAL"

IMPORTED "Dangel-edge" GERMAN SCYTHES. Hold a keen edge and mow as smooth as a lawn mower. Write for free descriptive catalogue—to-day.

The MARUGG CO., Dept. P, Tracy City, Tenn.

21 VARIETIES gorgeous colored Irises. The Garden's Greatest Beautifiers (including "Dream," the best pink) labeled and postpaid for only $1. Six orders for only $5. Color circular free.
A. B. KATKAMIER, Macedon, N. Y.

WANTED—Farm Products
Poultry, Eggs, Potatoes, etc. Write for inf'm'ti'n.
GIBBS & BRO., 321 E. Front St., Phila., Pa. Dept. A.

NESHAMINY GARDENS

By R. P. KESTER

RECOLLECTIONS of the great uncle's fruit growing, about which I wrote something last week, include so many things which show the comparison of conditions then with those of today that I wish to speak of them further. Forty years ago the knowledge of most farmers about commercial fertilizers was meager. The land which my uncle bought from Father was not rich. In fact it was really "run down" land and needed added fertility to raise good crops. My uncle realized this, but two things handicapped him at the outset. First, he had no money to spare for manure, and second, he did not then believe in commercial fertilizer.

• • •

I had another uncle who was the first agent for "phosphate" in that community. He studied all he could find on the subject which was not much, and talked learnedly if not convincingly to the farmers of the neighborhood. He tried to explain the elements composing "phosphate" to his neighbors, telling them that these elements were the same as are found in manure,—"manure" meaning only that which animals made in the barn. But they could not see it. Anything as strong and full of acid as "phosphate" was sure to "burn up" the soil. My great uncle would have none of it in his fruit growing.

• • •

After some years, however, when he found it necessary to do something to increase the size and yield of his berries he bought some nitrate of soda. This he sprinkled along the rows of his strawberries, but not realizing the nature of the material he was not careful to keep it from the foliage. The result was that it burned so many of his plants that nitrate of soda was condemned, and only after he had read in his fruit paper how to use it did he resume the use of it. After a time he bought a bag of potash, and finally after several years he began the use of commercial fertilizer,—guardedly.

But what my uncle lacked in natural or artificial fertility he made up to a large extent by intensive cultivation. He was the first man I ever heard use that term. Being a well-read man he had come to the conclusion that the sun, air and water would unlock fertility if the soil were kept stirred. Long before the neighborhood was ready for work in the morning Uncle could be seen out in his berry lots with old "Charley" and the cultivator, and after other people had quit work for the day he would continue until it was too dark to see. And he got results. His fruit did grow, and grow big.

In our neighborhood it was a settled practice to cultivate corn four times in a season. If from indolence or bad weather a man "got through" his corn a less number of times he was either shiftless or unfortunate. Uncle poohhooed that idea until his neighbors began to see that there was nothing mystical in the number four, and they began cultivating crops as many times as they needed it.

• • •

Spraying was another thing in which Uncle was a pioneer. Unfortunately he, and everybody else, knew little about it at first, and he did as much harm as good by spraying with the wrong material or at the wrong time. His enthusiasm encouraged Father and me to buy a sprayer of the barrel type. We had several fine cherry trees that were white with bloom that season. We talked to Uncle about it and had his advice to use Bordeaux mixture. We rigged up the new sprayer, mixed the material and gave two trees a good spraying when they were in full bloom. We had a full crop of cherries—except on those two trees. Not only did the blossoms fail to set any fruit, but every leaf came off and the ends of the twigs died. Of course the neighbors "knew that spraying poison on trees was all foolishness."

• • •

But to come up to date for a minute. The strawberries tax our capacity to get them picked. The Better Half of the farm is queen, I manager and oversees the picking of strawberries and the cutting and bunching of asparagus. It goes without saying that the work is done early and promptly. Fourteen crates was the record picking in one day to date, a total of 16 qts. and the total for one week was 1,000 quarts. We are strongly in favor of having the kind of help we have. A man, his wife and two children when out of school, are most dependable and efficient.

• • •

Several years ago the articles and communications of a woman living in Pike county attracted my attention, and we became friends by mail. Her snappy articles and good poems told me that she had a mind beyond the average. I found that her native heath was near the land of "The Limberlost," a section made famous by Gene Stratton Porter. Last week she and two of her daughters dropped in on us, much to our delight. Our only regret is that we were too busy and her time too short to visit as we would have liked. But we have a cordial standing invitation to go up to her home and fish in the well-stocked streams of Pike county. Here's hoping that Ed Bayard does not read this and beat us to it.

An Answer to Kester's Dare

IN P. F. of June 15, Mr. Kester dares any one to beat the chick record of G. M. McD. Mrs. H. G. G. also is quoted in his columns. I can beat both their records, which are exceptionally good.

This spring I set four pure-bred white pullets with pullet eggs. Two of them got 14 eggs apiece and the other two 13 eggs apiece. They could cover no more eggs. The first two hatched out 27 chicks out of the 28 eggs which I had given them. One egg was rotten. So there was no doubt about its being infertile.

I had set the other two in the wood house with the door ajar. I forgot the time when they were to come out. I was busy in the fields from seven to seven and gave them scant attention. One noon I thought I heard cheeping but did not look at once because I thought the time was not yet up. Later I looked. I found three chicks stiff and barely alive beside one of the nests. I quickly lifted both hens and saw that every egg had produced a chick. I counted them. There were 25 live chicks and one that had been trampled to death. This made 53 chicks out of 54 eggs—pullet eggs, mind you, and hatched out by pullets. Not an egg had been broken.

Today the chicks can be classed as young chickens. They are no longer peeps. Two of the chicks died at once out of the lot which I had forgotten about and which almost starved. They must have been about three days old when I found them, judging from their looks. The rest I still have. There are fifty chicks out of 54 eggs. If you say that I shall not count the two that died, probably from my oversight, then I have 100 per cent of them today. Now let somebody beat that if he can.

R. I. Weigley.

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"Spirit of St. Louis"

We Continue Our Lessons in Geography

By C. L. WHITE

I WAS entering the city of St. Louis on a murky morning, completing the first thousand of the 10,000-mile lesson in geography which I explained last week. Our train had just crossed the Mississippi and emerged from the black tunnel on the other side when those words, "Spirit of St. Louis," flashed by the car window. They were across the front of a shining black locomotive. It was a good looking monster.

Sure enough, we recalled, one of the crack trains between New York and St. Louis had been given that famous name. Here we were in the town that likes to think it started Lindbergh on his way to fame.

Later I talked with friends of the moneyed men who made possible the young air mail pilot's flight to fame. It seems that they didn't consider themselves gamblers; at any rate they were betting on a sure thing. When they advanced Lindbergh the money to buy a plane to fly to Paris the trip was as good as completed. Someway, they just naturally expected him to do what he set out to do.

St. Louis is very proud of its exhibition of Lindbergh trophies. It consists of a great number of valuable gifts the flier received from famous people throughout the world after his historic arrival in Paris. The city is wondering what will become of the collection now that Colonel Charles has a wife. If he didn't donate the trophies to the city; he finally permitted them to be placed on display. And the collection includes fine linens and other things that should be useful to a young couple setting up housekeeping.

No Cinders in Our Eyes

St. Louis was the real starting point of our agricultural editors' tour. But before boarding our special train we took time to do a little sight-seeing. We also wanted one final night's sleep before embarking for three almost continuous weeks in Pullman cars.

This last was an unnecessary precaution. For all of us rested as well on the train as we would anywhere else. Some nights I didn't waken once, even though our schedule showed that we had been switched around noisy yards and had passed dozens of roaring trains.

Moreover, we had frequent opportunities to go to hotels along the way to clean up. Not that we needed so much extra scrubbing. For as long as we were on the Missouri Pacific Lines we had no cinders and coal smoke. Reason: this road burns oil instead of coal in both freight and passenger locomotives. I understand that the Southern Pacific and some of the other lines we traveled burn oil in their passenger engines. Anyway, we were refreshingly free from coal dirt until we got back to the soft coal country.

Others Did Our Worrying for Us

It would be difficult to improve on the arrangements that had been made for us by the Missouri Pacific officials who planned our schedule. For our three weeks of care-free pleasure we can thank all of them—President Baldwin, Mr. McReynolds, Colonel Stinson, Mr. Cook, Mr. McDonald, Mr. Hector, Mr. Wheeler, Mr. Meyer and several others who made plans and traveled with us for short periods during the tour.

Mr. McDonald was with us from start to finish. He had a difficult task keeping us from straying just before the train was about to leave, giving our instructions at each stop, and keeping everything moving on schedule. I have mentioned Mr. Ziervogel, an officer of the road's dining-car service, who was our dining-car steward. He fed us for nearly three weeks and no two menus were alike, except that all were good. He maintained the reputation he made two years ago when he protected Mr. Bayard and the other editors from the dangers of under nourishment on their trip into southern Mexico.



The Editorial Special Carried Farm Paper Representatives from All Parts of the United States

Our esthetic tastes were cultivated, too, by Mr. Gimpel, the singing Pullman conductor, regularly of the famous Sunshine Special. He entertained us standing still and traveling a mile a minute; on the surface and 700 feet underground. But I am getting ahead of my story.

The sight-seeing in St. Louis consisted of a visit to one of the mills where a well-known feed company mixes hundreds of carloads of livestock and poultry rations every week. Every bit of that stock feed was clean enough and good enough to eat—except the cod-liver oil. Perhaps that was, too, only some of us have our prejudices.

Strange as it may seem, this mill has one machine the principal output of which is nails, screws, metal suspender buttons, with occasional guard bolts and cutterbar sections for variety. This versatile contraption is a magnetic cleaner. It snatches a deadly looking lot of iron and steel scraps from the grain just before it drops into the grinding mills.

A man with a stop-watch is one of the employes of this company. At frequent intervals he pulls a lever, thereby for a certain number of seconds diverting the numerous streams of feed from the mixer to separate pans arranged to catch the samples. These are weighed to make certain that the proper amounts of each kind are going into the mixer. Sometimes ten or more different ingredients are flowing into the mixer at once.

The Only Feeding Test That Counts

The liquids like molasses and cod-liver oil are kept at a constant temperature so the pumps always will deliver the required number of gallons per minute. The pumps, too, are checked frequently with the stop watch.

This concern isn't satisfied to have its grains come up to certain government standards. They must also pass certain chemical tests which are applied to every carload that comes into the mill and to the finished products. Just what these standards are to be is determined out on the experimental farms where the feeds are put to the only test that really counts, the feeding test.

The mysterious crooked glass tubes and odd looking bottles and flasks in the extensive testing laboratories were hardly more interesting than the offices. All kinds of fascinating machines are used to speed up the "paper work" connected with the manufacture and sale of feeds and the shipment of orders.

Just one example of office efficiency. When an order for feed is received a duplicating machine immediately makes a dozen or more copies. Every department concerned gets a copy and goes to work at once. As a result, the most complicated orders can be shipped the day they are received. And the mill is so well organized that much of the feed is actually mixed after the order is received. No musty odors around this plant.

Pouring rain made us think about the drainage problem of the great Mississippi basin. Water completely covered hundreds of fields in Southern Illinois; miles of main highways were under water right in corn planting time.

A Vast Watershed

This was something new to me, as it is to many easterners. In our country a heavy rain flows off or soaks into the ground within a few hours. But in much of the Middle West it just stands, and stands. Just one river carries to the sea most of the excess water from the vast territory lying between western Montana, Potter county, Pennsylvania, and the Gulf of Mexico. Little wonder the Father of Waters isn't big enough for his job. Two-thirds of the United States is too much for one river to drain.

Every spring thousands of farmers in the lower Mississippi Valley fear that Old Man River may break through the artificial banks and levees. Occasionally he does break through; then thousands of farms are buried under ten or fifteen feet of water; buildings are damaged or floated away; a crop year is lost. Our first day's journey south took us into the Creole country of old Louisiana where we heard much of the flood of 1927.

(To be continued.)

A Clover-Cutting Tip

WHEN cutting our late-summer crop of sweet clover with a binder we always had trouble with stubs pulling up and getting under the slats. This caused extra labor and a waste of time, but last year we found a way to prevent it.

Along the slat-side of the elevator canvas we fastened a strip of heavy burlap, sewing it securely around both sides of each slat. The strip was exactly the same length and width as the elevator canvas, and when drawn into place it passed freely across the rollers without further attention.

With this arrangement sweet clover and other hard-stemmed legumes can be harvested, regardless of rough ground or bad weather conditions. The material after striking the table is elevated smoothly by the help of the burlap strips, and there is no interference from stubs or clinging vines.

F. R. Cozzens.

TIGHT BINDING TEXT CUT OFF

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TRACTORS FOR RUSSIA

THE commercial agencies of the Soviet government have recently contracted with the International Harvester Company for 5,900 tractors, and with Deere & Co. for 850 tractors. These are to be used in the redevelopment of Russian agriculture, in which 40,000 tractors are now in service. The capacity of Russian tractor manufactories is to be enlarged to 50,000 a year. Russia is again to be a competitor in agricultural production if the Soviet government can bring it to pass. Human nature has been the chief obstacle thus far, and it will remain an important one.

DELAYED

WHEN the special session of Congress was called we ventured to remark that its work would not be so easy or so speedy as was then expected. This surmise has proved to be correct, for the tariff remains unsettled with a hard contest in sight. The Senate has refused to consider limited revision or merely revision of agricultural and related schedules. That means a wide-open tariff problem, with all its national and international complications—something that neither the President nor the country had in mind at the start. And now we venture to say again that tariff legislation will not be completed in a few weeks after the Senate assembles in August.

REAL CONSERVATION

MANY years ago the late Dr. Thomas F. Hunt and the editor of this paper appeared before a committee of the Pittsburgh Chamber of Commerce to plead for the conservation of the nitrogen then going into the air in the production of coke. Dr. Hunt estimated this waste as then equivalent to 15 pounds of nitrogen for every arable acre in Pennsylvania. There has been a tremendous change since Dr. Hunt made his plea for this conservation of nitrogen. Last year the by-product coke ovens used an average of 5,772,000 tons of coal per month and the old-fashioned or bee-hive ovens only 575,000 tons per month. And the coke industry of the country produced not only $27,340,000 worth of sulphate of ammonia but $151,309,000 worth of by-products of all kinds. That is real conservation even if only the beginning of it.

UNAPPRECIATED BARGAINS

A BREEDER with a few bulls for sale advertised them with all the glamor of proud ancestors, high-production heritage and the cherished reputation of a famous herd, but got no inquiries. He toned down his description somewhat and got a little attention, but made no sales. In desperation he announced that he had some bull calves "too good to veal". This sold them all and he turned buyers away. Another breeder quoted a modest price for some exceptional stock, and was told that farmers could not pay it, apparently shy of the name of the farm. In these instances indicate that price is put before quality when buying pure-breds, or is it a sign that conservative claims on the part of the seller inspire confidence? It is easy to pay too much for breeding stock, but we should not forget that the cheapest may be the dearest. No animal is too good to head a farm herd if the price is right, and a notable line of breeding should not scare one away from a bargain.

FROM AUSTRALIA

FOR years we have patiently listened to tales about the advantages of sundry Australian government institutions, enterprises and practices. In earlier years all these "progressive" movements looked good to the casual observer. In recent years even that kind of an observer has been constrained to doubt. Now the British Economic Commission reports on some of these things and their consequences. The Australian debt, including that of the several states, is imposing "a heavy burden on the general community, on the costs of living and production." The enterprises engaged in by the states with borrowed capital have proved unprofitable as state enterprises usually do. The Commission says that any further expansion of the public debt must be accompanied by economic development to be safe. In regard to the system of arbitration courts the Commission says that its condemnation is "not without some justification". It has ranged Australian employers and employes into two hostile camps. An amendment is suggested to restrict appeal to the courts to cases in which all other efforts have failed. From all of which it appears that human nature operates in Australia just as it does in older commonwealths, and it prevents many fine theories from working out in practice.

OBSOLETE

IN a recent address before the American Fertilizer Association Dr. Harrison E. Howe, editor of the official organ of the American Chemical Society, applied to the cyanamid process of nitrogen fixation the term "obsolescent," stating that "coal and not power is the dominating factor" in the production of nitrogen. He showed further that the capacity of all the cyanamid plants in the world is 406,000 net tons of nitrogen, whereas the capacity of the direct synthetic plants is 1,252,000 tons. Mussel Shoals, he declared, "has no part in the fertilizer picture," and there is no reason to expect that cheaper fertilizers will result from its operation. This is in line with statements made at coal conferences in recent years and doubtless is correct, for capital is not investing in cyanamid plants and is investing in direct synthetic production. While Congress has been arguing over Mussel Shoals chemists have solved the problem by discovering a cheaper process. Mussel Shoals should be used as a producer of power, since it cannot be used economically as a producer of nitrogen.

OFFICIAL PREDICTIONS

THE Agricultural Marketing Act contains the following paragraph under the head of "miscellaneous provisions":

"The inclusion in any governmental report, bulletin, or other such publication hereafter issued or published of any prediction with respect to cotton prices is hereby prohibited. Any officer or employe of the United States who authorizes or is responsible for the inclusion in any such report, bulletin, or other publication of any such prediction, or who knowingly causes the issuance or publication of any such report, bulletin, or other publication containing any such prediction, shall upon conviction thereof, be fined not less than $500 or more than $5,000, or imprisoned not more than five years, or both: Provided, That this subdivision shall not apply to members of the board when engaged in the performance of their duties herein provided."

So it is a crime, punishable by fine or imprisonment or both, for any federal official to utter any prediction about the price of cotton. What of predictions about the prices of livestock, grain, wool, dairy products and other agricultural products? Is it all right for federal officials or employes to go on with these predictions as long as they let the southern cotton alone? There should be no need of this legislation or these restrictions. Long ago the Department of Agriculture could and should have adopted the sound policy of avoiding price prophecy; and it should now establish and proclaim that policy.

CONJECTURE

THE Agricultural Marketing Act opens a boundless field for conjecture. For instance, what about stabilization corporations under the new law? It is generally assumed that the first stabilization corporation will be one to deal with wheat. And then one to deal with wool. Let us see how this "stabilization" is to be done. The advisory committee for the commodity must apply to the Federal Farm Board to recognize a stabilization corporation as a stabilization corporation. The Board finds that the recommended corporation is duly organized under the laws of a state or a territory, if the Board finds that its voting stock is owned only by cooperative organizations handling that commodity, or if the corporation adopts such by-laws as the Board requires, the Board may recognize it as a stabilization corporation. That corporation may then secure loans from the Board at the lowest federal government security rate and with the money may proceed with the purpose of controlling any surplus in the community by buying, storing, handling, preparing, processing and merchandising the commodity in any amount. That is a very short and easy method, for some time must elapse before cooperatives can secure or jointly do all the things necessary for recognition.

Will the successful cooperative organization attempt to become a stabilization corporation? A successful cooperative marketing association is not a speculative body and cannot be if it is to retain long the confidence of its members or stockholders. But in order to become a stabilization corporation it must become a speculative body and it must be engaged in speculating with money borrowed for the purpose of speculation. No other connection is possible or its purpose to buy, store and resell, in original or some other form, limited quantities of a commodity. That speculation if carried on by an individual or a non-cooperative corporation. It is equally speculation if carried on by a cooperative corporation financed by borrowed funds.

Will sound cooperative organizations, with reputation and capital to risk, take hold of such a proposition as this? We doubt it. Those which have no reputation or anything else to lose may try it, but does anybody want such organizations monkeying with the market for important commodities? The country, and the farmers of the country, would be better off if no organization qualified for stabilization corporation, or if the Board refuses recognition to any that does apply. Then the chances to disturb markets by this agency are more numerous than the opportunities to stabilize them. But let us wait and see how the old thing works." Maybe we can all learn something from it, particularly those who dream of stabilizing markets by eliminating the uncertainties which beset them.

New Jersey Farm Comment

By G. W. HARRIS

TWO hundred and fifty New Jersey potato growers gathered at an informal open-air meeting at the farm of James Ewart, Middlesex county, on June 18. This annual Potato Field Day under the direction of the New Jersey State Potato Association always brings a crowd of potato enthusiasts from the South Jersey and Central Jersey sections.

A. E. Mercker, Executive Secretary of the Inter-State Early Potato Committee, told the growers that potato prices so far for the early states had been very encouraging but that the old potatoes on the market were seriously injuring the new market. Maine had been shipping from 75 to 100 cars of old potatoes each day during the past weeks. When they are offered at a low price, they cannot help but influence the market for new potatoes.

That the Eastern Shore potatoes would be harvested by the 15th or 20th of July was predicted by Mr. Mercker. These growers had a very poor year last season and will clean up their crop this year as rapidly as possible. The earlier the Eastern Shore potatoes are off the market the better the prospects for New Jersey growers. Many years the overlapping of the Eastern Shore shipping period with that of New Jersey seriously affects the market for New Jersey growers.

Various types of labor-saving potato equipment were demonstrated during the day. A two-row tractor cultivator was seen in action and a power sprayer mounted on a truck made rapid work of the spraying job. This outfit is one designed by Mr. Ewart.

A new type plow which operates by a power take-off from the tractor and plows and prepares the seed bed in one operation created a great deal of interest among the potato growers. This is one more new implement offered to the grower to help him cut his cost of production.

• • •

AGAIN war on the Japanese beetle opens in three South Jersey communities. Moorestown, Collingswood and Haddon Heights started last week to protect the foliage of their shade trees and shrubbery from the ravages of the beetle by a community spray program.

Five sprayers have been loaned through the State Department of Agriculture for the work which will probably be completed by July 1. The Moorestown campaign is supported through its Improvement Association, while in Collingswood and Haddon Heights the work is sponsored through the Department of Public Works.

• • •

GEORGE H. SCHMIDT, well known to New Jersey poultrymen as inspector and secretary of the New Jersey R. O. P. Association, will be foreman of the new Hunterdon County Egg-Laying Contest at Flemington which opens on October 1. Mr. Schmidt will assume his new duties on July 1 to supervise construction work of the new contest plant which is to be completed by August 15.

Mathew Darago, a graduate of the agricultural course of the New Brunswick High School, has been appointed to assist Mr. Schmidt.

When complete, the Hunterdon County Egg-Laying Contest plant will consist of two long-type houses containing 25 pens each. The pens will be 8 by 10 feet in dimensions, each large enough to house 15 birds. The two laying houses will be connected by a building containing feed and packing rooms, an office and quarters for the poultrymen. Funds used in the construction of the contest plant have been raised by popular subscription in Hunterdon county.

• • •

THE New Jersey State Poultry Association plan their annual summer tour through Connecticut during the week of August 5. The Connecticut Poultry Association, whose members visited New Jersey last year, has issued this invitation and plans are being made for a joint meeting of the two state associations.

Approximately 500 miles will be covered during the five-day tour by motor buses. Members will leave Paterson on Monday morning, August 5, and return to New Jersey the following Friday afternoon.

The scenic Bear Mountain route will be followed by the Jerseymen in their tour to Connecticut. Stops will be made at two chicken farms along the way, and the party will arrive at Storrs, the location of the Connecticut Agricultural College, in time for the annual banquet of the Connecticut Poultry Association. This event opens the annual Farmers' Week at that institution. The New Jersey poultrymen will remain at the college the following day for the poultry program. The Storrs International Egg-Laying Contest will also be visited.

The plants of several successful poultrymen will be inspected on Wednesday and Thursday. An added attraction will be a tour of the U. S. Naval Submarine Base, located at New London, Conn.

Those who plan to make this trip may obtain a complete itinerary of the tour by writing to L. M. Black at the experiment station, New Brunswick.

• • •

CLUB boys and girls are taking the lead in their various agricultural interests and many are setting records which may be looked upon with envy by their older business rivals. One example of this is the three Hunterdon county calf club members who made the state honor roll for the month of May.

Israel Phillips' Guernsey cow Dulie D's Queen made 1246 pounds of milk and 67.3 pounds of fat. Her test is 5.4%. Abram Van Doren, one of the younger calf club members, made 1525 pounds of milk and 59.5 pounds of fat with his two year old Holstein, Colantha Wayne DeKol Beets. Eleanor Totten, vice-president of the Mt. Airy Calf Club, made 1221 pounds of milk and 26.6 pounds of fat with her three year old Holstein, Princess Segis Beets Creamelle.

Nathaniel Phillips, Clarence Lambert, Alfred Coleman, Kenneth Smith and Dwight Gary also reported one record for the month while Israel Phillips reported two. Kenneth Smith's Holstein made over 1000 pounds of milk in spite of the fact that she has been milked six months.

The 60 active calf club members in Hunterdon county own 102 animals of which 44 are milking.

• • •

GOVERNOR Larson of New Jersey, addressing the 4,000 farmers who attended Field Day meetings at the New Jersey Agricultural Experiment Station said that the money expended by the state in maintenance of the New Jersey Station was returned to the state many fold. He also pointed out that "Industry for many years has been working for economy in production, where agriculture has only given serious consideration to this problem in the last 10 or 20 years."

Dr. John M. Thomas, president of Rutgers University, expressed the opinion to the Field Day visitors that the only kind of farm relief which counts in the long run is that attained through the activities of state agricultural experiment stations and the U. S. Department of Agriculture which collectively rank as the largest scientific research agency in the world.

Dr. J. G. Lipman, director of the Experiment Station, touched on the subject of farm relief by saying the farmer finds "that something has happened in the building of our economic machinery to deprive him of a just share of the wealth he has produced; that the purchasing power of his dollar is not on a par with that of non-agricultural producers.

"It is for this reason that we hear and read of agricultural discontent and of a great variety of opinions concerning so-called farm relief. The question is, what can be done to bring our agricultural population a greater degree of economic opportunity? "It is easier to ask this question than it is to answer it. Let us have such legislation—national and state—as may be founded in reason and fact. But, let us not set too much store by this. By and large, agricultural problems must be settled by the farmers themselves."

• • •

THE taxes imposed on American farmers are not in proportion to their ability to pay and the disproportionately heavy taxes are due mainly to the fact that farmers carry the burdens of other taxpayers because they possess visible tangible property which can be easily traced, says the New Jersey Department of Agriculture, after a study of the farm tax problem in New Jersey and the United States.

The last two decades have witnessed an enormous development of commerce and industry in cities and towns. The new forms of wealth were created which constitute intangible personalty, seldom taxable. The rural districts on the other hand are in possession of visible tangible property easily reached by administration and heavily taxed by it. The cause of this unsatisfactory situation is in the main two fold: The legislative bodies of the states and local authorities are following the traditional easiest way to tax the visible property and such intangible personalty as can be traced and assessed without a great effort, on the prevailing pseudo-scientific theory that farmers shift taxes on the consumers of their goods. The survey shows that the farmers do not shift taxes on a second person or consumer and that the tax on rural landowners tends to stay where it is placed.

There are five different kinds of land taxes in practice, according to the report. They are: A tax on gross produce, a tax on economic rent, a tax according to the quality and quantity of the land, a tax on the selling value of the land, and a tax on the net agricultural income.

The New Jersey tax system is based upon the selling-value of the land. The theory of the complete shifting of taxes upon the consumer assumes that the landowner at the margin of cultivation will abandon his farm after the imposition of the tax and invest his capital and labor in some other enterprise. But he would derive no benefit in such a case if all other properties are equally taxed. Ordinarily a farmer continues to stay on the farm, and as a result agricultural supply will not decrease and prices consequently will not rise. Therefore, a tax on agricultural land will stay where it was placed in the first instance; that is, the farmer pays the tax.



Inter-county Dairy Club Field Day on the Holstein farm of George C. Weeks, Blairstown, N. J. Club members and their parents from Warren and Sussex counties participated in the activities. This event followed inter-county dairy club visits earlier in the year.



First annual outing of the Junior Forestry Clubs of Sussex County, N. J., included a tour to the Edison Tower near Ogdensburg and a visit to the Stokes State Forest north of Branchville. Boys and girls of the McAfee and Myrtle Grove Clubs made the trip under the leadership of County Club Agent F. W. Morrow.

TIGHT BINDING TEXT CUT OFF

The Timber Treasure

By FRANK LILLIE POLLOCK

(Copyright, 1911, by Perry Mason Co. Originally published in the Youth's Companion.)

Synopsis

FRED GILLESPIE, son of a Toronto lumber merchant, has found in an old log cabin, standing two weeks' canoe trip north of Toronto, Canada, are interested in a man they have seen at times on the lake. He explains his name is Harrison and that he is a fish culturist and is stocking a lake for sport fishing. For this purpose he has a glass-bottom boat. During the conversation, Fred mentions the fact that a raft of black walnut logs washed over and sank years ago. Harrison does not seem interested. Fred, fishing about, hooks a snag in order to protect himself from the insects. He does not extinguish it properly and the forest, which is his father's great hope to revamp the lumber business, is almost entirely destroyed. Fred and Bert become separated during the fire. Fred meets Harrison and accidentally discovers the long lost valuable walnut logs. That night Harrison deserts with the only good canoe and the supplies. Fred seeks help from friends in a nearby camp. Bert returns and the work of rescuing the logs is started.

HORSES were urgently needed, for the work was already too heavy for men alone Fred was exceedingly anxious, however, to have as much timber as possible in sight before he applied for help in Toronto.

By noon of the next day the rescued timber amounted to more than two hundred pieces, or about twenty thousand feet, and there seemed to be plenty more where that had come from. Fred felt there was good ground for his most sanguine hopes.

Nothing had been heard from Harrison. It was five days since the man's treacherous departure; he might return at any moment.

About the middle of that afternoon Bert called, "Somebody's coming!"

The boys all dropped work and ran to look southward, the direction in which Bert pointed. Up the shore of Little Cohoconk three teams were coming, accompanied by a large party of men. They had evidently come out from the old logging road.

"Do you think it's your man Gillespie? Can you make them out?" Lewis asked.

The distance was too great for them to recognize any one, but Fred had no doubt that it was Harrison, come back for his booty.

"What do we do—fight, or back water?" Gilmore inquired, a little nervously.

"Back water!" cried Lewis, with contempt. "What do you take us for? Fight, I say. We can stand off that crowd without any trouble."

"I don't know," said Fred. Harrison's probably got a lot of rough lumber-jacks with him who'd sooner fight than eat. This quarrel's none of your's, anyway, boys."

rison's probably got a lot of rough lumber-jacks with him who'd sooner fight than eat. This quarrel's none of yours, anyway, boys."

But the general sentiment was in favor of resistance; some of the fellows began to seize pike-poles and axes.

"No—no weapons!" Fred interposed. "Some one might get badly hurt. Fight with our bare knuckles, if we're going to fight at all."

Meanwhile the strangers continued to come leisurely up the lower lake. They were near enough to be counted; there were eighteen of them. Including the guides, who seemed as ready as any one for a scrimmage, Fred's whole force numbered sixteen.

In half an hour the invaders had come so close that Fred easily distinguished Harrison at the head of his seventeen brawny woodsmen. They, too, must have seen the boys in line before the timber they were going to defend, but they came on with perfect unconcern. Pipe-smoke rose among them, and bursts of loud laughter.

When they were still fifty yards away, Fred stepped forward.

"STOP there, Harrison!" he shouted. "Or come on alone if you want to talk to me."

The party laughed loudly again. But Harrison turned, spoke to the man next to him, and then advanced alone. He came up to the boys with his hands in his pockets.

"How are you, boys?" he said, pleasantly. "I see you've done considerable good work on my timber. Make out a bill, and I'll pay you for it. But I guess I won't need you any longer."

"Your bluff doesn't go, Harrison," said Fred, firmly. "This timber isn't yours. It's mine,—or my father's,—and I defy you to touch a stick of it!"

"You've got to show me," said Harrison lightly.

"I'll show you. My father bought all the timber, of every description, on this shore. Here's one of the clerks from the railway offices, who entered the sale." He pointed to Bert. "Of course, your crowd may possibly be able to overpower us, but what's the good of that? You can't carry off all this timber in a night, and I'll be back with an injunction and the police in two days. You'll have to drop it."

"What's your name? Who's your father?" demanded Harrison, sharply.

"James Gillespie of Toronto."

"The lumber dealer?"

Fred nodded, and Harrison looked at him thoughtfully.

"I'm sorry I didn't know that before. We could have fixed the whole thing up easily enough," he remarked.

"You mean that you wouldn't have stolen my canoe!" cried Fred, indignantly.

"All's fair in war," said Harrison, laughing. "I hated to do it, but I saw that you had spotted the walnut, and I had to do something to get a start. I had found the raft the day before. I was just ready to get away when the fire caught me. I'd been prospecting for it all summer. However, I've got a better claim than prior discovery," he added, as Fred was about to speak hotly.

"I don't need to fight you. I have the law on my side. Your claim would be good enough only it happens that I have a better one. I took the trouble to go up to the county seat, to the registrar's office, to get these copies made, in anticipation of just such a dispute."

He drew several legal-looking papers from his pocket.

"David Wilson, who cut this raft, was my uncle. He died eleven years ago, and—well, here's a copy of his will."

Fred took the typewritten document, but he was in such confusion of mind that he could make little of it. "The last will and testament of David Wilson of the County of Haliburton, Province of Ontario—"

"Here's the kernel of it," Harrison pointed out.

"'I further devise and bequeath,'" he read, "'to my nephew, William Arthur Harrison, all my rights and interests in timber owned by me, consisting of the following lots,'"—and a long list was appended,—"'also comprising all my right in a raft of walnut timber lying on Cohoconk Lake in the year 1[illegible] in case the said raft shall ever be recovered, wholly or in part.'"

"And here," continued Harrison, producing another paper, "is a copy of the sworn statement of the assets of the estate, made by the executors. It shows, you see, that my uncle owned all the property of the Wilson Lumber Company at the time of his death, and the lost raft, you observe, is specified among the assets. Further, here are papers testifying to my own identity."

Sick with confusion and despair, Fred read the papers. The copies were indorsed and certified as correct under the seal of the county registrar.

"Look these over, will you, Lewis?" he said, "and see if they seem regular."

The law student examined them closely one by one.

"They seem all right," he said, at length.

"Then this fellow has the right claim to the timber?" Fred asked.

"I am afraid so," Lewis answered, respectfully.

It was too much! Fred turned upon Harrison in a sudden flash of fury. His fists clenched.

"Keep cool, old man!" Lewis whispered, close to his ear.

Mastering himself, Fred thrust the papers back into Harrison's hand.

"We'll get out!" he said, huskily. "Give us five minutes to break camp."

He turned to his friends with a gesture of defiance.

Lewis had already given them a word of explanation and the boys, who were keyed up for battle, sullenly accepted the situation. They began to pack the camp outfits, pellmell, into the boats.

"Throw the pike-poles and tools into the lake," said Fred. "I'll pay for them."

He could not carry away in the boats all the logging apparatus, but he would not leave any of it for the enemy. In ten minutes the boats were ready to start.

Fred, who left the shore last, was about to embark in Bert's canoe, when Harrison drew him aside.

"Look here," he whispered. "I want to see you a little later. I owe you something, you know, after all this. I don't want to take any hard advantage, and I know how you feel. I didn't want to fall out over with all these fellows. I'm willing to come to some compromise, but the matter is strictly between you and me. Meet me about sunset, will you? Up the lake, at the foot of that big hemlock stub?"

FRED hesitated, then consented. He boarded Bert's craft, and they followed the three motor-boats, which were proceeding slowly up the lake. The boys looked sympathetically at him as he came alongside.

"What are you going to do now, Gillespie? Will you come back to the club-house with us," said Lewis.

"No. I think I'll go back to town," Fred answered, listlessly.

"I must go back, anyway. My vacation is up," said Bert.

Fred and Bert remained with the others until they had almost reached the head of the lake. Then the motor-boats continued up the water, bound on the long detour necessary to get back to Lake Wilson; and Fred and Bert landed to make camp on the shore that night. To reach the chain of lakes that would take them south, they had to make a two-mile carry—an undertaking for which they prepared a full day.

Fred felt more dejected than ever. He should go back to the city. He felt that he could not face his father with the story he would have to tell. He revolved wild schemes of remaining in the woods, of getting a job as forest ranger, or as timber-cruiser. In some such way, he thought he might at least make a living, and do no one any harm.

Still, he had a faint hope that something might come from his interview with Harrison. He had confidence in the man, yet it might be that Harrison would prefer to come to some agreement with him than to face possible legal complications.

So about sunset Fred took the canoe and paddled down the lake. The hemlock stub that Harrison had indicated was a huge dead tree that overtopped the water, a conspicuous landmark. The water was deep almost at its roots.

He was surprised at being the first one on the spot, for he was late, and the twilight was already falling. The hideous, desolate, fire-swept shore was darkening and growing vague in shadow. Two miles down the lake he could see the great camp-fire of Harrison's party. (To be continued.)

The Cheerful Plowman



KICKING ON MOVIES

SOMETIMES I go to see a show with Pauleeny, Pete and Ma. You know, they come back home and scold. "Why, by the bones of Pete the Great, is that considered 'up to date'?" I crab, with temper bold. "A kissing, cooing, loving spree! No more of that, I say, for me. I want more solid food. The makers of this movie stuff are pulling such a sappy bluff. I hate their mushy mood."

Sometimes I say, "A broncho show! A bucking, kicking rodeo! Such movies, O such junk! An eastern guy in western dress. A fake and fiddle, I confess. So punk, so punk, so punk!"

Again I say, "A castle, hey? A lover dashing down the way with sweetheart in arms, while Sir Blink's horsemen, one and all, are plunging madly from the wall and sounding wild alarms."

Again I grumble at a star who smashes up a polished bar and busts a looking glass, who fells twelve ruffians all at once, then pulls six dozen other stunts, alas, alas, alas! "My quarter's wasted!" I declare. "An auto journey through the air far better would have been. I might have stayed at home and read, I might have pruned the lettuce bed. I feel as mean as sin. If I were making movie reels I wouldn't give the price of meals to many 'stars', I vow, and then I'd picture so-and-so, and so-and-so, and so, you know, I'd show them why and how!"

Thus I complain and thus advise, and thus I lecture strong and wise on Hollywood's affairs; thus I, a farmer from my birth, mop reel producers on the earth and offer threats and dares.

J. B. T.

The Farm Home

Field Day in Jersey

By GERTRUDE S. STEWART

IT was a gala day for farm folks Wednesday, June 12, when the sun kissed us through the splendid trees on the State Farm campus and leaders in various phases of home economics focused our thoughts from the usual pots and pans to higher ideals in child training, real home building and interior decoration.

We are hoping to have a branch [illegible] list in this [illegible] which will [illegible] feel the need [illegible] The day is just [illegible] ents follow [illegible] are directed [illegible] training. [illegible] of leaders [illegible] welfare [illegible] glad for [illegible] in study [illegible] aim to [illegible] ing problems [illegible] ents share.

New Jersey [illegible] ciations [illegible] in any way with child [illegible] should make good use of Miss Edith D. Dixon in charge of this work. Already she is well known among many Parent-Teacher and Child Study groups. She may be addressed in care of New Jersey State Extension Service, New Brunswick, N. J. If you have any individual problems, she is anxious to help you if you write her.

Mrs. Harrington Speaks on The Good New Days

Every one of you would have enjoyed seeing our own Mrs. Harrington, and hearing her convince us that "Every day in every way we are growing better and better." She says this business of home economics is best defined as the science of efficient living. It is not ability to earn any salary but to demonstrate a gracious womanhood. Not only does it embrace such feats as cooking and baking but a happy hospitality, a fine family spirit.

She led us to see that today we enjoy Good New Days only insofar as we put proper planning into our tasks. We need house efficiency that we may have the needed leisure for uplift—study and recreation. One desire thus attained spells House Happiness for it leads to harmonious living.

That woman who is constantly reeducating herself, who has not lost her sense of humor, who retains a belief in romance—she is the woman who enjoys to the full the Good New Days.

U. S. A. Means not Only United States of America, but US ALL

Mrs. Harrington, in conclusion, classified women as either drivers, followers, martyrs, or real leaders. If you are one of those all-important women who think your own personal attention to things is all that keeps this world from ingoing to smash, then you belong to the drivers, an unhappy class.

Do you need to be told exactly what to do now and what next? Do you sit still and look on mostly? Then you are a follower. The martyrs are the dear ones who do an awful lot because—and they never stop telling about it either.

We hope the majority of our readers are in the latter class—the real leaders, who never say "Go", but whose by-word is "Come". They believe in their fellow-workers and live that splendid big thing called cooperation. They know that U. S. A. means us all.

Note. A third lecture on the women's program was a delightful and most helpful demonstration on Home Decoration at Small Cost. This we will review in an early number.



Mrs. Ida S. Harrington, formerly Household Editor of Pennsylvania Farmer, delighted the N. J. Field Day audience with her splendid talk on "The Good New Days."

About Birds

BIRD baths and bird boxes bring us a multitude of bird friends.

First we transplanted some of their natural haunts from the woods. We have several maguchi and dogwood trees, as well as other shrubbery. The robins build in the ramblers, the catbirds in the Philadelphias, the wrens in the tiny bird houses which we rent "for a song", and we are paid lavishly.

The martins occupy the colony houses we put up for them and my "help" wonder why I do not have any flies in the summer. The martins feed on them.

For three days I have heard and seen a cuckoo in the nut tree and I'm wondering and hoping the cuckoo will stay. I like the flickers too, with all their noise, in the elm tree.

We have two bird baths in the front yard and one in the back yard, which I fill with clean water religiously.

The starlings, sparrows and others I do not love, nor them either, unfortunately.

We have tried to make our home grounds so worth-while that at times we are rewarded with the red birds. One winter a beautiful red bird roosted in the magnolia tree high right under the lodge of the front piazza. He came to his roost with the utmost regularity just at our supper hour. I could see him fly in every night as I sat at the table.

I never find time to discover all the nests in our dooryard but I spend anxious hours when the young are learning to fly, for fear some stray cat will come and catch them.

If the next big war is to be a battle with the insects, then I'm going to do all I can now to protect the birds, so they can keep the common insect enemies in control. Each morning I awake to the melodious sounds of the martins, and I love to watch them as I sit in the lawn swing at the twilight hour, as they get all their food while on the wing.

Cora June Sheppard.

Machinery Needs Oil

GIVE your household machinery small but frequent doses of oil, prescribes the New York state college of home economics. A drop or two of oil used often in the moving parts of washing machines, vacuum cleaners and sewing machines makes them more efficient than a large amount of oil used occasionally.

Oil most household machines every two weeks, the college recommends. For machines which are not often used, once a month is enough. The sewing machine should have a little oil three or four times a year. Every bearing and joint where one part moves against another should be lubricated, including the bearings beneath the table.

Too much as well as too much oil tends to clog the machinery. Dirty oil with grit in it may actually harm the machine. A high grade of light machine oil like that used in the generators of automobiles should be used for the larger electric motors such as those on washing machines. Most vacuum cleaner motors have ball bearings and do not need oiling. They are packed in grease which only needs replacing every two or three years.

A special pair of kitchen scissors make easy work of shredding lettuce or cutting up fruit and vegetables for salads.

• • •

An electric fan in the kitchen does much to relieve the discomfort of preparing meals in hot weather.

• • •

Lukewarm water, rapid washing and drying, may keep colored materials from running.



An ordinary romper pattern is all that is required to fashion cool comfort for Sonny. Trim out the neck and armholes and shorten the legs.

Independence Day

By HEPSY NEFF

THREE hundred years seems a long time but the greatest three hundred years this old world has ever seen lies just behind July 4, 1920. It was in 1620, after a stormy voyage across the Atlantic, that a shipload of passengers set their feet on a bit of solid rock and gave it the name of Plymouth, the little English town which had been the home of these brave homeseekers. Later, these settlers and others who had come to this new land from all parts of Europe began to talk about uniting under a form of government of their own planning. But only after more than a century and a half of suffering, injustice and war did they dare to claim an independence which gave them the right to manage their own affairs in their own way.

Such an act demanded more courage than we now realize. Philadelphia, the Quaker city, founded by William Penn somewhere about 1680, early became the center of the best thought of the American colonies. As the capital of Pennsylvania, its commodious state house gathered our first Congress. Within its walls the Declaration of Independence was read on July 4, 1776. There the framers of our Constitution struggled for four months and behind closed doors before they could offer an agreement fit to ask for the ratification of the colonies. No wonder the great Franklin, then enfeebled by age, begged for some sacrifice of personal opinion, even conviction, lest the failure to agree bring on civil war.

The Greatest Document

We of today glory in hearing our Constitution called, "The greatest document ever struck off by human hands." In the dark days of 1787 the question was not so easy. Looking back at those great years from the gains of today, events seem to have followed each other swiftly. But from July Fourth, 1776, when the great Liberty Bell pealed out the news of the signing of the Declaration of Independence, on to the announcing of the Federal Constitution in September, 1787, its acceptance by a majority of the states by June, 1788, and its ratification by the last of the states in November, 1790, fourteen weary, anxious and troubled years dragged slowly along.

Those of us who have watched the daily press have shared in the anxieties that followed the difficulties of agreement between European nations and the Reparations Committee. Our forty-eight states have so long managed their separate governments and multiplied their activities to their mutual benefit that we can see only the gains of such fairness and wonder why such gains are not plain to everybody.

Perhaps the Pan-European movement, now nearing its fifth year of effort to "achieve a united Europe on the American model," is known to most of our readers. Recently its president appealed to our President, Mr. Hoover, in an open letter asking our sympathetic aid for the new movement. He says: "A war between American states would be as impossible today as a war between the states constituting the German republic.... There is no stronger guarantee of peace for neighboring peoples than the customs union....and economic guarantees increase from year to year through increased mutual dependence."

That our United States has demonstrated to the world the possibilities of living in peace and with a neighborliness that has made each state helpful to every other state is an achievement not always recognized as the cause of our unparalleled prosperity. Why not look forward, accept new means and new signs of peace and find in them merely new ways of using the golden rule?

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PERCHERONS OF QUALITY
Prices reasonable. One yearling stallion; one two-year-old and three yearling mares. Stallion and two mares sired by Carnot's Best, others by imported stallion, Majeur.
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Shetland Ponies.—Pony, Saddle & Bridle, $75.00. Pony, Buggy & Harness, $100.00. Pony Farm, Cortland, Ohio

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Milking Reds Shorthorn Bull, 9 mos. old. Dams record 14,409 lbs. milk. Accredited Herd. Lee R. Scott & Sons, Burgettstown, Pa.

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D. S. POLLED HEREFORDS.—A fine selection. Cows, heifers, bulls. Come or write prices. CHAS. D. GILL, Millersport, Ohio

BUCK & DOE RUN VALLEY FARMS
Hereford Cattle—Poland-China Hogs—Hampshire Sheep—Draft Horses. THE SAINT AMOUR COMPANY, Mortonville, Penna.

Angus Cattle at reasonable prices
Write BAYARD BROS., Waynesburg, Pa.

Farm and Dairy

By L. W. LIGHTY

AS the pleasant and growing weather comes I have hundreds of visitors. Often after looking at the flower garden we sit on the front porch and enjoy the ten-mile view we have from there, and often I get information of value.

A New York man sat with me on the porch. Since he was a milk producer for the city market I asked a few questions. His records indicated that the feed and labor cost of milk produced by barn feeding is about 25 per cent more than pasture produced milk. "Since I am convinced of this I have made every effort to lengthen the pasture season as far as possible," is the way he put it.

He has a pasture sown to orchard grass which is very early and there the cows go while the bluegrass is growing to make a substantial and plenteous summer pasture. Soys, sorghum and Sudan give the late summer and autumn pasture. In a dry season the feed bill is more than in a wet season when the pasture is very abundant, but the labor bill is very little, as the boy with a good Collie cares for the cows morning and evening and the rest of the time they care for themselves. Two men and the boy do the milking with a mechanical milker

I remarked, "That boy seems a very important factor." He agreed, adding that it was his own son and he never met a better boy. That attitude may have much to do with the success of his dairying.

How About the Farm Horse?

FOR nigh eight hours I had talked and walked in the flower garden answering questions and explaining floral matters until I was threatened with lockjaw and lingual paralysis, besides my ankles were tired and an auto party from the upper end of the Cumberland Valley agreed to sit on the porch where I could rest and listen. A horse lover told me this story:

A neighbor bought a mare for $65. She produced two colts and at his public sale the mare and two colts, a yearling and a suckling, brought $133. He found farming did not pay, so he sold out and is working in the shop. Another neighbor several miles away bought a pure-bred mare of the large draft type well up in years for $150. She brought him four colts. Two of them he sold for three hundred dollars more than twice the cost of the mare and he still has the mare and two colts which are valuable.

This man has proved that farming



FAMOUS PENN STATE JERSEY

The American Jersey Cattle Club awards gold medals to cows of that breed which surpass 700 lbs. butterfat in a year or 610 lbs. in 305 days. Option's Ima Datonia, purchased by the College from J. B. Dayton of Burchardville, Pa., when she was four years old, won four of these medals in consecutive years.

As a five-year-old she produced 621.36 lbs. of butterfat in 305 days. The next year her yield was 756.75 in 365 days. As a seven-year-old she made her best record, 792.77 lbs., in a full year. The following year she produced 610.05 lbs. in 305 days.

pays well, that the horse is not a thing of the past and that good pure-bred livestock can be made to pay well.

Another Front Porch Story

A MARYLAND man and his family looked over the flower garden and then I got his story. He has learned how to make pork from grass at a low rost in feed and labor. He has good housing quarters for about 15 sows. Tries to have all litters come during March and ready for the field of rape the latter part of April. He has a succession of green crops coming all summer, movable fences, steel posts easily driven and pulled and movable self-feeders. The water pipes are on top of the ground and easily moved and the water pumped with the engine.

In September the pork harvest begins; by November it is finished and the sows go to the winter quarters. He found winter pork production expensive with little or no profit. It required too much work and housing. Summer production requires little shelter, little work only good management. The air of prosperity and gentility in the family convinced me this man had found living on the farm and farm production pleasant and profitable.



Holds World Record

TO Mrs. E. R. Fritsche, owner of Sycamore Farm, Douglassville, Pennsylvania, goes the honor of breeding, owning and testing Sycamore Cammelia Governess, the latest world's record Ayrshire. This cow has completed a senior three-year-old record of 15,416 pounds of milk, 606.88 pounds of butterfat, in 305 days, and has completed her calving requirements by giving birth to a fine heifer calf.

Sycamore Cammelia Governess is a daughter of Glen Foerd Governor, and consequently a great-granddaughter of the former world's record-holder, Auchenbrain Gem. On the 1928 fair circuit she was represented by a pair of twin heifers that were exhibited in the junior yearling class.

Oxford Cow Testing Ass'n



CHAS. PYLE, Tester, Oxford C. T. A.
Chester C.

THE Oxford Cow-Testing Association finished its first year January 1, 1929, with 13 whole-year members. In addition two members were in the Association part of the year. The total number of cows for all or part of the year was 368.

Four herds with an average of five or more cows exceeded an average of 300 lbs. of butterfat. A complete list of these herds follows:

Owner	Breed	Lbs. Milk	Lbs. Fat
Norman Thompson, G.J.	& Mix	8364	385.3
Harold & L. O. Hansen, R.H.		10644	374.8
J. S. Reisler	R.G.	G.G. 7085	352.9
James Hastings	R.J.	6245	314.5

Wm. Vandegrift, County Agent. Charles M. Pyle, Tester.

CHIX from large hr
Ferris Strain W. Leg. ..... $
Everlay Brown Leghorns ..... $
Bacon's Barred Rocks ..... $
Owens' R. I. Reds ..... $
Black Minorcas, White Rocks ..... $
Heavy Mixed ..... $
Light Mixed ..... $
Our breeders are selected for size, type and production. The kind that lay and pay. Write for literature. It is free. Tells of our great egg machine.
CHIX JUNIATA POULTRY F... Box P, Richfield, P...

WHITE CA... Greatest All-Tom... Superior to Leghorns. One ... weeks 243% net profit in ... Another: "A flock of 94 hens ... average of 199 eggs in a ... another "210 Leghorns had 30% ... and 55% production in Jan. while ... production in Dec. and 94% ... CATALOG FREE. stamps appreciated. NABOB POULTRY FARM, Box 22, ...

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Flocks inspected by officers ... Penn'a Dept. of Agri. ... Barred Leghorns. Eggs ... and S. C. Black Minorca ... Reds. Catalog ... each. Our 19th year. $1.00 books ... Free. Member U. S. C. ... THE KEYSTONE HATCHERY, ... (The Old Reliable Plant) Box 32, ...

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High Egg Production Bred, Healthy ... Large size Tancred-Barron English ... White Leghorns. 273-316 egg line ... Nothing used. chicks are ... vigorous. These early pin chicks ... parcel post prepaid. 100% ... guaranteed any week in June at $12 ... 150 at $17; 200 at $22; 300 at $32.50; ... 1000 White Rocks, Barred Rocks, $10 per ... per. Ship C. O. D. Catalog free. ... LEONARD F. STRICKLER, Box 7, ...

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Send no money, just mail your order. ... C. O. D. and guarantee live delivery ... From pure-bred, inspected and culled ...
S. C. Wh. & Br. Leghorns ... $2.30
Bd. Rocks & R. I. Reds ... 2.40
Wh. Rocks & Wh. Wyandottes ... 2.50
Mixed, all varieties ... 2.10
Box 509, TITUSVILLE VALLEY HA...

Navy Brand Concentrated ...
From Tuberculin Tested Cow...
28 per cent milk solids, 6.6 per cent butter... as custard with no fat eggs required. ... toe-picking and losses. Just mix ... Increases egg production and ... Helps chicks grow feathers. ... Hastens ... Write for prices. ...
TITUSVILLE DAIRY PRODUCTS ... Titusville, Pa.

Reduced Chick Pri...
to Effect June to Octo...
Large Type Wh. Leghs. $2.00 $4.00 $ ...
Rocks, Reds, Minorcas 2.50 5.00 ...
Wyandottes, Orpingtons 2.75 5.00 ...
Hamburgs, Lic. Accepted. Sc. Less ... Catalog Free.
Lantz Hatchery, Tiffin, ...

BARRON ...
From Large Type Barron ... White Leghorns. Some ... pounds. Extra quality chicks from ... stock at $9 per 100; $85 per 500; $ ... Hatches June 12-19-26. Order at ... 100% live arrival guar. 100% ... ROBERT L. CLAUSER, Box H, ...

LOOK! DUCKLIN...
Postpaid. Live Arrival ... White Pekins, White and ... Buff Runners. Ducks ... ington Ducklings. They ... most profitable broilers ... weigh 5 lbs in 8 weeks. ... free. Rimmle appreciated. ... NABOB POULTRY FARMS, Box H, ...

BABY CHICKS ... Tancred Str. Wh. Leghorns ... White Leghorns ... Barred Rocks ... R. C. Reds ... Heavy Mixed ... Light Mixed ... 500 lots 5c less—1,000 lots 1c less. ... delivery guaranteed. Order from this ... write for free circular. ... McAlisterville, ...

Chicks 7c Up ...
S. C. W. Leghorns, 2 yr old breeders, ... R. C. W. Leghorns, 1 yr old breeders, ... Barred Rocks ... Assorted ... Prepaid live arrival and satisfaction ... TURKEY RIDGE HATCHERY, ...

Klines' Barred R...
Healthy stock. Prices ... Strong chicks guar. Prepaid ... $10.00-100; $94.00-1,000. ... S. W. KLINE, Box 89, ...

NO BLACKHEAD
Use Kline's SAVO for turkeys. Trial Pkg. ... medium 15c; large, to raise 75 ... Money back guarantee. ...
GRAINCO PRODUCTS CO., ...

PULLETS GASSONS Large Type ... White Leghorn ... sorted cockerels ... chicks for sale. Write for ... GASSON'S POULTRY FARMS, ...

BABY CHICKS
HEAVY LAYING FREE RANGE FLOCKS
... 50 100 500 1,000
W. & Br. Leg. $2.50 $4.50 $8.00 $37.50 $70
Rocks & Reds 3.00 5.50 10.00 47.50 90
Orpg'ts 3.00 5.50 10.00 47.50 90
Wyandottes 3.25 6.00 11.00 47.50 90
Mixed Chicks 2.25 4.00 7.00 32.50 60
Prepaid safe delivery guaranteed. Order from this ad or write for circular.
L.H. MACE POULTRY FARM Richfield, Pa. Box 3.

BABY CHICKS
... 50 100 500 1,000
Leghorns $4.50 $8.00 $37.50 $70.00
Rocks 5.50 10.00 47.50 90.00
R. I. Reds 5.50 10.00 47.50 90.00
Orpingtons 6.50 12.00 57.50 110.00
Rocks 6.75 9.00 42.50 80.00
Mixed
... chicks from free range flocks 100% live delivery guaranteed. Parcel post prepaid. Bank reference. Order direct from this ad.
NABOB HATCHERY, Box 10, Richfield, Pa.

HERBSTER'S QUALITY CHICKS
Summer Prices
Can ship C. O. D.
... Rocks & Reds, $10 per 100
... Heavy Mixed, 8.00 per 100
Herbster's Poultry Farm, Rt. 171, McClure, Pa.

BROILER—RAISERS
SHIPPING CRATES LOANED FREE
NEW YORK LIVE BROILERS and other poultry to New York's Oldest Live Poultry House. Est. 1892. ... to be handled immediately upon receipt. Sheets ... mailed daily. Highest prices. Our outlet is ... Inquire about us. Write for quotations. ... ten shipping instructions and Holiday Calendar. ... KRAKAUR POULTRY CO., Inc., ... Washington Market, New York City.

Baby Chicks
From Free Range Selected Flocks
... July. 50 100 500 1,000
White Leghorns ... $2.50 $4.50 $8.00 $37.50 $75
Rocks & Reds ... 2.75 5.50 10.00 47.50 90
Light Mixed ... 2.25 4.00 7.00 34.00 65
Heavy Mixed ... 2.50 4.50 8.00 38.00 75
100% Prepaid Safe Delivery Guaranteed.
Pine View Poultry Farm, R. 3, Millerstown, Pa.

ValleyViewChicks
... 25 50 100
Tancred Strain Wh. Leghorns, $2.75 $5.00 $9.00
S. C. W. Leghorns ... 2.50 4.50 8.00
Rocks & R. I. Reds ... 3.00 5.50 10.00
Heavy Mixed, 99.00. Light Mixed, $7.00
200 lots 5c less, 1,000 lots 1c less. Free range. 100% live delivery guaranteed. Circular.
VALLEY VIEW POULTRY FARM.
I. J. Ehrenseller, R. 2, McAlisterville, Pa.

BABY CHICKS Order from this ad. Save time and money.
... 25 50 100 500 1000
Leghorns ... $2.25 $4.25 $8.00 $19.00 $75
Assorted Reds ...
W. & Br. Rocks, ...
& Wyandottes 2.75 5.25 10.00 49.00 95
Rose & Single Comb Leghorns 2.50 4.50 8.00 39.00 75
Mixed Broilers 2.00 3.50 6.50 31.50 60
Gem Poultry Farm & Hatchery, Port Treverton, Pa.

Quality Chicks at Low Prices
Variety 100 500 1000
Tested Strain Leghorns ... $7.50 $36.00 $70.00
Barron or Wyckoff Leghorns ... 8.00 38.00 75.00
Special Leghorn Wyckoff only ... 9.00 43.50 86.00
Barred Rocks ... 13.00 62.50 120.00
Mixed Chicks ... 7.00 31.00 65.00
L. E. STRAWSER, McAlisterville, Pa.

15,000 B. C. W. LEGHORN CHICKS—for June and July delivery—Cash or C. O. D.—White Leghorns 25—$2.50; 50—$4.50—100—$8; 500—$37.50; 1000—$70. Light Mixed, 25—$2; 50—$4; 100—$7; 500—$32.50; 1000—$65. From carefully selected free range flocks. 100% arrival Prepaid
The Richfield Hatchery, Box 3, Richfield, Pa.

BEST QUALITY CHICKS
Chicks or C. O. D. 100 500 1,000
Tancred Str. W. Leghorns ... $7.50 $35.00 $70.00
R. C. Brown Leghorns ... 7.50 35.00 70.00
R. C. Barred Rocks ... 9.00 42.50 85.00
Light Mixed, $6.50; Heavy Mixed, $8.00 per 100. Order direct. 100% live delivery. P. O. Paid.
Chester Valley Hatchery, R. 2, McAlisterville, Pa.

FERRIS STRAIN WHITE LEGHORN CHICKS
Our breeders are large birds, long deep, rectangular bodies. Selected for size, type and egg production.
$8.00, per 100; $37.50, 500; $70, 1,000
JUNIATA POULTRY FARM, Box P, Richfield, Pa.

WHITE LEGHORNS ... $7.00 a hundred
Brown Leghorns ... 7.00 a hundred
Black Minorca ... 10.00 a hundred
Rocks ... 10.00 a hundred
Mixed chicks, $6.00 & $8.00 per hundred for light and heavy.
ECLIPSE HATCHERY, Fort Treverton, Pa.

Chicks, Barron Eng. Wh. Leghorns 8c
White Leghorns 7½c; Barred Rocks 10c; heavy mixed 8c; light 7c. Reduced on large orders. 100% guaranteed. Circular Free. July and August delivery
TWIN HATCHERY, McAlisterville, Pa.

S. C. W. Leghorns, $8.00-100. Barred Rocks, $10.00-100. White Rocks and Reds, $11.00-100. Mixed, $6.00-100. Add 2c if less than 100 lots. Mr. Chix are all from accredited flocks. 1 pay postage. Special prices on large orders. Circular free.
JACOB REIMOND, Box 4, McAlisterville, Pa.

ZELLER'S EXTRA QUALITY CHICKS from Large Type & C. White Leghorns. Trapnested, production bred matings for 10 years. $14—500; $25—1000. Also quality Rocks and Reds. 10% books order. 2014 Manada St., EDGAR A. ZELLER, Harrisburg, Pa.

BARRON and WYCKOFF STRAIN
S. C. White Leghorn chicks for June, 9 cents each; $80.00 per 1000 Prepaid and safe delivery guaranteed. Our 19th year. Circular free. $1 books order.
THE PENN'A HATCHERY, Liverpool, Pa.

Poultry Problems

Hens Go Blind

My hens go blind, cannot see to eat. Do not seem to be sick, just starve to death if I do not kill them. Their eyes look a little bleary or blind looking. Last year I lost three hens that had a large lump in bowels that just looked like egg yolk hardened, had the odor of spoiled egg.

Henry E. Zimmerman.

I CANNOT tell from your description just what the trouble may be with your hens. The thought that they may have chronic coccidiosis suggests itself, and if your young birds had this disease last year perhaps this is the case.

The lumps which you found were probably due to some derangement of the reproductive system, and were nothing which you could foresee or prevent, and probably would not spread.

If you have sour milk feed it. It would tend to hasten growth, and in most situations this is desirable.

If the trouble with your birds has not cleared up, write me again, stating what the findings are on opening up a dead bird, and I will try to help you.

R. L. S.

Weak Chicks

Our baby chicks were not quite as husky as some are when we got them, but did well until a week old, only a few having died out of 500 up till that time. With the good care we have given them they sat down and die. Some of them which seemed to be lively and stood only a short time before would sit down with feet pointing forward. If we stand them on their feet they stagger sideways and finally they die. Others seem to have a diarrhea.

Ervin J. Yoder.

THE trouble you describe in your young chicks is not uncommon, but no sure remedy seems to be at hand, nor is the cause known. Recommendations are to feed plenty of green feed and to make some change in the grain and mash, perhaps feeding some other brand for a time, although this must not be taken as any reflection on the brand you are now using. For some reason where much of this trouble occurs a change of feed seems to be beneficial.

R. L. S.

Whitewash

Please send me a formula for whitewash to use in a sprayer for poultry house, stable, etc. I'd like to have one calling for glue and tinta if desired, but especially the glue.

Mrs. D. M. Woodmancy.

A FORMULA for whitewash such as you desire follows: Slake one-half bushel of lime in boiling water, keep it covered; strain and add brine made by dissolving one peck of salt in warm water and three pounds of rice flour, then boil to a paste; add one-half pound of whiting and one pound of glue dissolved in warm water. Mix and let stand a few days before using.

R. L. S.

Toe Pickers

I have 800 baby chicks, and they start picking their feet and tails until they bleed. They continue to do this until the chick must be removed. Will you please let me know what to do?

V. W.

PICKING in the brooder house is very troublesome and very common, and once it gets started is very hard to stop.

Be sure that the chicks are not crowded, and see that they always have feed and water. Try to keep the house comfortable, not excessively hot. If it is possible to let the chicks run out this will help to control picking. Darkening the house somewhat by hanging curtains over the windows will also help. Picked individuals should have the sore place smeared with tar, which will prevent them from being picked further.

R. L. S.

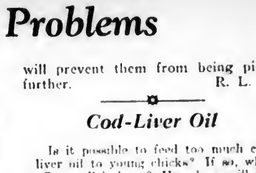
Cod-Liver Oil

Is it possible to feed too much cod-liver oil to young chicks? If so, what effect will it have? How long will the oil retain its potency in tin containers, if it is not opened?

H. J. C.

COD-LIVER OIL may be fed to poultry at the rate of one or two per cent of the mash without any harmful results. I cannot tell you how much would be necessary to prove harmful. An excess would interfere with digestive processes and perhaps cause an excessive assimilation of minerals.

Oil should retain its potency indefinitely in sealed tin containers. R. L. S.



Just Paint it on the Roosts!
—Before the chickens perch. Only a small paint brush and a can of "Black Leaf 40" are needed. While chickens roost, fumes are slowly released and penetrate the feathers; killing lice. Eliminates accidental handling of birds. Ask your dealer or write us.
Tobacco By-Products & Chemical Corp., Inc., Louisville, Ky.
"Black Leaf 40" Kills Poultry Lice

CHERRY HILL CHICKS
S. C. W. Leghorns—Wyckoff Strain ... $ 8.00
S. C. Everlay Brown Leghorns ... 8.50
Barred Rocks and R. I. Reds ... 10.00
Heavy Mixed ... 8.00
Light Mixed ... 7.00
5c less per chick in 500 lots, 1c less in 1,000 lots. For less than 100 chicks add 2c per chick. 100% live arrival guaranteed. Parcel post prepaid. Bank reference. Order direct from this ad or write for free circular.
CHERRY HILL POULTRY FARM
Wm. Nace, Prop., Box P, McAlisterville, Pa.

Nest Box Notes



By R. L. SCHARRING-HAUSEN

AUTOMATIC watering devices in the brooder and colony houses certainly save a lot of work. A poultryman who is raising a bunch of young stock told me the other day that during a recent hot spell the chicks drank so much he hardly had time to do anything but carry water to them. After that he put in an inexpensive automatic system and relieved himself of all that trotting around.

• • •

I WAS recently talking to a man who is in the custom hatching business, and he told me that he had hatched some 3,000 turkey eggs for his customers this season. Hatches ran from 50 to 80 per cent of total eggs set, and the mortality among the little turkeys, now several weeks of age, has been very low, amounting to three or four per hundred in many cases, with no losses at all in some flocks. These poults have all been brooded under coal stoves. Experiences of this sort prove conclusively that turkeys can be raised successfully under artificial conditions where the natural methods of using a turkey hen or a fowl have failed.

• • •

THE time is close at hand to set a patch of late cabbage for winter green feed. A small area of good ground will yield a lot of cabbage which can be stored away and fed during the fall and early winter.

• • •

AT this time many poultry yards and runs are bare, and it is a very good plan to plow, spade or disk them up and sow a green crop such as oats or rape for later pasture. Frequent plowing and cultivation of such lots on which the birds are compelled to run constantly will help to keep worms and other troubles in check.

• • •

ANY one who has breeding males with his hens at this time, now that the hatching season is well past, is making a mistake. Not only do surplus males increase the feed bills, but they help to decrease the quality of the eggs. During hot weather especially, infertile eggs keep much better than fertile ones. If there is a reason for keeping over roosters, they should have quarters by themselves away from the hens.

CHERRY HILL CHICKS
S. C. W. Leghorns—Wyckoff Strain ... $ 8.00
S. C. Everlay Brown Leghorns ... 8.50
Barred Rocks and R. I. Reds ... 10.00
Heavy Mixed ... 8.00
Light Mixed ... 7.00
5c less per chick in 500 lots, 1c less in 1,000 lots. For less than 100 chicks add 2c per chick. 100% live arrival guaranteed. Parcel post prepaid. Bank reference. Order direct from this ad or write for free circular.
CHERRY HILL POULTRY FARM
Wm. Nace, Prop., Box P, McAlisterville, Pa.

LOOK!
Baby Turkeys and Hatching Eggs
Mammoth Bronze, Bird Bros. strain of prize winners; White Holland, prize winners at International Turkey Show, Chicago, Ill.; Narragansetts, Axtell's strain of prize winners; Bourbon Reds, Axtell's strain of Prize winners. Hundreds weekly. Price right. Live arrival guaranteed. Catalogue free.
NABOB POULTRY FARMS, Box Z, Gambier, Ohio

GREEN FOREST **HUSKY CHICKS**
English and Tancred Strain
Ship C. O. D. 25 50 100
S. C. White Leghorns ... $2.50 $4.25 $ 8.00
S. C. Barred Plymouth Rocks ... 2.75 4.75 9.00
Mixed chicks ... 2.75 3.75 7.00
We guarantee 100% strong chicks on arrival.
GREEN FOREST POULTRY FARM,
J. W. Amig & Son, Star Route, Richfield, Pa.

BABY CHICKS
... 25 50 100 500
Wh., Bl., W., and Br. Leghorns ... $2.75 $5.00 $9.00 $43
Rocks, Reds and Wyandottes ... 3.50 7.00 13 64
Heavy Broilers ... 3.25 6.00 11 50
Light Broilers ... 2.75 4.50 8 39
Prepaid four zone safe-arrival free. 19 years in business. Hogan tested flocks. Postage paid. 100% delivery.
JOHNSON'S HATCHERY, ICKESBURG, PENN'A

HILL SIDE CHICKS Will Ship C. O. D.
Special Wyckoff Strain ... $ 8.00 per 100
Special Tancred Strain ... 9.00 per 100
S. C. W. Leghorns ... 7.50 per 100
Barred Rocks ... 9.00 per 100
Rocks, Reds and Wyandottes ... 9.00 per 100
Light Mix ... 7.00 per 100
Heavy Mix ... 8.00 per 100
100% live delivery. Special prices on large lots. Less than a hundred, add one cent a chick.
T. J. EMRENZELLER, Prop.
United Phone Box 11, McAlisterville, Pa.

ULSH'S Superior CHICKS
... 50 100 500
White Wyand. ... $5.25 $10.00 $47.50
Wh. & Brd. Rocks ... 5.25 10.00 47.50
Heavy Mixed ... 4.25 8.00 37.50
100% live delivery guaranteed. Postage paid.
JAS. E. ULSH, Beaver Springs, Pa.

Special Offer—STARTED CHICKS
2, 3 and 4-wk-old high quality stock for immediate delivery, prepaid to your station at the following prices:
... 2 wk. 3 wk. 4 wk.
English Wh. Leghorns ... 18c 22c 30c
Barred & White Rocks ... 20c 25c 35c
Order direct from this ad. 100% live delivery and satisfaction guaranteed.
MONARCH HATCHERY, Box E, Holgate, Ohio

STOP! LOOK! and take notice to the special low prices on Cocolamus husky chicks for June Delivery.
... 25 50 100
Tancred strain White Leghorns ... $2.50 $4.50 $8.00
Everlay Strain Brown Leghorns ... 2.50 4.50 8.00
Barred Rocks and S. C. Reds ... 3.00 5.50 10.00
Light mixed ... 2.25 3.50 6.00
Heavy mixed ... 2.50 4.50 8.00
100% live delivery guaranteed, parcel post prepaid. Special prices on 500 and 1000 lots. Free circular.
COCOLAMUS POULTRY FARM, Cocolamus, Penn'a

PENN'A CHICKS FOR JUNE
Have vim and vigor—hatched by men with 18 years experience. Prepaid and 100 per cent live delivery guaranteed. S. C. White and Brown Leghorns, 9c; Barred Rocks and Reds, 10c; Rocks and Minorcas, 12c. Heavy mixed, 9c; Light breeds, 8c; $70.00 per 1,000. Circular free.
THE PENN'A HATCHERY, Liverpool, Pa.

WOLF SELECTED CHICKS
CHICKS C.O.D. Send only $1.00 and pay Postman the balance.
Special pen mated and extra high best chicks at slightly higher prices. Shipment made any time you wish.
... 25 50 100 500 1000
S.C. Wh., Br. & Buff Leghorns, Anconas ... $2.25 $4.25 $ 8.00 $38.00 $ 75
Rd. & Wh. Rocks, S.C. & R.C. R.I. Reds, Bl. Min. ... 2.50 5.00 10.00 48.00 95
White Wyandottes, Buff Orpingtons ... 3.00 5.00 11.00 52.00 100
Jersey Black Giants ... 1.50 3.50 15.00 72.00 140
Assorted Heavy Mixed Chicks ... 2.25 3.50 8.50 46.00 90
Light Mixed ... 2.00 4.00 7.00 34.00 66
Last March July 8th
WOLF HATCHING & BREEDING COMPANY, Box 63, Gibsonburg, Ohio
IMMEDIATE DELIVERY

TIGHT BINDING TEXT CUT OFF

THE YOUNG PEOPLE

Fourth of July Specials

I pledge allegiance to my flag,
And to the republic for which it stands;
One nation, indivisible,
With liberty and justice for all.

"WON'T you please give us some games to be played at a picnic and some sandwich suggestions for a Fourth of July outing," writes a reader of the Young People's Page—so we hasten to comply.

Bagged

This is a good game to start off with. There are two Its, both of whom have paper bags over their heads and faces. Players must remain in a very limited area in order to give these handicapped Its a chance. When an It is able to tag a person he is privileged to take off his bag and put it on the head of the person tagged.

Treasure Hunt

No matter if you're four or forty, you will get a thrill out of searching for unknown treasure. Hide any number of inexpensive things in a limited space, announce the hunt, divide the group into two teams, and at a blast of a whistle tell them the fight is on. At the end of a short period blow the whistle, call them back to the starting point where a count should be taken of the prizes still to be found.

Handicapped

Targets arranged as for regular throwing contests with the exception that distances are a great deal shorter. Handicaps might be as follows:

Right and left hands are tied together. Contestants must throw with joined hands.

Blindfolds are put on all contestants.

Turn backs to targets and throw backwards.

Left hands only can be used.

(Better have a soft ball for these "handicaps".)

Icy

Give each contestant a piece of ice for each hand. They must keep it there while they race to the goal and back. You might try having the feet tied together for slower progress.

Musical Jump

Tie the runner's feet together, instruct him to jump to the goal and return, and keep singing at the top of his lungs all the while.

Say It Quickly

Form a circle with It in the middle. Each has been given the name of an animal and when It points suddenly to a person and says, "You!-1-2-3-4-5-6-7-8-9-10!" that person must say his animal name three times before It gets through counting. Of course you will give the biggest and longest names you can find.

An Old One

If you play Ruth and Jacob, it might be variegated by having Ruth make her whereabouts known to Jacob either by tee-heeing, by yoo-hooing, or by imitating some animal.

A New One

Try a game of baseball on kiddie kars.

While Cooling Off

Sing with a leader some well-known song, but sing with ha-has or tee-hees instead of words.

• • •

A small object is hidden in such a way that part of it is visible. Then the person who in the meantime was sent away, is called back to search for the object, his search being guided by the singing of the players. The nearer he gets to the object the louder they will sing, and vice versa.

• • •

Two captains choose sides called the Snickers and the Snigglers. The snickers line up and make faces at the Snigglers who are expected not to laugh or even smile. An umpire keeps official score. Then the Snigglers line up and make faces at the Snickers who in turn are expected to keep sober faces.

• • •

Give each a piece of paper and tell them to tear an elephant out of it without using any instruments.

• • •

Mental Test: Pointing to one of the group at a time, It puts her finger on her head and says, "This is my foot," whereupon the one pointed at must immediately put his finger on his foot and say "this is my head!" See who can keep a clear head the longest.

• • •

Start to whistle a song. As soon as some one in the crowd recognizes the tune and calls out the correct name of it, he may stop.

Luncheon Suggestions

Sandwiches

Grind dates and mix with mayonnaise. Spread on buttered bread.

• • •

Three green sweet peppers, three hard boiled eggs. Run peppers and eggs through chopper. Add sufficient mayonnaise to make of proper consistency for spreading.

• • •

Run one-half pound American cheese and one sweet pepper through meat chopper. Season with a little salt and spread on slices of buttered bread.

• • •

Put new cabbage and peanuts through food chopper, mix with rather tart mayonnaise and spread on buttered bread.

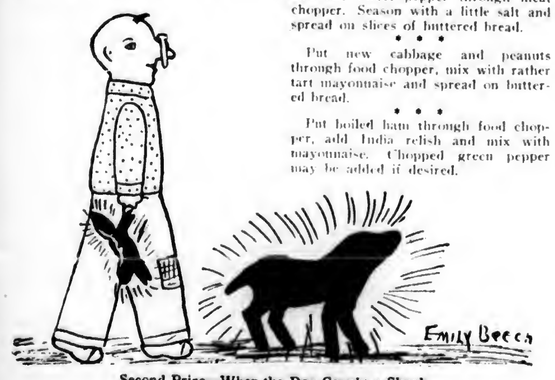
• • •

Put boiled ham through food chopper, add India relish and mix with mayonnaise. Chopped green pepper may be added if desired.

Nut bread spread with snappy cheese is delicious.

• • •

Dressing for cole slaw—One-half cup vinegar, one-half cup sugar or sweeten to taste, one egg. Mix well then boil. Add one-half cup cream while hot. Sprinkle salt, mustard and celery seed over cabbage.



Second Prize—When the Dog Caught a Skunk
Westmoreland County, Pa.

JULY PRIZES

WOULD you like to have a flag holder and a set of five handmade flags for your auto? These will be the prizes for July. You have read about the 4-H Club members and their achievements and ways of making money, so we know you are anxious to tell us what you are doing. For the five best letters on "How I Am Earning Money This Summer," the prizes will be the flag holders and flags.

Then for "Our Artists" the next subject for cartoons is "The Chicken Thief." Just who or what this thief is will be up to you. A country boy or girl needs no suggestions about this subject so use your head and send in a prize drawing. Yes, the prizes for the cartoons will also be flag holders and flags.

Then, don't forget the prize work features we told you about in the last paper, the story and picture for the little folks to color. Surely your talent will find a place in some of these offers.

Send your contributions to Young People's Editor, Pennsylvania Farmer, 7301 Penn Ave., Pittsburgh, Pa.

ANSWERS TO LAST WEEK'S PUZZLES

Fox (f-ox); B R and Y. Stone; A spelling bee; Disproportionableness; Fiddle-de-dee because it is spelt with more e's. The letter "n"; A sponge. In the spring because the trees are shooting and the ball rushes out. The multiplication table.

Prize Story

A Country Pond

IT is just a small, quiet pond half hidden by the thick bushes that grow on its banks. It contains no beautiful flowers or snowy water lilies, but just coarse queer plants that have a peculiar fascination for me. From its dark and stagnant waters the yellow spaddocks lift their heavy heads, while the damp, rich soil of the banks produces a varied display of growth—great milk weeds, elderberry bushes, purple and white meadow flowers, and goldenrod. Behind the pond, looking down upon the scene, are the large forest trees.

The pond is very quiet in winter, but when spring comes there is the ceaseless soprano chorus of the frogs I love to hear. Later, the frogs' voices change and become heavier. Then they sound like bass violins tuning up, and when they get a good start, the loud and sepulchral noise that issues from the quiet pond is amazing. Still later in the summer, about August, we have a complete symphony orchestra composed of the pond people in conjunction with the woodsfolk—the whip-poor-wills and the tree toads. It is indeed most thrilling to hear that orchestra and we are loath to bid it farewell as we know we must when cool weather comes. Its faithful members play tirelessly the whole night.

Later in the season, one by one they drop out and the pond resumes its serenity. I wonder if it, too, misses the jolly noise of its gay inhabitants, but perhaps it sleeps when they do. Who knows? Elizabeth M. Tyson.

Monmouth county, N. J.

Little Folks Corner

A Fourth of July Party



Salute the flag as you pass by,
Wherever it's unfurled.
Remember, it is your flag,
The dearest in the world.

Salute the flag, as you pass by,
With hand up to your brow!
For men have lived and died for it—
That's why it's your flag now.
F. A. Richardson.

"HAVE you decided whether you will let us have the Fourth of July party, mother?" said Catherine.

"Well, I have been thinking it over, and I have decided that I will let you have one. You know I am getting ready to go away, and have a great deal to do, and usually, when we have a party, we decorate the dining room, and you have to wear your best clothes. Now, I have a surprise, and, if you agree to my plan, I think it will be lots of fun."

"Oh, Marjorie, we're going to have it!" said Catherine, gayly.

"This is what I was thinking of," said their mother. "Instead of setting the table and making so much extra work for Mother, we can put up the daintiest luncheon in pretty boxes and hide them all around the house; then, when it is time, you can all go and hunt for them; and, when you invite the girls, tell their mothers that you want them to come from three until half-past eight, and that they are not to dress up, but just wear the clothes that they would at home."

The afternoon of the Fourth was pretty hot. The children played all sorts of games and raced about, and it was really delightful not to have to be thinking of spoiling dresses all the time. When it was supper-time and the children came into the house, they could not help peeping into the dining room. But Mrs. Sinclair said: "Now we are going to play a game which is called 'Hunt the supper.' Each girl's supper is in a little box with her name on it, and is hidden in one of these four rooms. If you find a box that belongs to someone else, you mustn't tell."

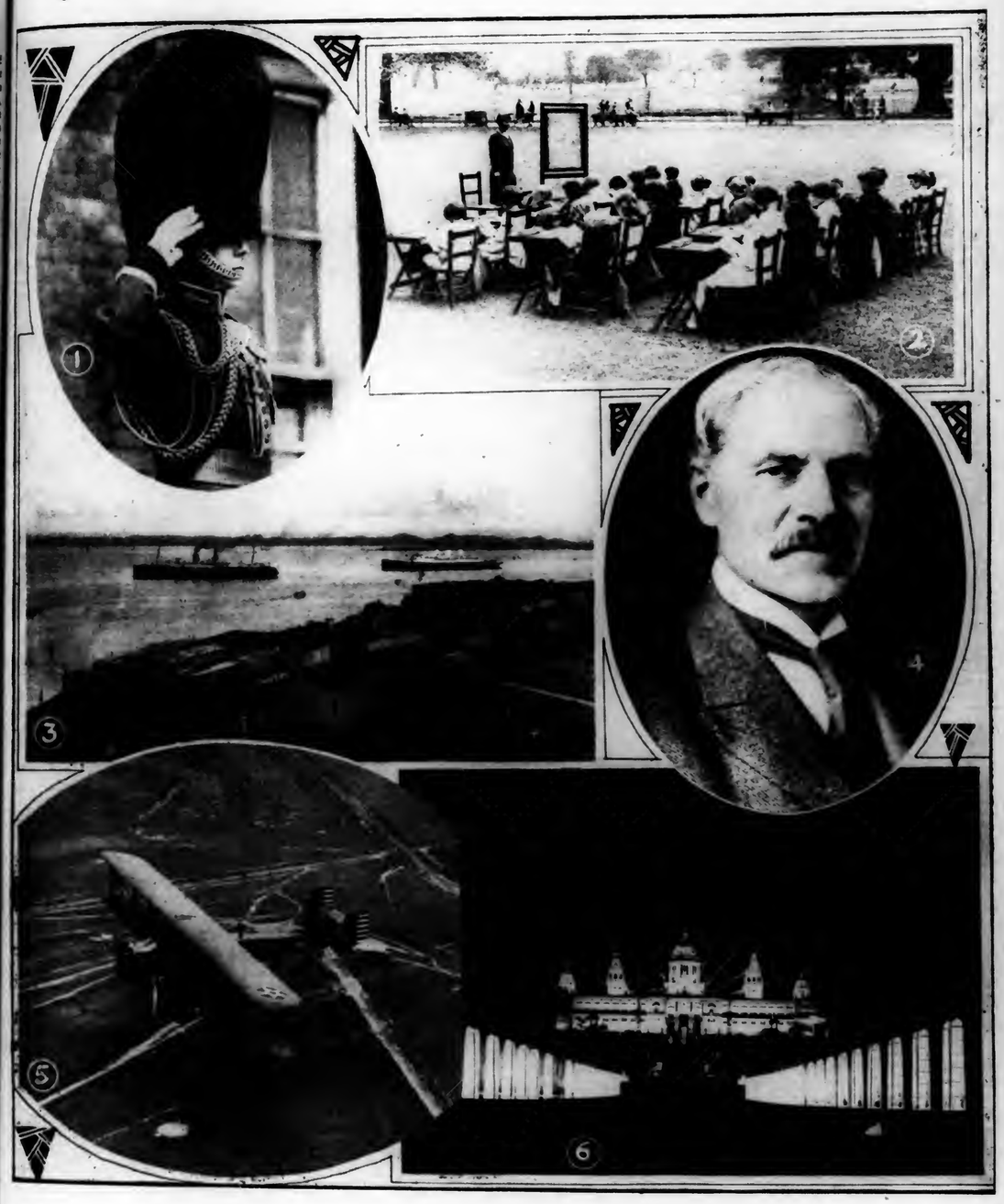
It was the greatest fun that ever was, hunting the boxes. At last they were all found, and Mrs. Sinclair said: "Now, wouldn't you like to come outdoors and eat supper on the piazza?"

So they all went out; some sat on the steps and in the hammocks and cozy corners; it was so delightful to be outdoors. And then the fun of opening the boxes! Such a dainty box it was! On the top was a tiny Fourth of July napkin, then came layers of delicious sandwiches, and apples and sweets, and there was all the lemonade they wanted. When they had almost finished, Mary came out with a large platter of ice cream, and Mrs. Sinclair brought quantities of cake. How they did eat, sitting out doors!

Just then John and his father began to set off the fireworks, and with each "Oh's!" of delight at the fireworks and the joys of eating ice cream, the place was filled with merriment.

When the children said "Good night," they told Mrs. Sinclair that it had been the loveliest time they ever had at a party, and Mrs. Sinclair felt quite sure that they meant it.

PASSING EVENTS IN PICTURES



(Copyright by Underwood & Underwood)

1. London, England: The Prince of Wales received the colors of the now disbanded West African Regiment of which he is Colonel-in-Chief, at St. James Palace. Photo shows H. R. H. saluting the colors.

2. Outdoor school for children established in the heart of London. Lessons in the open-air for children whose health makes this course desirable are a feature of London's educational life. A scene in St. James Park.

3. A harbor scene at San Juan, Porto Rico, with two tourist steamers departing.

4. A recent and excellent portrait of Ramsay MacDonald, who becomes the new Premier of England. Premier Baldwin has resigned in favor of the Laborite.

5. The Army's new battleship of the air. An excellent photo of the new twin-motored Curtiss Condor bomber in the air over Mitchel Feld, L. I.

6. Seville, Spain: United States Week is being observed at the International Exposition at Seville, with former Governor of Arizona heading the United States Commission to the exposition. A view of the National Palace illuminated at night.

TIGHT BINDING TEXT CUT OFF

Farmer's Business Letter

THE hog market edged higher early in week only to have the entire gain lost during the closing days of trade. The big packers did not support the advance, buying only a few, and came in late in the week when shipping orders were filled to force prices lower. Yet there is strength in the market, which apparently is on the verge of working to a higher level.

The usual June run has failed to materialize and this adds strength to the market. The run at eleven markets promises to be the smallest June total since 1917, and third smallest in twenty years. It becomes increasingly evident that the supply of hogs in the country is relatively light.

Lambs Again Lower

The lamb market was characterized by further weakness this week, though receipts here, at 47,000, were smallest of the year, comparing with 65,000 last week, 41,000 last year and 57,000 two years ago. Lambs were $1 to $1.25 lower, but yearlings (last season's lambs) worked 25 to 50 cents higher and other sheep held about steady with supply very light. Average price of lambs this week was $14.95, which was 95 cents below last week, $1.15 below the same week last year, and lowest for the week since 1924.

A prominent western sheepman while in Chicago this week, was asked about expanded sheep production. "Without doubt" he said, "we have more sheep than we had a few years ago but we need more. This country needs to produce more of the wool it uses and lamb consumption should be larger. We have a place for increased sheep production. One purpose of the lamb consumption campaign, which is still continued is to take care of the larger production sheepmen knew was coming." The promotion of demand for lamb has not kept pace with increased marketing, however, and that is why a lower level of prices prevails. While a good demand for feeding lambs is predicted for this season and western speculators have invested in expectation of it, there may develop considerable conservatism among feeders if evidences of large supplies continue to appear.

Cattle on Upgrade

The cattle market continued to show activity and strength this week until the close when some weakness developed, affecting mostly the lower grades. Quite a large number of good to choice steers were marketed in the course of the week. Top steers reached $15.65 this week, that price being paid for heavy steers and being 25 cents higher than last week's top. Omaha sold cattle at $15.60 this week, and St. Joseph at $15.65. It is unusual for these western points to receive as good cattle or make tops as high as Chicago.

Wheat Higher

Wheat prices made a net gain for the week of 5 to 6 cents, the trade feeling that some price effect from the new legislation is likely, and in addition there was unfavorable news from the southwest where harvest is under way. Kansas and Oklahoma reports indicate high quality but only fair yields.

Using condition reports received from all over the world, the department of agriculture announces that exclusive of Russia and China a world wheat crop 5 per cent smaller than last year was to be expected for the year 1929-1930 season. This reduction, the department added, would probably more than offset the 1928-1929 season and "it therefore seems likely that world market prices for wheat through the 1929-1930 season will average somewhat higher than they have through the 1928-1929 season."

Corn was some higher. The visible supply is decreasing and much corn is late. A feeling is growing that it may pay to hold old corn.

Chicago, June 22, 1929. Watson.

Produce Market Review

SMALL lots of New Jersey potatoes arrived in Philadelphia during the past week. They sold at 75c to 85c per ⅝ basket and while this is not considered a very satisfactory price, especially for the first shipments, it is a poor basis to judge market conditions. These potatoes were very small and there were liberal supplies of well matured stock from other sections.

New potato prices held fairly steady in the city markets. Late in the week Eastern Shore Cobblers were quoted at $3.00 @ 3.65 per barrel in Philadelphia, at $3.25 @ 3.50 in New York and at $3.00 @ 3.25 in Baltimore. Rain early in the week held up digging in the Norfolk section and shipments during the early part of the week were only 50 to 75 cars daily. The movement from the Eastern Shore of Virginia increased more rapidly than was anticipated and several days exceeded 500 cars. Virginia shippers believe that the Eastern market has reached its low level at $3.00 per barrel and will hold steady or advance slightly.

The asparagus season is coming to a close and the demand has dropped off sharply. Some growers are shipping only their better grades and leaving the small and crooked stock at home.

In spite of predictions of light crops of peas in New Jersey there have been very liberal supplies in Philadelphia. Prices are exceptionally high on New York State and New Jersey celery. At the close of the week this sold at $5.00 @ 7.00 per half crate. There is very little celery on the market at this time while normally California is an important source of supply.

New apples from Delaware made their appearance on the market and sold readily. The blackberry season in New Jersey is about to open and a few crates have already been marketed. The Maryland and Delaware stock sold at $3.00 @ 5.50 per 32 quart crate.

The Philadelphia egg market was irregular during the week with considerable price variation due to the wide range of qualities arriving. The extreme hot weather affected the demand, since jobbers and retailers were not inclined to carry any stocks in excess of immediate requirements. Hot weather also had its effect at production points and the general quality averaged lower with considerable stock showing heat defects.

Butter prices were about steady during the week but there was an unsettled undertone. Chain stores are not buying very actively on the open market and are storing their own receipts.

FEED PRICES

The quotations are for transit and nearby shipment, Thursday, June 20, 1929, according to the Penn'a Bureau of Markets and the U. S. Bureau of Agricultural Economics, cooperating. The following quotations show the approximate cost of feed per ton (all in 100-lb. sacks) delivered on track at Philadelphia and Scranton. At points farther west prices are slightly lower; nearer east slightly higher.

Pure spring bran	$41 00
Soft winter wheat bran	42 00
Hard winter wheat bran	41 00
Standard middlings	38 00
*Flour middlings	38 00
*Red dog flour	39 50
White hominy	39 50
Yellow hominy	39 50
Gluten feed	40 75
36% cottonseed meal	46 00
41% cottonseed meal	47 00
43% cottonseed meal	48 00
34% linseed meal	55 50

(*) Superior grades of these feeds usually command premiums

Philadelphia Hay and Straw

No. 2 timothy, $18.50; No. 3 timothy, $16, sample hay, $13. No. 1 mixed clover, $18; No. 2 mixed clover, $16; No. 1 straight rye straw, $20.50; No. 1 wheat straw, $14.50; No. 1 oat straw, $13.50.

CASH GRAIN

Chicago, June 24—The following cash prices ruled here today: No. 2 hard wheat, $1.18. No. 2 yellow corn, 94¾@95c; No. 2 mixed corn, 93¾c; No. 3 white oats, 43@44¾c.

Miscellaneous Produce

PHILADELPHIA MARKETS

Produce

Fruits.—APPLES, Del., bu. Transparents, $2.25@2.75; peet, $1.50@1.75. Early ripes, $1.50@2.25. STRAWBRERRIES, too few sales Penn'a and N. J. stock today to quote. BLACKBERRIES, Md. and Dela. 32-qt. crates, $4@5; few fancy Dela. high as $5.50; poorer low as $3. HUCKLEBERRIES, N. C. and Md., 32-qt crates, $5@7.50. RASPBERRIES, N. J. and Md., per pint, 12@15c, few 16c. CHERRIES, N. J. sour per lb., 10@12c; climax baskets, $1.75@2; poorer, $1.25@1.50. CURRANTS, N. J., 32-qt. crates, [illegible] higher.

Vegetables.—ASPARAGUS, [illegible] bunches, 60@$2.50, according to [illegible] BEANS, N. J. ⅝ baskets, [illegible] wax, $1.50@1.75; bushels, $2.75@3; green, $1.75@2.25; bushels, $3@3.50. BEETS, Pa. and N. J., [illegible] bunches, $1@2.25. CABBAGE, N. J., bbls. mostly 300@400; Penn'a bbls., [illegible]. CARROTS, N. J., per hundred bunches, $1@2.50. CELERY, N. Y. ½ crates, $1@2; Pa., [illegible]. LETTUCE, N. J., crates, Boston, 75c@$1; Romaine, 25@50c; leaf, 25@50c. ONIONS, Penn'a and N. J., ⅝ baskets, [illegible]. PEAS, N. J., ⅝ baskets early, 75c@$1.25; Telephones, 75c@$1.25. PEPPERS, N. J., ⅝ baskets early, 50@75c; Telephones, $1.50@2. SALSIFY, N. J. bushels early, $1.50@2. SPINACH, nearby bushels, 50@75c. SQUASH, N. J. ⅝ baskets, $1@1.50. TURNIPS, nearby ½ bushels, white, few sales, 25@50c. TOMATOES, Pa. hothouse per lb., 10@15c. POTATOES, N. J. ⅝ baskets, $1@1.50.

Eggs.—Firsts, 31c; seconds, [illegible]; pullets, 26@27c; pullorum, 24@25c; checks, 24c; old roosters, 21@22c; pigeons, 30@40c.

Lancaster

Butter.—Country butter, 36@37c; creamery, 40@42c; prints, 42@43c.

Poultry.—Chickens, dressed, [illegible] each; springers, 60@$1.25 each; $1.50@2.50 each; squabs, 25@30c each.

Eggs.—Fresh eggs, 32@35c.

Vegetables.—Asparagus [illegible] bunch, beets, 8@15c per bunch; [illegible] plants, 15@25c each; string beans, [illegible] per ¼ pk; beans, lima, 30@35c per box; cabbage, 10@20c per head; [illegible] 15c per bunch; cauliflower, 20@35c per head; celery, 15@25c per bunch; cucumbers, 10c each; spinach, 12@15c per ½ bu. basket; [illegible] 5c per bunch; peppers, 5c each; endive, 10@15c per head; radishes, 5@10c per bunch; [illegible] 20c per head; rabbages, 5@10c per head; mushrooms, 25@30c per pt. basket; [illegible] 6@20c per ¼ pk.; green onions, 5c per bunch; corn, 45@50c ½ doz.; potatoes, 60@75c per bu., 60@75c per ½ bu.; sweet potatoes, 25@30c per ½ pk.

Fruits.—Strawberries, 15@20c per box; cantaloupes, 12@15c each; watermelons, 50@75c each; cherries, 15@20c per box; currants, 25@30c per qt. box; red raspberries, 45@50c per qt. box; black raspberries, 35c per qt. box.

PITTSBURGH PRODUCE

Butter.—Creamery prints, [illegible] 50@51½c; tubs, 49@49½c; bulk [illegible] @47c.

Eggs.—Fresh, select, white, [illegible] brown, 32@34c; current receipts, [illegible]

Poultry.—Heavy hens, 23@25c; [illegible] 22@24c; broilers, 37@40c; [illegible] 18c; ducks, 25@27c; geese, 16@18c; [illegible] 40@50c per pair.

NEW YORK

Butter.—Creamery, higher than [illegible]

Eggs.—White eggs, current receipts extras, 35@36c; extra [illegible] 34½c; mediums, 34@34½c.

Poultry.—Live, by freight, fowls, [illegible] 27c; broilers, 28@40c; ducks, 28; [illegible] 25@30c.

Pittsburgh Hay and Straw

No. 1 timothy, $21@21.50; [illegible] othy, $19.50@20.50; No. 2, timothy, [illegible] @17.50; No. 3 timothy, $15 [illegible] light clover mixed, $17.50@18; [illegible] light clover mixed, $15.50@16.50; [illegible] clover mixed, $18.50@19; No. 1 [illegible] mixed, $14.50@16.50. No. 1 wheat, [illegible] $12@13; No. 2 wheat, [illegible] wheat, $9@10; No. 1 oat, [illegible] 2 oat, $10.50@11.

WEEKLY WOOL MARKET

Boston, June 21.—Through the [illegible] part of the wool market, [illegible] the past week was very dull, [illegible] the U. S. D. A. Prices were [illegible] the finer qualities and slightly [illegible] some of the medium grades.

Domestic Wool Quotations

Grease Basis, Ohio and [illegible]

64s, 70s, 80s, (fine) strictly combing [illegible]
64s, 70s, 80s, (fine) French combing [illegible]
64s, 70s, 80s, (fine) clothing [illegible]
58s, 60s, (½-blood) strictly combing [illegible]
58s, 60s, (½ blood) French combing [illegible]
56s, 60s, (½ blood) clothing [illegible]
56s, (⅜ blood) strictly combing [illegible]
56s, (⅜ blood) clothing [illegible]
48s, 50s, (¼ blood) strictly combing [illegible]
48s, 50s, (¼ blood) clothing [illegible]
46s, (low ¼ blood) strictly combing [illegible]
36s, 40s, 44s, (common and braid) [illegible]

LIVESTOCK

PITTSBURGH

Cattle

SUPPLIES continue light, only 25 carloads being on sale Monday. Good fat steers were stronger and considering quality looked 15@25c higher but sold within the previous week's price range. Well fed handy and light weights brought $14.50@14.65, the latter for some nice cattle averaging 1,096 lbs. A few yearlings, averaging 789 lbs. brought $14.50, but they were not top-notchers. Ordinary fed butcher steers went at $13.50@13.75, with fair light steers $12.50@12.75, these showing grass and lacking finish. Nothing suitable for feeders appeared. Heifers were generally steady. Choice fat cows held up pretty well but grassy kind sold lower. Canners went largely at $5.50@6. Bulls were steady to lower. A Hereford breeder cleaned up his young bulls at $12 per cwt., they classing more as steers than as bulls. Good heavy bulls brought $10.50@10.75, a few good handy kind more but bulk of butcher bulls sold at $10@10.50.

Choice grain-fed steers, 1,200 lbs. or over	$14 50@14 75
Good to choice	14 25@14 50
Fair to good, do.	13 75@14 25
Plain heavy steers	13 25@13 75
Choice handyweight steers	14 50@14 75
Good butcher steers, 1,000 to 1,150 lbs.	14 00@14 25
Fair to good, do.	13 50@14 00
Ordinary to fair, do.	13 00@13 50
Common, do.	12 25@12 75
Good light butcher steers	13 75@14 00
Fair to good light steers	13 25@13 75
Common to medium, do.	12 50@13 25
Inferior light steers	10 00@12 00
Feeders	Nominal
Stockers	Nominal
Choice heavy bulls	10 50@10 75
Choice handy butcher bulls	10 75@11 00
Good handy bulls	10 25@10 75
Fair to good bulls	9 50@10 25
Common to fair bulls	9 00@ 9 50
Inferior bulls	8 00@ 8 50
Choice fat heifers	13 25@13 50
Good to choice heifers	12 50@13 25
Fair to good heifers	10 50@12 00
Common to fair heifers	9 00@10 00
Choice fat cows	10 00@10 50
Good to choice fat cows	9 50@10 00
Fair to good cows	8 50@ 9 50
Canners and cutters	5 00@ 7 00
Fresh cows, calf at side	50 00@150 00
Common to fair cows	7 00@ 8 50

Hogs

Monday's market was a short one, only 20 double-deck carloads arriving. Trade was active and prices 20@30c higher on bulk of the receipts. Good handy weight hogs brought $12 largely, some up to $12.10. Heavy mixed went at $11.50@12, and heavy all the way from $11.25 to $11.75, the heavier the cheaper. Most of the pigs and light are green and dress low percentages. Strictly good pigs would bring $11.50 and the same kind of light Yorkers $11.75, but bulk of pigs sell around $11.25 and off light around $11.50.

Heavy wts., 250 lbs. or over	$11 25@11 75
Heavy mixed	11 50@12 00
Medium wts., 180-200 lbs.	12 00@12 10
Heavy Yorkers, 165-180 lbs.	12 00@12 10
Light Yorkers, 125-150 lbs.	11 50@11 75
Pigs, 90-100 lbs.	11 00@11 50
Roughs	9 50@ 9 75
Stags	6 00@ 8 00

Sheep and Lambs

Monday's supply was around ten carloads. The few sheep offered were slow on the basis of $7.50 per cwt. for good handy wethers. Not many yearlings were here, the best on sale going at $11.85. Lambs were sharply lower in sympathy with other markets. Jersey City reported sales at $13.50@14 per cwt. Best lambs here brought $14 per cwt. Culls brought $10@12 per cwt. according to kind.

Good to best wethers	$7 25@ 7 50
Fair to good wethers	6 50@ 7 25
Good mixed	6 50@ 7 00
Fair to good, do.	6 00@ 6 50
Common to fair	4 50@ 6 00
Inferior sheep	3 00@ 4 00
Yearlings	7 00@11 75
Good to best lambs	13 50@14 00
Medium lambs	12 00@13 00
Culls	9 00@12 00

Calves

Receipts 1,250 head. Best veals lower at $15.50, others $9@13 largely.

Lancaster

Lancaster, Pa., June 22—Receipts totaled 325 head cattle, 22 calves, 51 hogs 17 sheep. Beef steers and yearlings steady to strong, compared with a week ago 25c higher, better grades showing full advance, top $14, average weight 1,325 lbs.; some held considerably higher, bulk of sales $13@13.75. Bulls, she stock and cutters about steady, bulk sausage bulls $10.50@11.25, heifers $11@11.50, butcher cows $9@9.75, cutters $5.25@6.50. Stockers and feeders fully steady. Calves weak to 50c lower or $1 under last week's close, top vealers $16.50. Hogs: Nominally steady.

SEEDS AND NURSERIES

SPECIAL TO MARKET GARDENERS—[illegible] for rye or treated, free disease, new soil [illegible] grown, which insure you greater crops [illegible] now ready for your late crop. Ballhead, Wakefield and flat varieties. [illegible] $1.25; 1,000, $1.75. Tomato, [illegible] Greater Baltimore, same price [illegible] collect. $1.00 thousand. Sweet Potato [illegible] Marglobe tomato. Prize [illegible] sweet potato, Marglobe tomato. Prize [illegible] 300, $1.25; 500, $1.75; 1,000, $2.75 [illegible] special price on quantities. Thousands [illegible] customers insure satisfaction. Reference. Plant Co., Franklin, Va.

[illegible] outdoor grown Vegetable Plants—[illegible] Copenhagen Market, Ballhead, Wakefield, [illegible] 500, $1.00; 500, $1.25; 1,000, $2.00 [illegible] 10,000, $10.00 expressed. Tomato Plants [illegible] Bonnyfood, Baltimore, Stone and [illegible] 300, $1.50; 500, $2.00; 1,000, $3.00 [illegible] 10,000, $15.00 expressed. Sweet Potato [illegible] Porto Rico and Nancy Hall Potato Plants: 300, $1.25; 500, $1.75; 1,000, $2.75; 5,000 [illegible] 10,000, $20.00 expressed. Shipping [illegible] 2 million daily. Day and Night Service. [illegible] customers must please you or money cheerfully refunded. J. P. Councill Company, Franklin, Va.

VEGETABLE PLANTS—Cabbage, Wakefield, Flatdutch, Danish Ball, [illegible] Copenhagen Market. 200, $1.00; 500, $1.25; 1,000, $2.00 prepaid. Express, $1.25 per 1,000. Tomato Plants, Stone, Baltimore, Matchless or Marglobe, Hall and Cuban Yams sweet potato plants and Ruby King pepper plants, [illegible] 1,000, $3.50 postpaid. We guarantee [illegible] in every way or money refunded [illegible] expected. Ideal Plant Company, Franklin, Va.

FIELD-GROWN VEGETABLE plants—[illegible] Jersey and Charleston, Wakefield, [illegible] Dutch, Danish Ballhead, Copenhagen Market, Matchless, Baltimore, Stone and Tomatoes, Baltimore, Stone, 200, 35c; 300, 40c; 500, $1.20; 1,000, $1.95 postpaid. Ruby King Pepper, 200, $1.25; 500, $2.00; 1,000, $3.50. All prepaid Cabbage, [illegible] and Beets, $1.00 per thousand. Express collect. Immediate shipment guaranteed. Ideal Plant Farms, Franklin, Va.

PLANTS OF FIELD GROWN VEGETABLE—[illegible] Cabbage, Copenhagen, Danish Ballhead, [illegible] and Late Dutch, Charleston and Jersey Wakefield, Baltimore, Stone and [illegible] Tomatoes, Baltimore, Stone and [illegible] Egyptian Beets, 100, 35c; 200, 60c; 300, 85c; 500, $1.25; 1,000, $1.95 postpaid. Ruby King [illegible] Porto Rico and Nancy Hall Potato [illegible] 100, 35c; 200, $1.25; 300, $1.75; 500, $2.50; 1,000, $3.50 postpaid. Cabbage and tomatoes, [illegible] expressed. Safe arrival guaranteed [illegible] C. Lankford & Sons, Franklin, Va.

ACRES CABBAGE, CAULIFLOWER Plants—[illegible] genuine Danish Ballhead, Jersey Wakefield, [illegible] delivery guaranteed. Plants moss packed. [illegible] Invited Golden Acre, Jersey, Copenhagen, Succession, Glory of Enkhuizen, Savoy, Ballhead Postpaid 200, 65c; 500, $1.00; 1,000, $2.00; Collect 1,000, $1.50; 5,000, $6.50; Cauliflower: 50, 40c; 200, $1.00; 500, $2.00; 1,000, $3.50. Celery Plants: 100, 60c; 200, $1.00; 500, $2.00. Port Mellinger, Dept. PF., North Dighton, Mass.

PLANTS FOR 30 DAYS—50 Acres Fine Cabbage Plants—Copenhagen, Ballhead, Flatdutch, Wakefield, Tomato Plants, Stone, Baltimore, Collect all $1.00 thousand, 5,000 $3.25, 10,000 $6.50. Sweet Potato and Pepper Plants $2.00 thousand Prompt shipments, absolute satisfaction guaranteed or money cheerfully refunded. Old Dominion Plant Company, Franklin, Va.

MILLIONS CABBAGE PLANTS—Copenhagen, Ballhead, Wakefield, Flatdutch, Tomato Plants, Baltimore, Stone. Matchless, Collect all $1.00 thousand, 5,000 $3.25, 10,000 $6.50. Sweet Potato and Pepper Plants $2.00 thousand Prompt shipments, absolute satisfaction guaranteed or money cheerfully refunded. Old Dominion Plant Company, Franklin, Va.

CARROTS N. J. ½ bu. baskets early 20c; 75c. Telephones, 75c@$1.25. [illegible] higher. Bushels Telephones, $1.50@2. CELERY, N. J. bushels early, $1.50@2. ESCAROLE, Openhagen, Ballhead, [illegible] Dutch, etc.; Beets, Tomato plants, 300, 75c; 500, $1.10; 1,000, $1.75 prepaid. 10,000 $10.00 collect. Pepper, sweet potatoes, $1.50; 1,000 $2.50; delivery guaranteed. R. R. Lankford, Franklin, Va.

BLOOM.—Millions Tomato and Cabbage plants—[illegible] Stone, Baltimore, Matchless Cabbage, Wakefield, Flatdutch, 200, 50c; 500, 75c; 1,000, $1.25 prepaid. 10,000, $7.50 express collect. Sweet Potato, 200, 60c; 500, $1.25; 1,000, $1.75 prepaid. Good plants, quick service guaranteed. Evergreen Plant Farm, Courtland, Va.

MILLIONS VEGETABLE PLANTS. Cabbage, Wakefields, Copenhagen, Flat Dutch, Ballhead, etc. Beets, Lettuce, Tomato plant 300, 75c; 500, $1.10; 1,000, $1.75, prepaid. 10,000, $10 express collect. Pepper, sweet potatoes $3.50, 1,000. Good delivery guaranteed. Mrs. Julia Lankford, Franklin, Va.

CABBAGE, COLLARD and TOMATO PLANTS, all varieties, 300 75c; 500, $1.00; 1,000, $1.50 postpaid. 5,000, $4.50; 10,000, $8.00 express collect. First-class plants. Prompt shipments. American Wholesale Plant Company, Franklin, Va.

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SEEDS AND NURSERIES

CABBAGE PLANTS. Wakefield, Flat Dutch and Ball Heads, 300, 75c; 500, $1.00; 1,000, $1.50 postpaid. 5,000, $4.50; 10,000, $8.00 express collect. Tomato plants—all varieties, 300, 75c; 500, $1.00; 1,000 $1.50 postpaid $1.00 thousand express collect. Hy-grade plants at low cost. Thomas Plant Co., Franklin, Va.

SPECIAL FOR JUNE.—Millions of vegetable plants. Cabbage, Ballhead, Copenhagen, Wakefield and Dutch, Baltimore, Stone, Matchless tomatoes, Crosby's beets, $1.00 thousand, charges collect. Prompt shipments. Moss Packed Cedar Hill Plant Co., Franklin, Va.

EXTRA NICE CABBAGE and TOMATO Plants, all varieties, 300, 85c; 500, 95c; 1,000, $1.45 postpaid. Express collect, 1,000, $1.00. Ruby King Pepper, 300, $1.00; 500, $1.50; 1,000, $2.40. Guaranteed Satisfactory. Joyner's Plant Farm, Franklin, Va.

HIGH GRADE PLANTS carefully packed large, well rooted open field grown leading varieties Cabbage, 75c 1,000. Tomato, $1.00. Porto Rico Sweet Potato, $2.00, 1,000. Acme Plant Co., Quitman, Ga.

COLLARD, CABBAGE and TOMATO plants, Charleston Wakefield, 500 $1.00, 1,000, $1.50 postpaid. $1.00 per thousand express collect. Tissey Pate, Jesup, Ga. 1,000 customers we're satisfying. Busy Bee Plant Farm, Franklin, Va.

CABBAGE and TOMATOES.—All leading varieties 100, 25c; 300, 65c; 500, $1.00; $4.25. Pepper, 40c 100 postpaid. Satisfaction Guaranteed. Thomas Plant Growers, R. 1, Box 50, Franklin, Va.

CABBAGE, Danish Ball Head, Flat Dutch, $1.25, 1,000 10,000 $10.00. Celery all leading varieties, spring plants $1.25 1,000, 10,000, $10.00 Cauliflower. Snowball $3.50, 1,000. J. C. Schmidt, Bristol, Pa.

CABBAGE PLANTS for late planting Copenhagen, Glory, Flat Dutch, Ballhead. Prepaid, 200 65c; 500 $1.25; 1,000 $2.00 Express, 5,000, $7.50. Celery, 100, 50c. Guaranteed. W. J. Myers, R. 2, Massillon, Ohio

FROSTPROOF CABBAGE PLANTS, 75c, 1,000; 5,000 $3.25. Tomato, $1.00. Ruby King Pepper, $2.00. Porto Rico Potato Plants, $1.50. Quitman Plant Co., Quitman, Ga.

SPECIAL ON CABBAGE PLANTS FOR JUNE Wakefield, Flat Dutch, Ballhead and Copenhagen, $1.00 per thousand, charges collect. Mrs. Vincent Lankford, Franklin, Va.

CABBAGE—Collard, Tomato, 1,000, $1.00. Nice plants. C. W. Borgess, Route 2, Courtland, Va.

SITUATION

DO YOU NEED FARM HELP.—We have Jewish young men, able bodied, acquainted with, but mostly without experience, who want farm work. If you need a good steady man write for an order blank. Ours is not a commercial agency. We make no charge. The Jewish Agricultural Society, Inc., Box C, 301 E 14th Street, New York City.

TOBACCO

GUARANTEED HOMESPUN TOBACCO.—Chewing, 5 pounds, $1.50; 10, $2.50. Smoking, 10, $1.75. Pipe free. Pay Postman. United Farmers Bardwell, Kentucky

LEAF TOBACCO. Good sweet chewing, 3 lbs. 50c; 5, $1.25; 10, $2.00. Smoking, 3 lbs. 50c; 5, 90c; 10, $1.50. United Farmers, Mayfield, Ky.

GOATS

REGISTERED THOROUGHBREDS, fresh, $40; grades, $45, bred yearlings, $30, fine buck, $25. Pairs, trios, herds, wholesale. Eastern Headquarters Worlds Best California heavy milkers. Goldsborough Goatery Mohnton, Pa

MISCELLANEOUS

WHY BLAME THE BULL when your cow does not breed? Use Cow Catch 1 hour before service. Results or your money back; 85 cents for one cow, $2.90 for five cows, postpaid. Woodstock Farm, Route 2, Box 59-C, Renton, Washington.

RUBBER GOODS of every description, mailed in plain wrapper, postpaid by us. Write for mail order catalog, saving 50%. Novelty Rubber, 11 Chatham St., Hamilton, Ont

THISTLE ERADICATOR, recommended by State College, Trexler's Sons, Trexler, Pa

CORN HARVESTER

RICH MAN'S CORN HARVESTER. POOR Man's Price.—Only $25.00 with bundle tying attachment. Free catalog showing pictures of harvester. Process Co., Salina, Kans.

HAY AND STRAW

WE BUY or HANDLE on commission, all grades hay and straw George E. Rogers & Co., Wabash Bldg., Pittsburgh, Pa.

HAY AND GRAIN WANTED

WANTED—Hay, Straw, Grain, Potatoes, Apples, Cabbage, etc. Carloads. Pay highest market prices. The Hamilton Co., New Castle, Pa.

RABBITS

MAKE BIG PROFITS with Chinchilla Rabbits. Real fur-money makers. Write for facts. 646 Conrad's Ranch, Denver, Colo.

FUR AND FOOD RABBITS.—Send for circular and price list. Belgian Yards, Kinderhook, New York.

CHINCHILLAS.—Stahl's Gold Certificate strain, pedigreed. Satisfaction guaranteed. Prices reasonable. D. Wagner, Tiro, Ohio.

DOGS

REGISTERED OLD ENGLISH SHEPHERD pups, bred from best of stock and watch dogs. Natural heel drivers. H. G. Loucks, Vermilion, Ohio.

FOR SALE.—Collie puppies, pedigreed, farm raised. Illustrated circular. Beam Wingerd, Chambersburg, Pa

SABLE AND WHITE COLLIE female pups, four months old. Fine ones, $4.00 each. John Sigrist, Dundee, Ohio.

COLLIE and FOX TERRIER PUPS. Handsome and intelligent. Lonely Kennels, Grove City, Pa.

TURKEYS

12 MAMMOTH BRONZE TURKEY EGGS $6.00 postpaid. Fertility guaranteed. Valuable instructions with each order. Breeders Catalog. Highland Farm, Sellersville, Pa.

TURKEY EGGS.—All breeds, $4.00 per 12, prepaid. Eastern Ohio Poultry Farm, Beallsville, Ohio.

DUCKLINGS and GEESE

WHITE PEKIN and WHITE MUSCOVY DUCK eggs, $2.00 per 12; $6.00 per 50; $11.00 per 100 postpaid. Fertility Guaranteed Big Type. Highland Farms, Sellersville, Pa

COCKERELS

SPECIAL SUMMER SALE Tancred S. C. White Leghorn Breeding Cockerels from Pennsylvania State Certified flock. All Cockerels from dams with 305-day trapnest records of 200 to 314 eggs. Booklet. North Poultry Farm, McAllisterville, Pa.

FINE APRIL BARRED ROCK COCKERELS for sale. Great breeding prospects. L. G. Tyreman, Bear Run, Pa.

BABY CHICKS

WHITE LEGHORN HENS and MALES now half price. Thousands of sigal-week-old pullets. Also baby chicks and eggs. Trapnested, pedigreed foundation stock, egg bred 20 years. Winners at 20 egg contests. Records to 320 eggs. Catalog and special price bulletin free, 1 ship c.o.d. George H. Ferris, 980 Union, Grand Rapids, Mich.

CHERRY HILL S. C. White Leghorn Chicks from my personal supervised breeders on our farm. They are truly larger, more vigorous, more profitable producers of white-shelled eggs than you will find elsewhere at such reasonable prices Circular free. Cherry Hill Poultry Farms, Wm. Nace, Prop., McAllisterville, Pa.

REDUCED PRICES.—Bucher Super Quality Chicks from inspected free range stock. Reds, White Wyandottes, White Barred Rocks, Giants, Black Minorcas, Anconas, White, Brown Leghorns. Booklet free, low prices. Pure Breeds. Bucher Bros. Hatchery, Dept. H, Berwick, Ohio.

CHICKS C. O. D.—100 Rocks or Reds, $12.00; Leghorns, $10.00; heavy mixed, $10.00; light, $8.00. Delivery guaranteed. Feeding system, raising 95% to maturity free. C. M. Leaver, Box 43, McAllisterville, Pa.

MARTIN'S CHICKS.—Barred, White, Buff Rock, Reds, Buff Orpingtons, White Wyandottes, 10c; White, Buff Leghorns, Anconas, 8c; Heavy mixed, 9c; Light mixed, 7c; 100% delivery, postpaid. Martin's Hatchery, Mt. Victory, Ohio.

BEAVER'S QUALITY Large Size Tancred-Barron English Single Comb White Leghorn Chicks, from my own flock, $8.00 for June. E. L. Beaver, McAllisterville, Pa.

LIGHT MIXED, 6½c; HEAVIES, 8c; Anconas, 8c, Continental Hatchery, York, Pa.

PULLETS

LEGHORN PULLETS.—Well grown, healthy, high producing variety. Buy now and get fall eggs. Right week, $1.00 each. Lone Ash Farm, Emlenton, Pa.

PULLETS, 8 and 12 WEEKS OLD. English White Leghorns, White Rocks. Maple Acres Farm, Tiffin, Ohio.

FARM LAND

PENNSYLVANIA

SHENANDOAH COLONIAL ORCHARD.—90 acres, 500 apple trees, 12-years old, 200 bearing pear trees, real money-maker; on improved road near city in lovely valley; 50 acres level tillage, spring water, old-fashioned home 6 rooms built about 1790, also barn, new poultry house, garage. Only $4,800 including horse, machinery, new spray outfit, fruit, 10 acres corn, ½ acre vegetables, etc.; part cash on 5 yrs. Strouts catalog. Free copy for you, 1,000 bargains, 532 pictures; write today. Strout Agency, 1422-BB, Land Title Bldg., Philadelphia, Pa.

SELL YOUR PROPERTY, through me. Quick results. Real Estate Specialist, 19 N. 19th, Harrisburg, Pa.

MISCELLANEOUS LANDS

240-ACRE ALFALFA FARM.—Tractor, 45 cattle, purebred and high grade, some producing around 2,000 lbs. milk in one month; 4 horses, colt, sheep and sow, hens, tractor, complete farm and saw equipment, auto truck, cement mixer, milking machine, all crops; usually cuts 175 tons alfalfa, raised 2,000 bu. grain last year, 3½ miles agricultural college, 8 miles College University, ½ hour city; 200 acres Madison Co. limestone, spring water, wood and fruit; attractive village, spring water, wood and fruit; attractive bldgs., 14-room house, all-ft. cemented-basement barn, silo, other bldgs. Complete $26,000, part cash. W. H. Manning, Strout Agency, P. O. Box 537, Canastota, N. Y.

LIVE GOOD WHILE MAKING A GOOD LIVING on the Del-Mar-Va Peninsula. Low-priced, productive land, town and watertrout homes. Three to ten hours to largest Eastern markets by motor or Pennsylvania Railroad. Very little snow and freezing. Finest concrete highways. Good schools, low taxes. Handsome descriptive booklet. Free. Address 163 Del-Mar-Va Building, Salisbury, Md.

FOR SALE.—5-Acre equipped and stocked poultry farm. Modernized two-story house, old shade, nice location, and a money-maker. Details on request. Owner, R. 3, Box 138, Vineland, N. J.

FOR SALE CHEAP.—Six fine truck farms near Norfolk, financed easy terms. Keeney Land Corporation, 205 Arcade Bldg., Norfolk, Va.

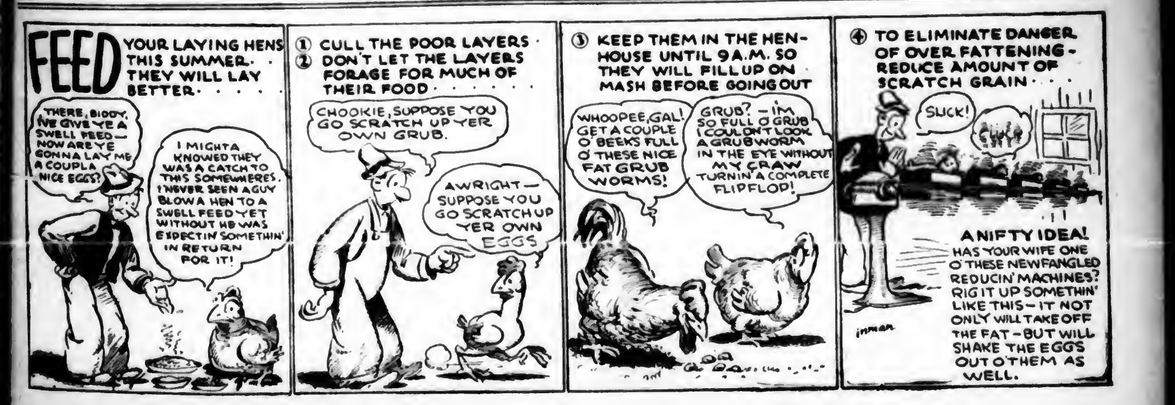
FARM—120 ACRES, $1,500 down. 15 cows, horses, hens, tools, crops, $6,500. Mr. Douglas, Herkimer, New York.

AGENTS

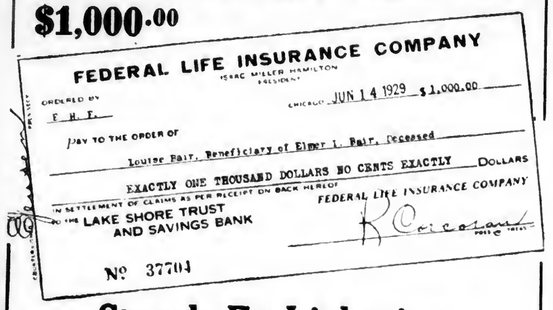
WANTED.—Farm representative in every Township. No soliciting. Kiernan Company, Whitewater, Wisconsin.

WANTED

WOOL WANTED FOR CASH.—Ship to S. H. Livingston, Successor Keystone Hide Co., Lancaster, Pa


FEED YOUR LAYING HENS THIS SUMMER. THEY WILL LAY BETTER.
THERE, BIDDY, I'VE GIVE YE A SWELL FEED—NOW ARE YE GONNA LAY ME A COUPLA NICE EGGS?
I MIGHTA KNOWED THEY WAS A CATCH TO THIS SOMEWHERES. I NEVER SEEN A GUY BLOW A HEN TO A SWELL FEED YET WITHOUT HE WAS EXPECTIN SOMETHIN' IN RETURN FOR IT!
① CULL THE POOR LAYERS
② DON'T LET THE LAYERS FORAGE FOR MUCH OF THEIR FOOD
CHOOKIE, SUPPOSE YOU GO SCRATCH UP YER OWN GRUB.
AWRIGHT—SUPPOSE YOU GO SCRATCH UP YER OWN EGGS
③ KEEP THEM IN THE HEN-HOUSE UNTIL 9 A.M. SO THEY WILL FILL UP ON MASH BEFORE GOING OUT
WHOOPEE, GAL! GET A COUPLE O' BEEKS FULL O' THESE NICE FAT GRUB WORMS!
GRUB? — I'M SO FULL O' GRUB I COULDN'T LOOK A GRUB WORM IN THE EYE WITHOUT MY CRAW TURNIN A COMPLETE FLIPFLOP!
④ TO ELIMINATE DANGER OF OVER FATTENING - REDUCE AMOUNT OF SCRATCH GRAIN
SUCK!
CHOKE
A NIFTY IDEA! HAS YOUR WIFE

Another Insurance Claim Paid
$1,000.00


FEDERAL LIFE INSURANCE COMPANY
ISAAC MILLER HAMILTON PRESIDENT

ORDERED BY F. H. F.

CHICAGO JUN 14 1929 $1,000.00

PAY TO THE ORDER OF Louise Bair, Beneficiary of Elmer L. Bair, Deceased

EXACTLY ONE THOUSAND DOLLARS NO CENTS EXACTLY DOLLARS

IN SETTLEMENT OF CLAIMS AS PER RECEIPT ON BACK HEREOF

TO THE LAKE SHORE TRUST AND SAVINGS BANK

FEDERAL LIFE INSURANCE COMPANY

POST OFFICE

No 37704

Struck By Lightning

On May 31st, during an electrical storm Elmer J. Bair, Littlestown, Pa. R-4, was struck by lightning and instantly killed. On June 14th, just 14 days after the accident, the Federal Life Insurance Company issued a check for $1000.00 payable to hs wife. While nothing can repay Mrs. Bair for the loss of her husband this check for $1000.00 will help take care of the unexpected expense. It pays to be protected.

Over $22,000.00 Paid
To Pennsylvania Farmer Readers

In the three years Pennsylvania Farmer has been offering its subscribers this insurance protection over $22,000 has been paid to policy holders. Any and all members of a reader's family between the ages of 10 and 70 years may secure one of these policies upon the payment of $2.00 per each policy.

Here Is What It Is Worth

$10,000.00 For loss of life by wrecking of railroad passenger car or steamship. $25.00 per week for 13 weeks for total disability.

$3,000.00 For loss of life by wrecking of St. Car, Omnibus, Taxicab, Automobile Stage or Passenger Elevator. $15.00 per week for 13 weeks for total disability.

$500.00 For loss of life while riding as a fare-paying passenger in an Airplane, Aquaplane, or Dirigible Airship. $5.00 per week for 13 weeks for total disability.

$2,000.00 For loss of life by wrecking or being accidently thrown from any horse-drawn or motor-driven car or motorcycle or while using or operating Farm Wagons and other farm machinery which are motor-driven or horse-drawn. $10.00 per week for 13 weeks for total disability.

$1000.00 for loss of life by being struck or knocked down while on public highway or by being struck by lightning, cyclone, tornado; collapse of outer walls of a building, or by the burning of any church, theatre, school, or municipal building. $7.00 per week for 13 weeks for total disability.

THERE IS A NEED FOR THIS PROTECTION

One out of every 11 deaths is caused by accidents—over 30,000 people are killed or injured every day—over 7,000 passengers are killed every year in railroad accidents; 57 automobile accidents occur every hour. Over 25,000 persons were killed and over 700,000 injured in highway and street accidents throughout the nation in 1927. No one is immune. Fill out the application blank below and mail today with $2.00. Tomorrow may be too late.

Notice Not more than one policy can be issued to any one person, but any or all members of a reader's family may each secure one.

Application

Print each name and address clearly and carefully. Illegible names will delay the delivery of your policy.

for $10,000.00 Farmers' Special Accident Insurance Policy issued to readers of PENNSYLVANIA FARMER

PENNSYLVANIA FARMER
Insurance Department, Pittsburgh, Pa.

I am a reader of PENNSYLVANIA FARMER, more than 10 years of age and less than 70 years, not deaf or blind or crippled to the extent that I cannot travel safely in public places, and hereby apply for a $10,000.00 Farmers' Special Automobile, Travel and Pedestrian Accident Policy in the Federal Life Insurance Company issued through PENNSYLVANIA FARMER. Enclosed is $2.00 (two dollars).

Full name ..... Age.....
Print plainly and carefully

Postoffice ..... State.....

R. F. D. .....Occupation .....

Postoffice .....State..... Relationship of Beneficiary .....

Full name of beneficiary .....

Does a Flyless Cow produce more Milk?



The difference between Klip and every other cow spray is that Klip alone is guaranteed to keep cows free of flies while milking and for long periods in the pasture. Increased milk yield depends largely on the comfort of animals in the field. If flies decrease milk production even 25% as a recent article in "Certified Milk" says, they may be costing you $50.00 a month.

Don't take our word for it—prove it yourself.

For five years three famous state entomologists and a state Agricultural Experimental Station worked developing Klip. This new cattle spray is made by the makers of Flit, the world's greatest household insecticide. Klip kills every fly it hits. In agricultural experiment station tests it was proved to be the one spray that gives complete protection against cow flies (horn flies) not only in stable but in pasture as well.

It can't taint milk, can't stain, and is absolutely harmless to cattle, even if licked. Use it on cows, horses and mules.

On sale at Hardware, Feed, and Farm Supply Dealers in one gallon cans ($2.50) and five gallon cans ($11.25). If your dealer hasn't got his supply yet, order direct from us. Be sure to send us your dealer's name when ordering. Address Stanco, Inc., 2 Park Ave., New York City.

FREE
Proof that Klip Works Best

If your dealer hasn't got Klip yet, fill in and mail the coupon and we will send you absolutely free (with no strings on it) a pint of Klip—enough to keep one cow happy for five days. You can't lose. Make the test yourself. If you want using a cattle spray, this the way to find out how much easier it is to milk a flyless cow and how much more milk a quiet cow delivers. If you are using a spray, this will prove to you the superiority of Klip over anything on the market. This offer is introductory only and will soon be withdrawn.

KLIP
NO FLIES ON US
Reg. U. S. Pat. Off.

STANCO INC., Dairy Division, 2 Park Ave., New York City
For mailing to be shown You can send me a pint of *KLIP, FREE*, and

I have..... milk cows, ...horses and mules..... also

My Name .....

Address ..... County.....

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Send the coupon for free pint can!

Stop that Annual Expense!

Why pay, pay, pay—year after year? You never have repairs or bother, with a Rib-Stone! Guaranteed! No blowing down, no leaning or sagging, no gaping air joints, no constant tightening, no annoyances! A Rib-Stone is NEVER out of line—even in price!

Point out desired location—we do the rest: foundation, walls, chute, roof, ready to fill. Not a single worry for you!

Where home construction and lower initial financing are desired, Globe Wood Silos are now a Rib-Stone product.





Rib-Stone Concrete Stave "The Best Silo Ever Built" "GLOBE" Wood Stave

Send at once for this free 40-page booklet "Silos and Silage" by F. R. Pricke, B. S., also printed matter on these remarkable silos.

SILOS and Silage

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they keep you to the fore of modern life. Through advertisements you've laid down the shovel and the hoe. You can buy a whole harvest ready-to-eat in cans. You've hung up the hoe and the bow, for a radio. There's little old-time work left in this age of amazing short-cuts. Read the advertisements carefully and when answering them, say you saw their ad in Pennsylvania Farmer.

TIGHT BINDING TEXT CUT OFF

End of Volume